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Funding California Schools When Budgets Fall Short



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State and district policymakers have difficult decisions ahead in their efforts to balance budgets, maintain school services, and prioritize safety amid the COVID-19 recession. While California's finances are stronger today than after the Great Recession a decade ago, funding for the school system is still volatile, and K–12 schools could face significant cuts if the state's economy does not recover quickly. In this report, we aim to understand how the Great Recession impacted funding for California's K–12 system, how prepared districts are for potential funding cuts, and what policy choices could forge a more financially resilient system.

Concerns over lower state funding and higher expenditures for distance learning and school reopening have brought renewed attention to school reserves. We examine how district-held reserve funds are distributed, how they have evolved over time, and how effectively they shielded districts from spending cuts during the Great Recession. Using data on district spending, revenues, reserves, and staffing, we detail the efficacy of district-held reserve funds, examine areas where cuts occurred in the recession, and determine the state of preparedness districts find themselves in today for managing revenue shortfalls in the future. We find:

- **District-held reserve funds enabled districts to limit spending cuts.** Reserve levels varied widely, and districts that held reserves mitigated revenue drops better and saw smaller spending cuts. During the recession, unrestricted local reserves mitigated spending cuts roughly dollar-for-dollar over the five-year downturn.
- **Current district reserves are larger and more equitably distributed.** District reserves are nearly twice as large today than before the last recession. Moreover, districts with the highest reserve levels serve larger shares of low-income and Latino students. However, for most districts, current levels are not high enough to fully insure against large revenue drops.
- **Spending cuts in the Great Recession were large and varied considerably across districts.** For the average school district, annual spending fell to over \$2,000 less per student by 2012–13. However, spending cuts varied across districts, as some districts had small declines and recovered quickly. Districts most affected by the recession, however, had higher shares of disadvantaged students. On a student level, total decreases over five years were roughly \$500 larger per student for low-income students, and cuts were larger for Latino and African American students than for white and Asian students.

- **Fiscal effects from the current crisis may impact high-need students and districts more, depending on policy choices.** While the 2020–21 budget avoids cuts to K–12 schools, current deferral policies burden districts with less property wealth that rely more on state funding. Future cuts—if done proportionally through the Local Control Funding Formula (LCFF)—would have a larger impact on funding in high-need districts.

The repeating boom-bust cycle in school funding hurts students and contributes instability to school operations. To build a school finance system that is stable and equitable when fiscal downturns lead to budget cuts, California must develop a more robust state K–12 reserve, help districts accumulate larger reserve funds, and prioritize student equity when balancing budgets. State and local policymakers would be wise to consider a longer-term view of school finance policy and enact measures to maintain a secure funding system. Such a shift can ensure that a repeating cycle of dramatic education cuts does not become the long-term status quo.

Introduction

Dramatic swings in revenues have plagued California’s K–12 public schools over the past two decades. Districts took years to recover from Great Recession spending cuts, with the average district spending around \$2,000¹ less per student at the trough in the 2012–13 school year.² Facing difficult choices to balance budgets, districts laid off tens of thousands of educators, increased class sizes, and reduced support services to students. In recent years, education funding has grown swiftly—surpassing previous highs by 2015–16—as state revenue kept pace with economic performance. However, the abrupt onset of the COVID-19 pandemic and its ensuing economic damage mean this growth will end.

Under the current budget, California K–12 schools will avoid cuts this year. But continued economic struggles may lead to billions of dollars in future cuts to state education funding. Budget projections suggest large operating shortfalls in the next few years, although current tax collections came in above expectations in the past few months (LAO, 2020a). Moreover, districts have incurred considerable new costs due to COVID-19 school closures and the move to distance learning since spring 2020, with more new costs to come in the 2020–21 school year to address the digital divide, improve distance learning, and reopen schools with improved safety, cleanliness, and social distancing measures.

Education funding is particularly volatile in California, largely due to state tax revenues that rely on a small share of high-income households (Murphy, Paluch, and Mehlotra, 2019). A substantial state reserve provides an important backstop for the state General Fund, preventing otherwise necessary cuts. But this reserve alone is insufficient to fully insulate the K–12 public system. And while the state held an education reserve of \$377 million entering the COVID-19 recession, these funds were quickly exhausted. Absent continued federal relief, potential state revenue shortfalls would likely require districts to make cuts or rely on their own reserves, or “rainy day funds.”

A robust body of evidence shows that education spending is an important determinant of student opportunities and outcomes.³ Much of this research studies spending increases, but recent national evidence from the Great Recession reveals that spending declines led to lower academic achievement and college-going as well as larger achievement gaps (Jackson, Wigger, and Xiong *forthcoming*; Shores and Steinberg 2019).

More generally, funding uncertainty also hampers student achievement (Lavertu and St. Clair 2018). While stable school funding is important to student success, research examining the policies that can ensure such stability has been more limited. In particular, few studies look into how well locally held reserves work as a policy tool to help districts weather funding cuts. These reserves have grown in importance in California: in 2018–19, districts held nearly \$3,000 per student in reserves (enough to cover about 21 percent of annual spending for a typical student’s district), almost three times as large as their levels two decades earlier.

In this report, we provide new evidence on how budget cuts have evolved and how effective district-held reserve funds have been, drawing on the experiences of the Great Recession. We discuss the volatility of K–12 funding,

¹ Adjusted for inflation to 2018 dollars using the consumer price index. All district-level finance data are adjusted for inflation in this report.

² Nationally, the Great Recession went from the fourth quarter of 2007 to the second quarter of 2009 (per the definition by the National Bureau of Economic Research). However, the effects on the California budget persisted for several years, with K–12 public education funding reaching its lowest level in 2012–13.

³ In a review of the literature on school spending effects, Jackson (2018) concludes: “The recent quasi-experimental literature that relates school spending to student outcomes overwhelmingly support a causal relationship between increased school spending and student outcomes... the robustness of the patterns across a variety of settings is compelling evidence of a real positive causal relationship.”

and the state and federal policies that attempt to mitigate these fluctuations. We then examine local district-held reserves, documenting their evolution over the last two decades, and their importance in limiting cuts to school staff and programs during the past recession. We further examine the extent of budget cuts from the Great Recession, documenting their impact on budgets and resources across districts and schools. We also examine how reserves are currently distributed across districts with differing student populations and how these reserves may affect future cuts amid the ongoing crisis. We conclude by discussing what these findings mean for K–12 finance policy in the current crisis and its recovery.

Funding Volatility and School Finance Policy

Funding for schools in California, as in all states, relies on federal, state, and local resources. While state and local funds contribute a near even amount to K–12 education in the average state, in California, state revenues provide the majority of funding for schools. In the 2017–18 school year, of \$88 billion in total funding for K–12 education, state funds accounted for nearly 58 percent of the total (\$50.8 billion), local resources contributed 34 percent (\$29.8 billion), and federal revenues provided 8 percent (\$7.5 billion) (National Center for Education Statistics 2020). Accordingly, policies at the local, state, and federal level are the primary mechanisms to stabilize school funding in times of revenue shortfalls.

In this section, we focus on the role of state and federal policies in addressing revenue shortfalls and school funding declines. We briefly discuss the volatility around state K–12 funding and provide background on state policies from the Great Recession and from the current crisis. We then describe the role of federal stimulus in supporting school budgets during economic downturns. We discuss local policies—most notably locally held district reserves and spending cuts—in the sections that immediately follow.

School Funding Is More Volatile in California than Other States

California’s reliance on state tax revenue exposes K–12 funding to volatility associated with economic fluctuations, especially unforeseen ones. The General Fund, the state’s primary fund, is funded through personal income taxes (roughly 70% of the total), sales and use taxes (20%), and corporate taxes (10%).⁴ K–12 funding comprises the largest portion of General Fund expenditures, accounting for approximately 40 percent of state spending.

Revenue volatility is a long-standing concern in California.⁵ The state’s progressive tax structure contributes to this volatility, as an increasingly smaller number of Californians contribute to larger portions of the state’s General Fund. In 2016, the top 1 percent of income earners in California reported about a quarter (23%) of adjusted gross income for personal income tax returns. This group accounted for nearly half (46%) of total income taxes paid (Murphy et al. 2019).⁶

Because of this volatility, California’s schools felt the effects of the Great Recession more acutely than most other states (Figure 1). State funding for K–12 education fell by 17 percent between 2007–08 and 2011–12. Nationally, schools that relied heavily on state support for funding were particularly vulnerable to the recession (Evans, Schwab, and Wagner 2019). California deviated from national trends in other recent recessions: spending fell

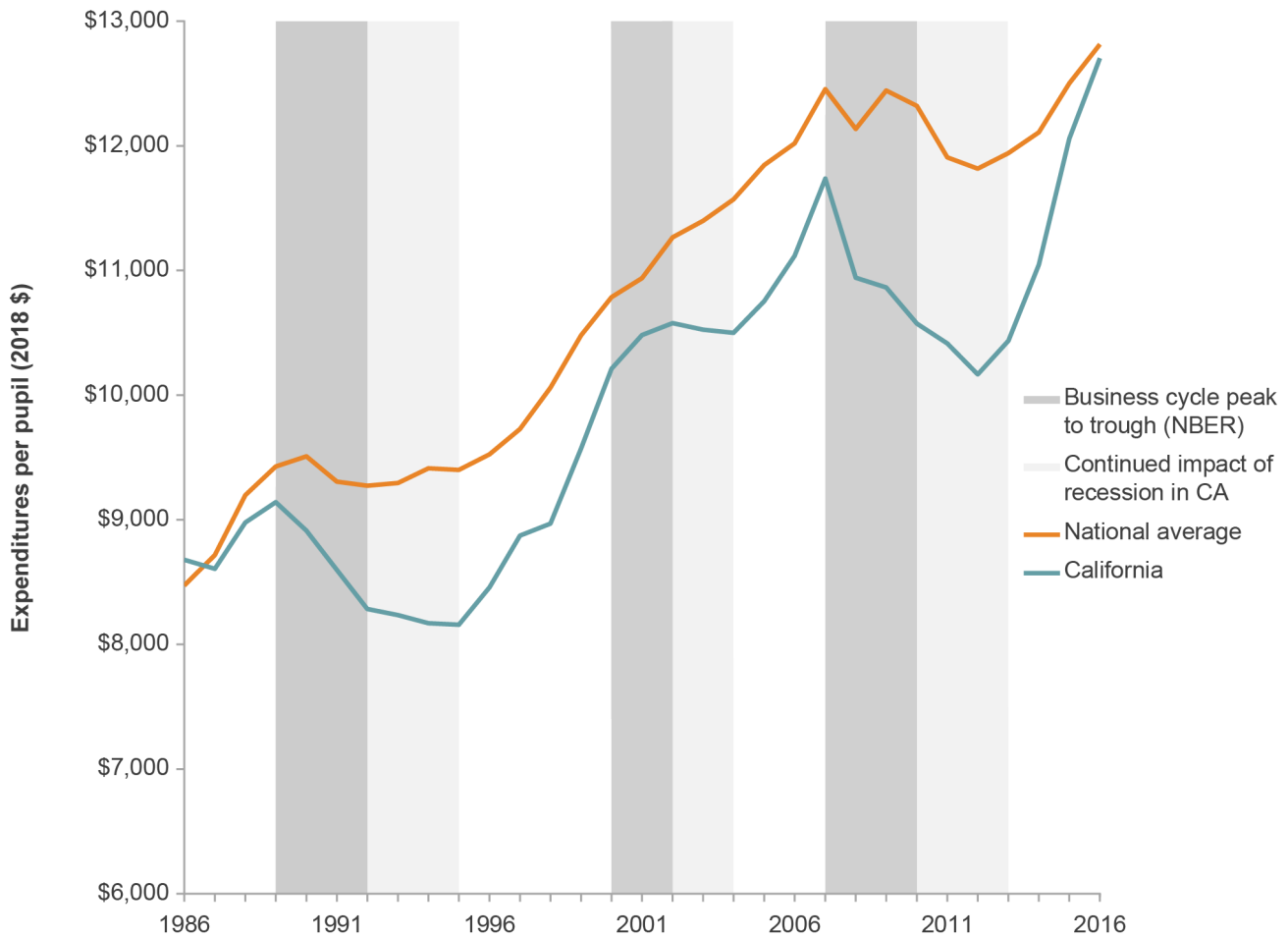
⁴ See [LAO \(2019a\)](#) for an overview of California’s fiscal outlook.

⁵ For example, see [LAO \(2005\)](#).

⁶ In addition, a substantial share of high earners’ income comes from capital gains and other equities that are particularly sensitive to market fluctuations, adding further volatility. See Murphy et al. 2019 for a more in-depth examination of state revenue sources and volatility.

more sharply than the national average in the aftermath of the early 1990s recession and stagnated after the dot-com crash of the early 2000s even as spending rose nationally. Conversely, school spending has tended to increase more quickly in California in times of economic recovery and expansion. In 2016–17 (the most recent year comparable data are available for the nation) school spending in California was nearly on par with the national average, a level it has been below for roughly three decades.

FIGURE 1
School spending in California has diverged from national trends following recessions



SOURCES: National Center for Education Statistics and authors' calculations.

NOTE: Spending is reported in per-student, inflation-adjusted dollars (2018\$). Only spending on current expenditures is included (e.g., staff, materials, operations). Shaded areas show periods of recession; the darker shaded areas show national recessions as defined by the National Bureau of Economic Research (NBER), and the lighter shaded areas show periods of recession in California, following the convention of Murphy et al. (2019).

State Policies to Address Budget Shortfalls

California is constitutionally required to have a balanced budget, meaning that in times of budget shortfalls the state must find ways to cut or delay spending, raise revenues, or draw on existing reserves. In past recessions and in the nascent stages of the current crisis, the state turned to several budget tools to ease the effect of falling revenue. We briefly describe these tools below, with a focus on how fiscal policies of the Great Recession relate to K–12 education.

Spending Cuts

Perhaps the most straightforward budget-balancing tool is to cut expenditures. Given that funding for K–12 education and community college (often referred to as “K–14” education) comprises roughly 40 percent of California’s budget, cuts to K–12 education are generally a major component of state spending cuts. Moreover, Proposition 98 guarantees that funding for K–14 education is about 40 percent of the state budget; when reduced revenue requires a smaller state budget, the guaranteed minimum spending level is mechanically reduced. Notably, in a special session of the legislature in 2009, lawmakers agreed to nearly \$15 billion in spending cuts—and reduced K–14 spending by \$8.4 billion under the Prop 98 minimum guarantee (LAO 2017).

The state need not fund at the Prop 98 minimum; indeed, the budget for the 2020–2021 fiscal year provides funding above the minimum. However, this is often difficult to do and has generally not been the case in past recessions. In fact, the legislature overrode and suspended the Prop 98 minimum guarantee in 2010–11 given continued fiscal distress, a situation that had happened only once before in 2004–05.⁷

Revenue Increases

Revenue increases—generally achieved through tax increases—are a politically and economically difficult tool to use during recessions. Nevertheless, California has helped manage some past budget shortfalls by increasing taxes. During the Great Recession, temporary increases in the personal income tax, state sales tax, and vehicle licensing fee generated billions in new revenue. In addition, Proposition 30 (2012) temporarily increased income taxes on earnings above \$250,000 and added 0.25 percent to the state sales tax, generating billions for the General Fund. These increases were extended in 2016 (Proposition 55) and will remain in effect until 2030.

Reserves

State and local governments often hold some amount of reserves, funded by setting aside budget surpluses in past years. State-held reserves were generally small and insignificant in the past recession. However, in the ensuing recovery, policymakers chose to set aside money to better prepare for future crises; these policies have left the state in a much better position to deal with the fiscal fallout from the current pandemic. From the perspective of K–12 funding, the two most relevant state reserve funds are the Budget Stabilization Account (BSA), and the Public School System Stabilization Account (PSSSA).

Budget Stabilization Account. After the dot-com recession in the early 2000s, voters passed Proposition 58, establishing the state’s Budget Stabilization Account (BSA) and requiring annual transfers into this reserve fund.⁸ However, Proposition 58 also allowed those deposits to be suspended by an executive order; accordingly, before 2014 only two deposits were made to the BSA (2006–07 and 2007–08)—later transfers were suspended due to the Great Recession.

⁷ See LAO (2017) for an overview of Proposition 98 over the years.

⁸ Under Proposition 58, deposits were capped at fund balance of \$8 billion or 5 percent of General Fund revenues, whichever was larger. The deposits were set to increase from 1 percent of General Fund revenues in 2006–07 to 3 percent in 2008–09 and all years following.

In 2014, voters passed Proposition 2, setting aside 1.5 percent of revenues from the General Fund and from excess capital gains and allocating half of the total to the BSA.⁹ Proposition 2 also amended the rules of withdrawal from the BSA: that is, the legislature may reduce the deposit or make a withdrawal from the reserve only during a “budget emergency.”¹⁰ In the 2020–21 state budget, nearly half (\$7.8 billion) of the BSA was drawn down to address the shortfall due to COVID-19 and the associated recession.

State’s Proposition 98 Reserve. In addition to the BSA, Proposition 2 also created a K–14 specific reserve: the Public School System Stabilization Account (PSSSA). Deposits into the PSSSA are triggered under a series of Proposition 98 conditions.¹¹ In contrast with the BSA, the restrictive design of the PSSSA has curtailed any meaningful growth of the fund. The state was able to make its first deposit into the account in the 2019–20 enacted budget, five years after its creation (LAO 2020b).

The PSSSA also affects district-held reserves. School districts must maintain a minimum level of reserves depending upon average daily attendance (on average, 3% of annual expenditures).¹² Notably, state law requires a 10 percent cap on local reserves when the PSSSA reaches at least 3 percent of the K–12 portion of the Proposition 98 funding guarantee. These reserve caps are not yet binding, as deposits into the PSSSA have yet to reach 3 percent. Most districts hold reserves in excess of current caps, however, and these caps could severely limit how districts can use reserves to mitigate declines in funding, among other uses. We discuss district-held reserve funds in greater detail in the next section.

Deferrals, Borrowing, and Other Policy Tools

Deferrals are a policy tool that allows the state to delay payments from one fiscal year to the next. Notably, they were used to balance the California budget during the Great Recession: the state deferred \$8.5 billion of K–12 school funding in 2010–11, 2011–12, and 2012–13 (Decker 2015).

While not often considered a form of borrowing—compared to, for example, the \$15 billion in Economic Recovery Bonds approved by voters in 2004 during the dot-com recession—deferrals are essentially short-term loans on behalf of school districts or other governmental agencies that receive state funding. When the state defers payments, districts must rely on their own reserves, on borrowing, or on spending cuts to cover obligations until state payments are received. In the 2020–21 budget, California included deferrals of future payments so the state could continue K–12 funding at roughly the same level through this school year despite revenue shortfalls.

Other fiscal strategies were also necessary during the Great Recession. To allow more leeway in how districts allocated limited resources, the state gave districts the flexibility to transfer some categorical block grant funds to each district’s general fund. The goal was to allow districts to target their direct classroom expenditures and essential student services.¹³ Additionally, the state shifted property tax revenue from redevelopment agencies to schools and community colleges, which helped the state meet its Proposition 98 obligations.¹⁴

⁹ Given that capital gains are an important driver of revenue volatility in California, Proposition 2’s focus on drawing from those revenues is particularly important. This allows the state to build out robust reserves during times of economic expansion. The other half of the Proposition 2 funds are used to pay down eligible debts.

¹⁰ During a budget emergency, the legislature may only withdraw the lesser of: the amount needed to maintain General Fund spending at the highest level of the past three enacted budget acts, or 50 percent of the BSA balance. This can only be declared by the Governor for two reasons: (1) whether estimated resources in the current or upcoming fiscal year are insufficient to keep spending at the level of the highest of the prior three budgets, adjusted for inflation and population; (2) in response to a natural or man-made disaster.

¹¹ Conditions for a deposit into the PSSSA include: Proposition 98 is not suspended in the fiscal year in which a deposit would be made; Proposition 98’s Test 1 is operative (as opposed to Test 2 or Test 3); all “maintenance factor” obligations created prior to the 2014–15 fiscal year have been repaid; a maintenance factor obligation is not created in the fiscal year in which the deposit would be made; and the Proposition 98 funding level is higher than in the prior fiscal year, adjusted for the percent change in attendance and the change in the cost of living.

¹² A reserve more than twice the minimum requires an annual statement justifying the need for a higher reserve balance (LAO, 2019b).

¹³ See Fuller et al. (2011) and Imazeki (2012) for analyses of categorical funding flexibility during the Great Recession.

¹⁴ This consisted of \$1.1 billion in settle-up monies, owed in satisfaction of prior year Proposition 98 minimum guarantees, and \$618.7 million of Public Transportation Account, Mass Transportation Fund resources for the Home-to-School Transportation program.

State fiscal tools during the Great Recession

California entered the 2007–08 budget year with a projected \$4 billion surplus, which was quickly revised by the Legislative Analyst’s Office to a \$2 billion deficit by November of 2007.* The situation grew in gravity over the next several years as the recession’s underlying housing crisis continued to unfold, sending unemployment rates to historic highs, and causing the overall state budget deficit to grow year after year, as the economic crisis first worsened and then moved towards a slow recovery. To manage these budget deficits, the state turned to a variety of fiscal tools.

Spending Cuts

- Reduced Prop 98 and program allocations, consolidated programs
- Eliminated cost of living adjustments (COLAs)
- Suspended requirements for smaller class sizes for Kindergarten through Grade 3 classrooms

Increased District Flexibility

- Move to Categorical Flexibility—districts were given greater leeway in how to allocate funds for existing 42 categorical funds (“Tier 3 funds”) to areas that needed greater priority within districts
- Reduced requirement for districts to set aside general fund expenditures for maintenance from 3 percent to 1 percent, exempting some districts with newer facilities
- Allowed shorter school year, with fewer instructional days

Budget Swaps, Shifts, and Transfers

- In a 2009 Special Session, the legislature acted to replace General Fund spending with funds from a Prop 98 reversion account (2008–2009 and 2009–2010) and public transportation account (2007–08 and 2008–09) to keep Prop 98 fully funded (without mandated COLA adjustments)
- Shifted funding from county redevelopment agencies to local schools and community colleges
- Deferred K–12 payments within the fiscal year and from one fiscal year to the next.

* See [LAO \(2018\)](#).

Federal Stimulus during Recession

The federal government is an essential partner in times of fiscal crisis because it can run at a deficit, increasing spending even amid declining revenues. Over the past four recessions, the state has received significant funding from the federal government. Federal funds have also been crucial in this current COVID-19 recession: money in the form of the Coronavirus Aid, Relief, and Economic Security (CARES) Act provided \$9.5 billion in direct funding to the state, \$4.5 billion of which was allocated to K–12 schools and community colleges for learning-loss mitigation. Much of the remaining state CARES Act funding went to public health and safety net programs; the federal government also allocated an additional \$5.8 billion directly to large cities and counties.

In the Great Recession, federal assistance was significant for education and other safety net programs. On February 17, 2009, President Obama signed into law the American Recovery and Reinvestment Act (ARRA). California received over \$11.3 billion of ARRA funds, with most allocated to fund K–12 and higher education in

the state. Schools in California received \$6 billion in ARRA funding to be spent over three fiscal years. The Education Jobs and Medicaid Assistance Act of 2010 also provided California schools with an additional \$1.2 billion in one-time federal funding to retain school staff and reduce teacher layoffs. Without these federal dollars—which were primarily targeted to the most disadvantaged schools and districts—budget cuts would have been even larger, especially for districts with a greater number of low-income and nonwhite students. We detail the disproportionate impacts of the Great Recession in further detail later in the report.

Local Reserves: Policy and Efficacy

When state and federal actions cannot fully protect funding for K–12 schools, district policymakers must determine how to balance their own budgets. In lieu of cutting spending—which may hurt the quality of education and the services provided to students—districts can draw down on their own reserve funds, if they have accumulated any significant balances. Districts have some ways to increase revenues from local sources, for example by assessing parcel taxes on local property (conditional on voter approval).¹⁵ In general, such increases were not widespread during the recession, and were often small in magnitude. For this reason, locally held reserve funds are a primary mechanism for districts to mitigate the effects of declines and state and other funding sources without cutting spending.

In this section we examine the size and distribution of local reserve funds across districts. We then study their role in the Great Recession and provide evidence that districts were able to limit spending cuts when faced with revenue shortfalls because of their reserve funds.

Overview of School District Reserves

Much like the state, all districts maintain a general fund account; districts receive revenue through this account, which they use to operate core programs. Depending on revenues and expenditures, the account may end a fiscal year with a remaining balance or a surplus. Each year, districts with surpluses add to their reserves. Districts with a remaining balance—because spending was greater than revenues—may draw from previously held reserves to bridge any deficits. Reserves allow districts to manage cash flow, alleviate funding volatility, address unexpected costs, save for larger purchases, and obtain higher credit ratings. For these reasons, district reserves generally exceed the state’s minimum requirement.

Reserve funds comprise multiple subcomponents, per the national standards set for fund balance reporting by the Governmental Accounting Standards Board (GASB).¹⁶ Districts must group their reserve amounts into one of five categories that apply varying levels of stringency for spending those funds.¹⁷ These categories are: *nonspendable* (not available for spending), *restricted* (earmarked for a specific purpose with legal requirements for usage), *committed* (earmarked for a specific purpose by the local school board), *assigned* (earmarked for a specific purpose by a district employee, such as superintendents or chief business officers), and *unassigned* (available for spending on any purpose).

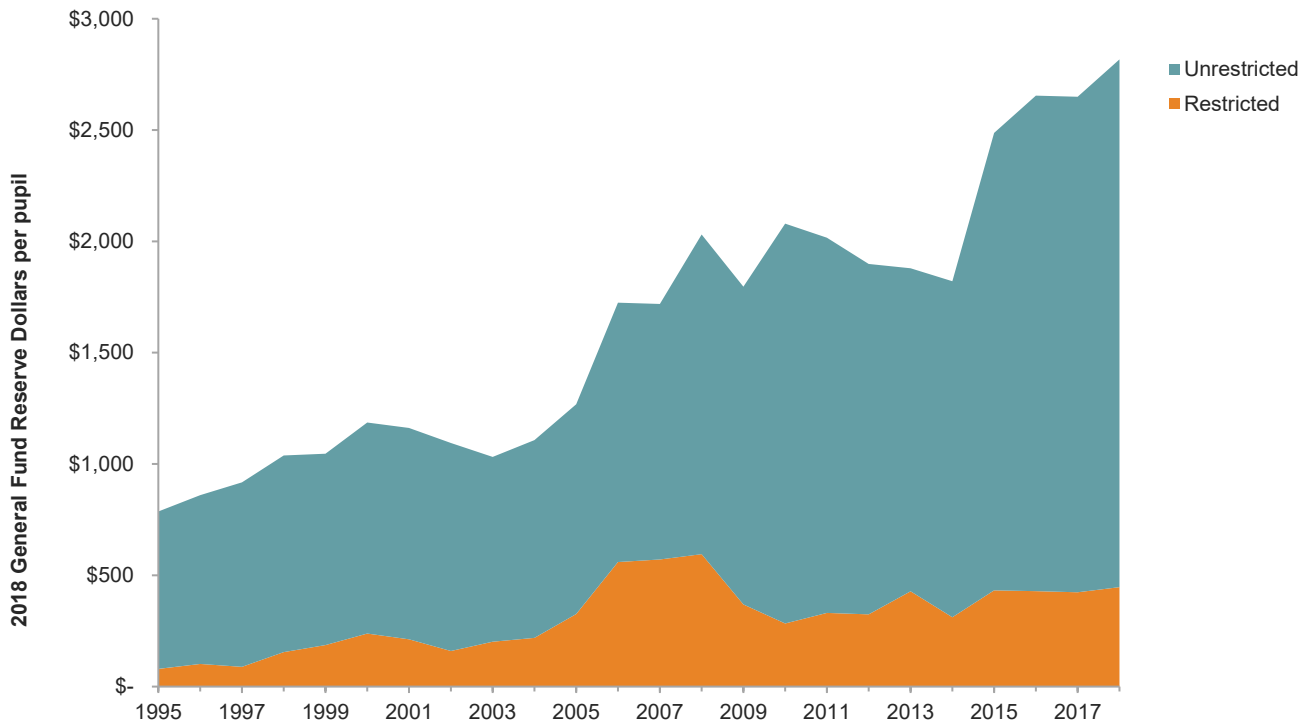
¹⁵ Districts can also issue bonds and fund their financing through increased property tax rates, but these actions are limited to capital infrastructure and not operational expenditures, which inhibits their ability to be used as a means of mitigating spending declines due to declines in general operating revenues.

¹⁶ See [GAO 2009](#) for a comprehensive overview.

¹⁷ See [LAO \(2015\)](#) for a detailed overview of district reserve funds and requirements.

Reserve funds can generally be described as either restricted or unrestricted.¹⁸ While there are some constraints, districts control whether reserves are designated as committed, assigned, and unassigned; for this report, we designate all of these types as unrestricted reserves. On the other hand, nonspendable and restricted reserves are generally constrained by state or federal law, and we refer to these as restricted reserves. As shown in Figure 2, unrestricted reserves have been the largest district reserve category for over two decades.¹⁹ Most district reserves are unrestricted funds (i.e., committed, assigned, and unassigned), available to districts to control and decide how to use.

FIGURE 2
Reserve levels have increased substantially over time



SOURCE: California Department of Education, SACS and J-200 district finance data; authors' calculations.

NOTE: Only reserves in a district's general fund or special fund for noncapital projects are included. Averages are weighted by district average daily attendance (ADA). Districts with ADA less than 250 are excluded. A small number of districts with more than 500 percent or less than 20 percent of the California mean spending per pupil in a given year are also excluded. See [Technical Appendix C](#) for further detail on sample restrictions and data sources. See [Figure A1](#) for an equivalent time series as a percent of student spending.

Importantly, the ebbs and flows of these funds do not always represent their liquidity. Due to accounting conventions, districts may need to record that they received funds before the cash actually becomes available for use. For example, during the Great Recession, reserve levels *increased* in most districts, despite large funding declines. Because the state had deferred revenue payments to districts, the level of reserve funds increased.

¹⁸ Here we follow the same convention as LAO (2020b) in grouping reserve funds into restricted and unrestricted reserves.

¹⁹ Here we include only reserves in a district's general fund or special fund for noncapital projects.

Districts also used ARRA funds over several years, leading to higher reserve balances between 2007 and 2010 and subsequent decline until 2014.²⁰

Before the Great Recession, unrestricted reserve levels had been growing at a faster rate than overall school funding: between 1997–98 and 2007–08 average unrestricted reserve levels increased by nearly two-thirds, from roughly \$700 to \$1,150 per pupil. Reserve growth in the five years before the recession was correlated with enrollment growth (but not decline) and with increases in revenue limit funding, federal funding, and to a lesser extent, local funding from nonstandard sources (e.g., parcel taxes).²¹

Since then, reserve funds have continued to increase, in part due to the decade-long economic expansion that benefitted the state and therefore the K–12 system overall. When LCFF was implemented in recent years, it led to larger funding increases for some districts (Lafortune 2019), and these districts were able to enlarge their reserve balances. Indeed, growth in reserve levels since the recession is correlated with increases in LCFF funding increases and in other state funding sources ([Technical Appendix Table B2](#)).²² As of 2018, districts held roughly \$2,800 per pupil in total general fund reserves, of which nearly \$2,400 were unrestricted funds.²³

Reserves Helped Districts Maintain Spending Levels in the Recession

How effective were these reserves in helping districts avoid spending cuts? Figure 2, earlier, shows that reserve levels actually grew during the recession, suggesting that districts did not spend reserves when they lost revenue. However, as previously mentioned, annual changes during the recession are somewhat obscured by state and federal policy choices (e.g., deferrals, ARRA). For this reason, fund balances do not necessarily represent available cash-on-hand, complicating any analyses over time. It is therefore important to examine whether district reserves are—in practice—an effective fiscal tool to mitigate funding volatility.

To measure the impact of reserves during the Great Recession, we examine how spending cuts evolved for districts with different prior reserve levels, holding revenue loss constant. In other words, we ask: *for a given revenue loss, how do prior reserve levels relate to enacted spending declines?* Here we focus on prior reserve levels to avoid the difficulties in accounting for reserves that districts might have been unable to use for current spending.

In Figure 3, two sets of estimates²⁴ are reported: estimates using peak-to-trough spending changes from 2007–08 to 2012–13; and estimates of cumulative declines, adding up the total loss in funding between 2008–09 and 2012–13 had spending persisted at 2007–08 levels.

The estimates on the left of Figure 3 show that for a given revenue loss, a dollar of unrestricted reserves is associated with a 21-cent smaller annual spending cut between 2007–08 and 2012–13. For restricted reserves, the estimate is half the size (10 cents) and not statistically significant.

The estimates on the right side show the effect of reserves on spending over all recession years, where the dependent variable is the total spending decline cumulated over the entire recession. Here, for a given total

²⁰ See LAO (2015) for a more comprehensive discussion of the various policy actions that led to growth in reserve levels during the Great Recession.

²¹ See [Technical Appendix Table B2](#).

²² [Technical Appendix Table B2](#) also provides evidence that, conditional on funding changes, reserves increased faster in districts with declining enrollment. This is in contrast with the pre-recession correlations. While this seems counterintuitive due to the cost pressures brought on by declining enrollment, districts that continue to decline year-over-year see persistently higher levels of per-student funding, due to the one-year hold harmless protection in state funding (Warren and Lafortune 2020). A deeper analysis of the growth of reserve funds and its causes in recent years is beyond the scope of this report.

²³ As a percent of annual student spending, this is 20.1% and 17.5%, respectively.

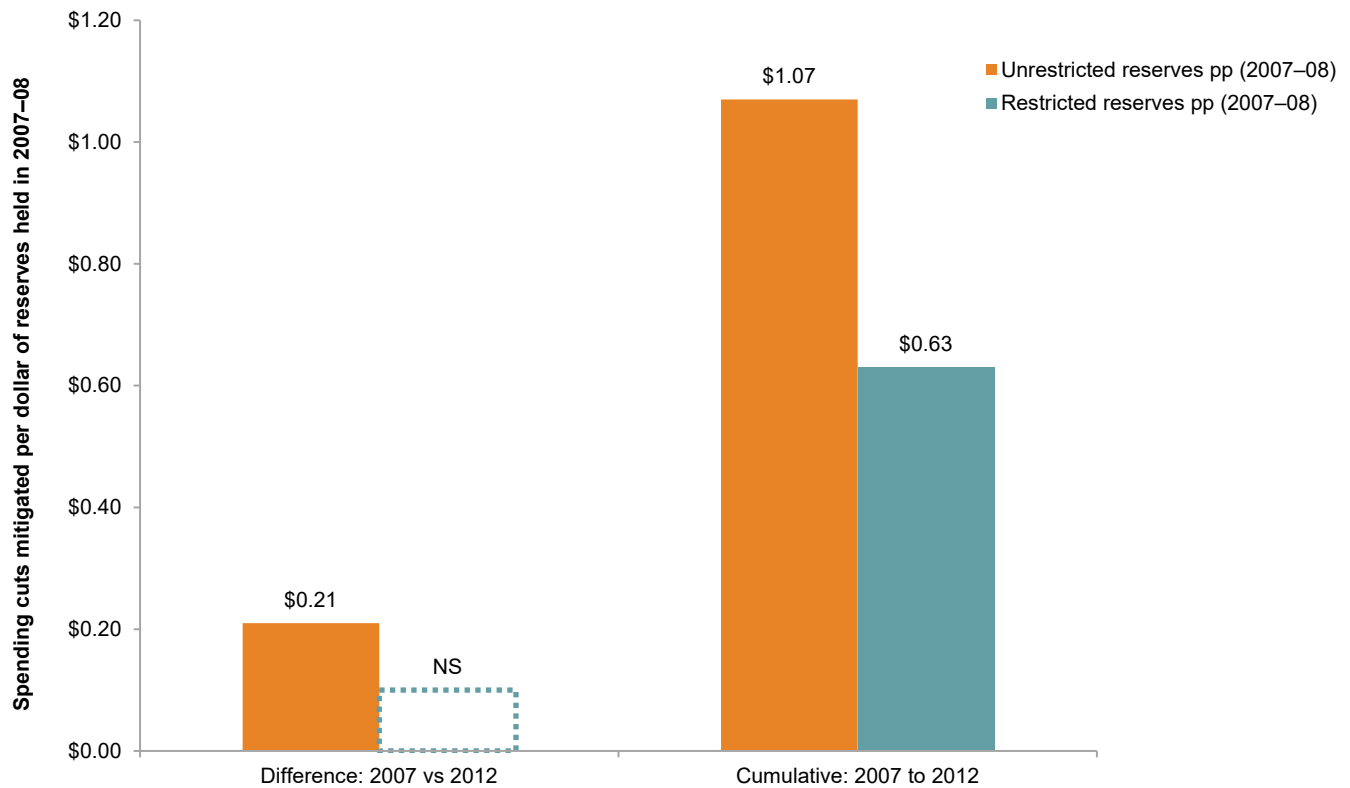
²⁴ Estimates are from regressions of spending declines on prior reserve levels. Regressions include controls for district demographic composition and the change in revenue during the recession. See [Technical Appendix B](#) for detail on the specification used and [Technical Appendix Table B1](#) for point estimates and standard errors.

revenue loss over five years, in districts with an extra dollar of unrestricted reserves in 2007–08, overall spending losses were lower by \$1.07 (statistically significant). An extra dollar of restricted reserves is associated with spending losses that were lower by 63 cents (statistically significant).

Thus, these estimates show that when districts held unrestricted reserves, they made smaller spending cuts by roughly \$1 for every \$1 of reserves held.²⁵ Restricted reserves also appear to provide some partial insurance over the entire recession period. Estimates for restricted reserves are sensitive to controlling for district demographics, however, so we interpret these with greater caution. Overall, while other differences in district fiscal management are likely, these results strongly suggest that with unrestricted reserves districts avoided revenue losses approximately dollar-per-dollar during the past recession.

FIGURE 3

Every dollar of unrestricted reserves held in 2007–08 mitigated about \$1 of spending cuts between 2008–09 and 2012–13



SOURCE: SACS district financial data; authors' calculations.

NOTES: Point estimates shown above each bar. "NS" denotes an estimate that is not statistically significant. See [Technical Appendix B](#) for regression specifications. Regressions are weighted by district average daily attendance (ADA). Districts with ADA less than 250 are excluded. A small number of districts with more than 500 percent or less than 20 percent of the California mean spending per pupil in a given year are also excluded. See [Technical Appendix C](#) for further detail on sample restrictions and data sources.

²⁵ Results are very similar in specifications that exclude LAUSD. See [Technical Appendix Table B1](#).

School Budget Cuts in the Great Recession

Despite state and federal policies to alleviate the impacts of the Great Recession, most K–12 districts in California lost significant revenue. Moreover, while the state recovery first began in 2012, K–12 spending sank to its trough in the 2012–13 school year. Then spending did not rise above pre-recession levels until 2015–16 (Figure 1, earlier). For districts that held them, reserves helped to mitigate cuts, but revenue shortfalls went well beyond the capacity of most districts to self-insure. Moreover, districts were not equally affected, and many of those serving the most disadvantaged students had the largest cuts.

In this section, we examine the impacts of the Great Recession on school finances and resources. While the current COVID-19 crisis is very different in nature, understanding the consequences and differential impacts of budget cuts on schools is crucial for policymakers grappling with how to distribute limited funding during downturns, or when choosing how much to hold in reserves in times of economic expansion.

Lower State Funding Drove District Revenue Loss

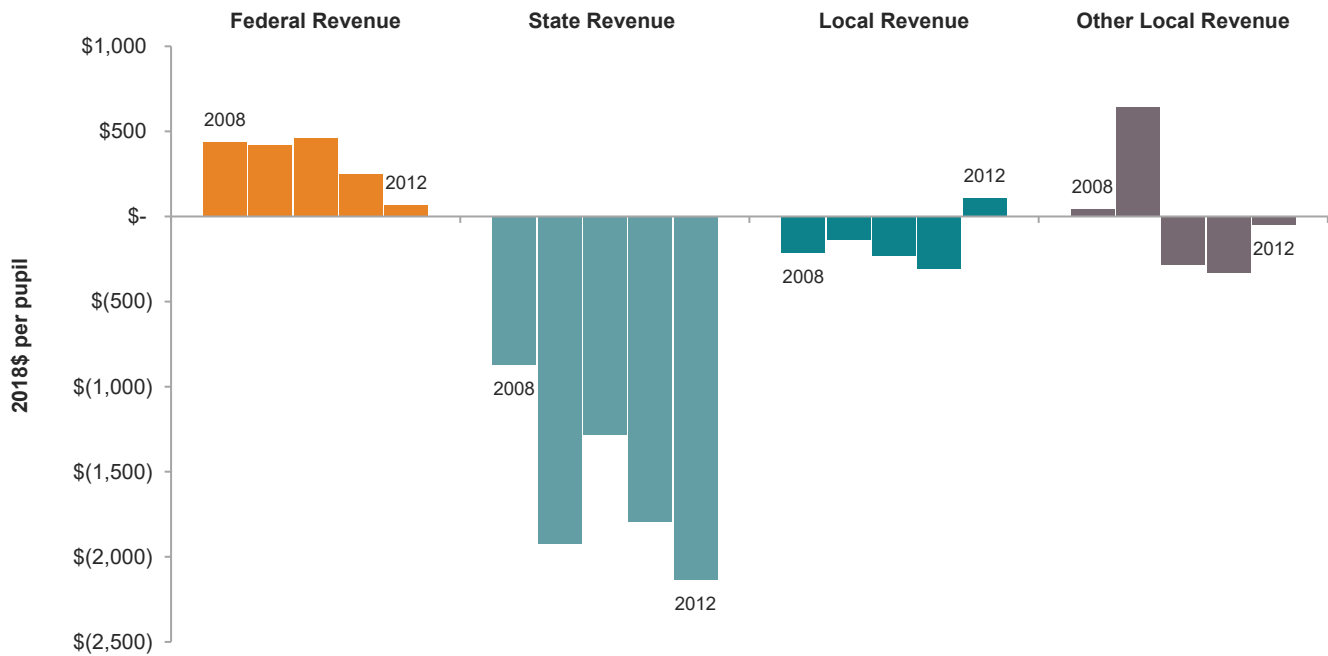
Between 2008–09 and 2012–13, districts cumulatively lost \$7,144 in revenue per student (Figure 1, earlier).²⁶ Compared to 2007–08, funding in 2012–13 fell by over \$2,000 per student in the average district, driven almost entirely by the drop in state revenue (\$2,100 lower). While the economic impacts of the recession were greatest in 2008 and 2009, per-student state revenues actually hit their trough in 2012–13. Other revenue sources, including increases in federal and other local revenues (e.g., local construction bonds or parcel taxes) helped offset some losses, but these sources were small relative to the large changes in state revenues.²⁷

²⁶ Assuming revenues would have stayed at their 2007–08 levels, adjusting for inflation.

²⁷ Despite the housing crash in the recession, local revenues did not fall much on average, and started increasing in 2012–13, when overall revenues and spending reached its trough. This is partially due to Proposition 13 and the difference between assessed and market value: just as rapid increases in property values lead to only modest and gradual increases in assessed values (and hence local property tax revenues), decreases will not affect property tax receipts unless they are large enough to trigger reassessments below a property's assessed value. See LAO (2016) for a detailed overview of Proposition 13.

FIGURE 4

Annual district revenue losses during the Great Recession for the average student, by source (relative to 2007–08 levels)



SOURCE: California Department of Education, SACS district financial data; authors' calculations.

NOTE: Local revenue includes local revenue sources that contribute to the revenue limit (e.g., property tax revenues); other local revenue includes those sources that operate outside of the revenue limit (e.g., capital construction bonds, parcel taxes). Averages are weighted by district average daily attendance (ADA) and shown in inflation-adjusted 2018 dollars. Districts with ADA less than 250 are excluded. A small number of districts with more than 500 percent or less than 20 percent of the California mean spending per pupil in a given year are also excluded. See [Technical Appendix C](#) for further detail on sample restrictions and data sources.

Spending on Teacher Salaries Saw the Largest Cuts

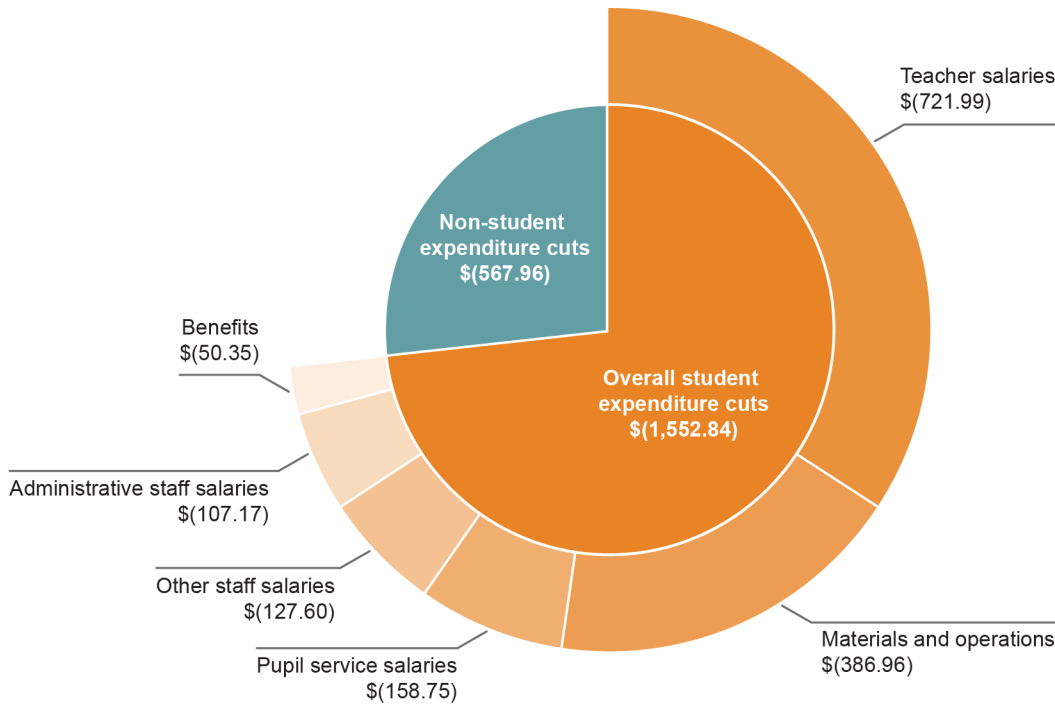
A majority of school district spending is for staff salaries and benefits.²⁸ Unsurprisingly, this area is where most spending cuts occurred in the Great Recession. Between 2007–08 and 2012–13, total spending per student declined by nearly \$2,100 in districts serving the average student. Excluding categories that are less relevant to services for K–12 students (e.g., capital, pre–K, adult education, and debt service), we can construct a measure for “student spending” (Bruno 2018). Student spending in the average district was roughly \$1,500 lower per pupil in 2012–13 than prior to the recession.

Among student spending categories, spending on staff salaries made up more than \$1,100 per pupil in cuts, with over \$700 of that reduction coming from teacher salaries (Figure 5). Significant cuts were also made to materials and operations (e.g., instructional materials), and in other nonstudent expenditures (e.g., capital, pre–K, adult education, and debt service) between 2007–08 and 2012–13. Although cuts to teacher salary spending, nonstudent spending, and materials and operations were greatest in terms of dollars, cuts to other staff salaries were larger by proportion (20% reduction compared to 15%, 17%, and 15% reductions for the other categories, respectively) ([Technical Appendix](#) Figure A3).

²⁸ Most staff expenditures are on teachers and other “certificated” personnel, such as pupil support services (e.g., librarians, counselors, nurses) and administrators. A smaller amount is for “classified” staff, including noncertificated instructional assistants, athletics staff, clerical and office staff, and maintenance staff.

FIGURE 5

By subcategory, the deepest student spending cuts during Great Recession were to teacher salaries
Spending cuts by subcategory:



SOURCE: California Department of Education, SACS district financial data; authors' calculations.

NOTES: Average expenditure change between 2007–08 and 2012–13 is shown for student and non-student expenditures, and subcategories of student expenditures. Averages are weighted by district average daily attendance (ADA) and shown in inflation adjusted 2018 dollars. Districts with ADA less than 250 are excluded. A small number of districts with more than 500 percent or 20 percent of the California mean spending per pupil in a given year are also excluded. See [Technical Appendix C](#) for further detail on sample restrictions and data sources.

The drop in spending on teacher salaries corresponds to the decline in the teaching force during the Great Recession. At its height in 2007–08, the full-time teaching workforce totaled over 301,000 full-time equivalent teachers. However, by the time of the recovery in 2012–13, it had tumbled to a low of around 272,000, a nearly 10 percent decrease despite relatively stable student enrollment ([Technical Appendix Figure A2](#)).²⁹ Since then, the total number of full-time teachers in the state has not recovered—reaching roughly 294,000 in 2018–19, signifying the lasting effects the Great Recession has had on California’s K–12 system. In addition, districts cut instructional and service days, which further reduced spending on teacher salaries: statewide, the average student had nearly two fewer instructional days in 2010–11 and 2011–12, and one fewer day in 2012–13 than prior to the recession.

Vast Differences Appear in Spending Cuts across Districts

Nearly all districts saw less revenue and lower spending during the Great Recession, but some districts fared much worse than others. Here, we focus on differences across districts in their student spending³⁰ during the

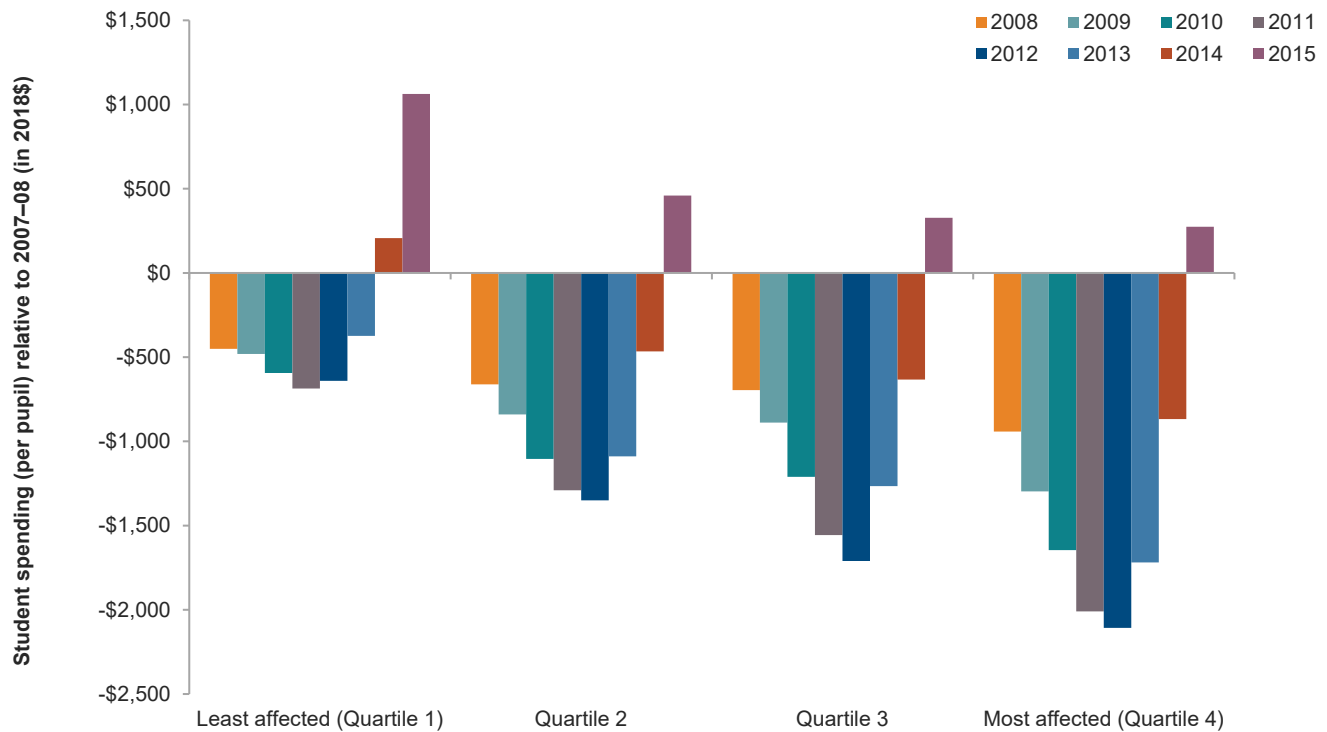
²⁹ Though the exact circumstances varied by districts, in general, this reduction was achieved through a combination of attrition without replacement, layoffs, and early retirement incentives.

³⁰ Recall, “student spending” includes all funds and revenue sources, but excludes spending that is not directly relevant for the resources provided to K–12 students in a given year: capital outlay, debt service, pre-K, and adult education. Here we follow the conventions of Bruno (2018) in generating this expenditure subset.

recession, a subset of total spending that excludes certain categories that are less relevant to K–12 students in a given year.

In the least-affected districts—defined as the quartile³¹ of districts with the smallest spending decline between 2007–08 and 2012–13—average spending was about \$640 lower per student in 2012–13 than it was in 2007–08, before the recession (Figure 6). At the other end of the spectrum, the most affected districts—the quartile of districts with the largest declines—saw much larger declines. Student spending per pupil was on average \$2,100 lower than before the recession, cumulating to an overall spending decline of nearly \$8,000 per student over five years (had spending remained flat at 2007–08 levels instead of declining). Importantly, these cuts had lasting impacts far beyond the recession: Figure 6 shows that while the least-affected districts recovered and surpassed pre-recession levels in 2014–15, it was not until 2015–16 that most other districts achieved similar recoveries.

FIGURE 6
Large differences appear across districts in Great Recession student spending declines



SOURCE: California Department of Education, SACS district financial data; authors’ calculations.

NOTES: Average student spending relative to 2007–08 levels. Averages are weighted by district average daily attendance (ADA) and shown in inflation adjusted 2018 dollars. Weighted averages are shown for each quartile of Great Recession impact, which is determined by the peak to trough spending change (2007–08 vs. 2012–13). Each quartile contains equivalent number of students, but different numbers of districts. Districts with ADA less than 250 are excluded. A small number of districts with more than 500 percent or less than 20 percent of the California mean spending per pupil in a given year are also excluded. See [Technical Appendix C](#) for further detail on sample restrictions and data sources.

³¹ Quartiles are student-weighted, meaning these districts serve 25 percent of the students of the state, but are not necessarily 25 percent of the districts in the state.

Slightly Larger Spending Cuts for Low-income, African American, Latino, and English Learner Students

The difference in the demographics between the most- and least-affected districts are notable. Those with the smallest spending declines were typically smaller districts and had lower shares of Latino students (43%), African American students (6%), and students eligible for free and reduced-price meals (45%; an indicator for low-income households) than the statewide average ([Technical Appendix Table A1](#)). The most-affected districts were on average much larger and served a broader and more disadvantaged student body: 60 percent of the students in these districts were low-income, nearly 60 percent were Hispanic/Latino, and roughly 30 percent were English Learners (ELs).³²

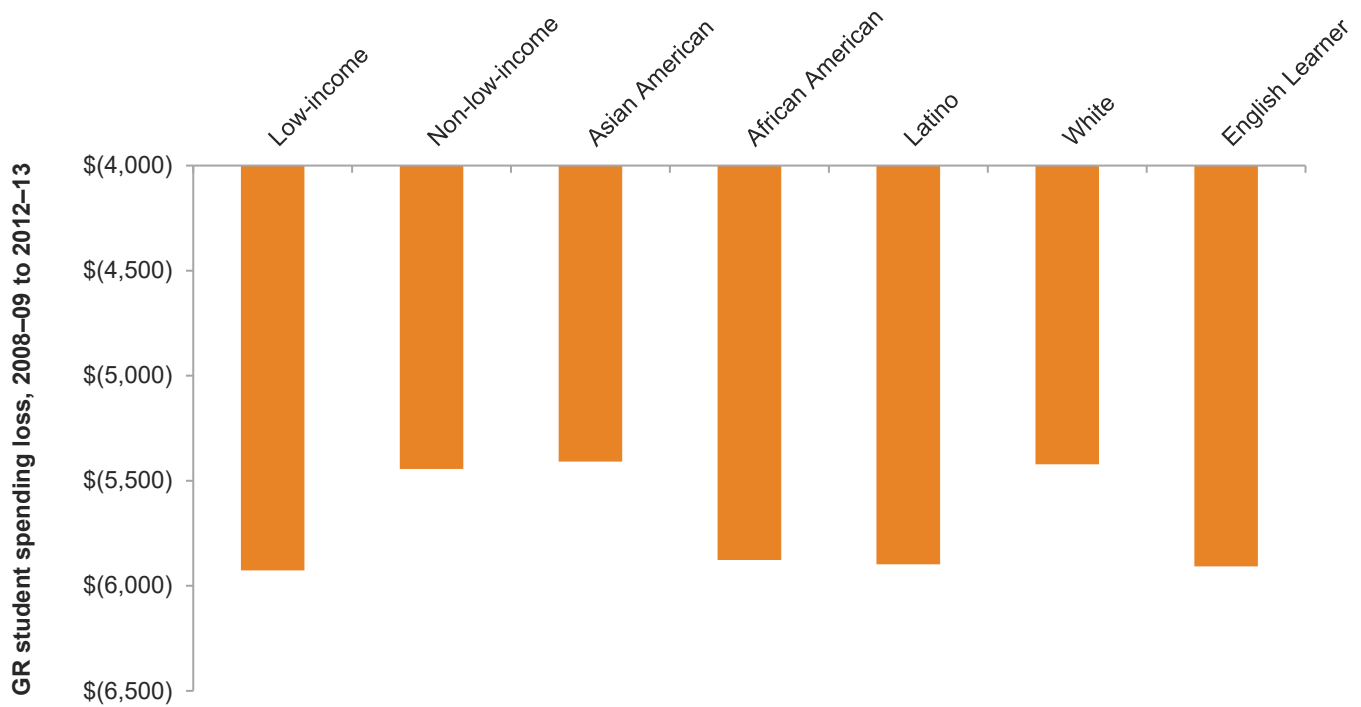
For better context around these differences, we can look at the average spending cut affecting students of varying racial/ethnic backgrounds and income levels. Given the modest variation in student demographics across differentially affected districts, disparities across student demographic groups are smaller ([Figure 7](#)). Over the course of the Great Recession, cumulative spending for the average low-income student declined over \$5,900 over five years, compared to a decline of about \$5,400 for the average non-low-income student.³³ Spending on African American, Latino, and English Learner (EL) students also fell by about \$400–\$500 more per student over the five-year period from 2008–09 to 2012–13, compared to white and/or Asian students ([Figure 7](#)).

³² Some of these differences are due to Los Angeles Unified School District (LAUSD) being one of the most affected districts. LAUSD is in the top quartile of recession impact, and because these statistics are weighted by student Average Daily Attendance (ADA), LAUSD comprises roughly 40 percent of the averages in this quartile. Analogous results are presented in [Technical Appendix D](#) that exclude LAUSD. Differences are qualitatively similar, but many of the differences in student demographics between the most and least affected districts are smaller.

³³ This is also consistent with evidence from Lafortune (2019) on the progressivity in spending by student income over time: progressivity was flat through the early 2000s but declined in the recession years, before increasing under LCFF.

FIGURE 7

Cuts to spending on students were slightly larger for low-income, African American, and English Learner students



SOURCE: SACS district financial files, enrollment files, FRPM files; authors' calculations.

NOTES: Weighted averages for each student demographic group are based on district enrollment. Districts with ADA less than 250 are excluded. A small number of districts with more than 500 percent or less than 20 percent of the California mean spending per pupil in a given year are also excluded. See [Technical Appendix C](#) for further detail on sample restrictions and data sources.

Differences Due to Reserves, Prior Funding Levels, and Cuts to Programs

What accounts for this differential growth and decline? In the previous section, we found that districts with higher unrestricted reserves had lower spending declines by roughly \$1 for every \$1 in unrestricted reserves. Indeed, large differences in reserves across districts correlate with spending declines: in the quartile of districts with the highest reserves, unrestricted reserve levels were over five times higher than in the bottom quartile (\$2,174 vs. \$465 per student). Districts with the lowest reserves also had higher shares of low-income, Latino, and EL students ([Technical Appendix Table A2](#)).

Nevertheless, most districts held insufficient pre-recession reserves to fully shield them from spending cuts when state revenue dropped. Across districts, remaining differences in declines were mainly due to differences in pre-recession spending levels, categorical program funding cuts that were not uniform across districts, and federal stimulus funding that was targeted to districts with more low-income students.

First, the most-affected districts had spent more as they entered the recession, by nearly \$2,000 per student compared to all other districts ([Technical Appendix Table A1](#)).³⁴ While the “revenue limit” system in place before the LCFF seemed to ensure relatively equal baseline funding, there was still notable variation across districts

³⁴ Prior average spending levels were very similar in the other three quartiles.

(Weston, 2010). For a given percentage cut to funding, districts with higher levels of funding will experience larger cuts in dollars.³⁵

Second, state “categorical” funding streams directed funding to districts for specific programs and students that varied across districts. Many categorical programs also had substantial cuts during the recession. Most notably, the “Tier 3” programs—which included Targeted Instructional Improvement Block Grants, Adult Education, Instructional Materials Block Grants, and Deferred Maintenance³⁶—saw significant cuts but districts had the flexibility to use these monies in their general fund.³⁷ Districts with a larger share of low-income and EL students received a larger share of Tier 3 funding, and saw larger cuts in dollars, but similar cuts as a share of the overall budget (Imazeki 2012). On the other hand, federal stimulus funding was mainly targeted to districts with more low-income students, helping to prevent further cuts in these districts.

Staffing Cuts Were Slightly Larger in Districts with Larger Cuts

How did these drops in spending affect school staffing? In Table 1, we present the changes in staffing resources between 2007–08 and 2012–13 for districts with different spending declines. In general, differences in staffing changes are smaller than in overall spending, which reflects the varying strategies districts employed to reduce costs.

Pupil-teacher ratios increased by more in the districts with the largest spending cuts (1.7 students per teacher in the most affected vs. 1.0 in the least). Overall declines in the number of teachers varied modestly across districts (declines ranging from 8.6% to 11.3%) and were smaller in the middle quartiles of district spending declines.

Hiring decreased in all districts. The share of novice teachers, or those with less than three years of experience in the profession, fell by 9 percent in the most-affected districts and by roughly 7 percent in all others. In districts with the largest cuts, the number of teachers and spending on teachers per student remain lower today than before the recession ([Technical Appendix](#) Figures A4, A5, A6).

Districts also reduced spending on staff by reducing instructional and additional “in service” days. In 2012–13, the districts with the largest cuts had 1.3 fewer instructional days than before the recession, compared to 0.6 fewer days in those with the smallest cuts. Notably, districts in the middle quartiles made similarly large cuts to the number of instructional days. Districts also slightly reduced the number of in-service days, although differences in these reductions are smaller across districts with different levels of spending cuts.

Importantly, seniority-based staffing regulations, such as “Last-in-first out” (LIFO) meant that the least experienced teachers were generally the first to be laid off.³⁸ As a result, layoffs often are associated with a rise in teacher experience and qualifications.³⁹ The data show this was the case in the past recession: average teacher experience increased by 1.2 to 2.3 years.

Pupil services staff—which include counselors, nurses, psychologists, and librarians—declined in all but the least affected districts. The typical ratio of students to pupil services staff was around 250 before the recession (i.e., one staff member per 250 students in a school), and jumped in most districts: in the most-affected districts these ratios

³⁵ [Technical Appendix](#) Table A6 shows that differences in revenue and spending declines are smaller as a percentage of a district’s budget than they are in dollar terms. In addition, revenue declines are more similar across districts than spending declines, providing additional evidence as to the importance of locally held reserves in mitigating these shortfalls.

³⁶ Cuts to maintenance and operations were particularly large (over 25%, or roughly \$300 per student annually) in the most affected districts ([Technical Appendix](#) Figure A9).

³⁷ Fuller et al. (2011) find that district responses to the added flexibility varied— some used the funds on the same programs they were previously mandated to support, while others reduced program offerings and redirected this funding to shore up the general fund.

³⁸ See LAO 2012 for a detailed overview of the teacher layoff process in California.

³⁹ In some districts, early retirement incentives were used to reduce costs by reducing levels of higher paid, more experienced staff. Williams (2015), finds evidence that these incentives induced highly experienced but lower-quality teachers into retirement.

increased by 37, while districts with medium impacts saw larger increases of 59 (Quartile 2) and 84 (Quartile 3). These ratios actually *declined* in the least-affected districts, indicating that there were slightly more staff per student in 2012–13 than before the recession.

TABLE 1

Resource changes, 2007–08 vs. 2012–13, by Great Recession student spending decline

	Quartile 1 (smallest spending declines)	Quartile 2	Quartile 3	Quartile 4 (largest spending declines)
Teaching staff FTEs	–10.5%	–8.8%	–8.6%	–11.3%
Pupil-teacher ratio	1.0	1.9	1.9	1.7
Total instructional days	–0.6	–1.0	–1.7	–1.3
Total in-service days	–0.3	–0.9	–0.8	–0.3
Pupil services staff FTEs	9.1%	–6.5%	–7.4%	–13.8%
Pupil-services staff ratio	–0.6	59.0	84.0	37.3
Mean teacher experience	1.2	1.3	1.3	2.3
Share novice teachers	–6.7%	–7.2%	–7.2%	–9.0%

SOURCES: SACS district financial data, Staff Demographics, and Staff Assignment files; authors’ calculations.

NOTES: Averages are weighted by district average daily attendance (ADA). Districts with ADA less than 250 are excluded. A small number of districts with more than 500 percent or less than 20 percent of the California mean spending per pupil in a given year are also excluded. See [Technical Appendix C](#) for further detail on sample restrictions and data sources.

Within-district Differences in Cuts were Small

Up to this point, our analyses have focused on district-level changes in spending and resources during the recession. Most decisions over budget cuts occur at the district level and relate to district-wide financial health. Moreover, existing data only allow us to examine detailed financial records at the district level.

Nonetheless, cuts affect students and schools, and not just districts. Given that student household income varies widely across schools in each California district, one may worry that cuts disproportionately affect disadvantaged students. In fact, when districts lay off staff, giving priority to senior staff can leave high-poverty schools with less-experienced teachers on average, comparing both *across and within* school districts (Lafortune 2019). During the Great Recession did districts make proportionate cuts across all schools, or did some schools fare better than others?

Overall, we find that differences were small across schools of varying poverty levels in the same district. Spending on teachers declined similarly in high- and low-poverty schools, and class-size increases were nearly identical on average. Given the larger differences across districts, these results suggest that within-district variation in student income does not exacerbate disparities in funding cuts.

Table 2 reports estimates of the average change in staffing resources for the lowest- and highest-poverty schools in a district, and the within-district difference between the two.⁴⁰ The average district varied greatly in the share of low-income students across its schools. The lowest poverty schools—based on their within-district ranking—were

⁴⁰ Specifically, the lowest-poverty schools are defined as the quartile of schools in a district with the lowest share of students eligible for free or reduced-price meals; the highest-poverty schools are analogously defined as the top quartile. Districts with very few schools will generally have little to no socioeconomic segregation across schools, and we therefore focus only on the districts with at least 10 schools. In addition, because high schools often serve a student body that is more representative of a district’s demographic makeup, we focus only on K–8 schools, so as not to compute within-district poverty gaps based on differences attributable to the size of the school. For more information on these restrictions, see [Technical Appendix C](#).

on average 32 percent low-income, whereas the highest-poverty schools served a student body that was nearly 77 percent low-income. Across all districts with at least 10 schools, the average difference in poverty rates between the highest- and lowest-poverty schools was approximately 45 percent in the 2007–08 school year.

Despite this variation and the potential for differential cuts due to seniority-based layoff rules, recession-driven cuts at high- and low-poverty schools in the same district were generally similar.⁴¹ Pupil-teacher ratios increased by about three students per teacher in both, and changes in mean teacher experience (increase of roughly 2 years) and the share of novice teachers (declines of roughly 8%) were also similar. However, high-poverty schools reduced the number of teachers slightly more: these schools saw a nearly 17 percent reduction,⁴² compared to just over 13 percent in the lowest-poverty schools. Importantly, this does not contradict the finding of no differential class size increase: high-poverty schools had lower class sizes before the recession, and thus an equivalent increase in class sizes implies a larger decline in the number of teachers.⁴³ Pupil services staffing also decreased by 4.5 percent in the lowest-poverty schools in a district, but increased by 12 percent in the highest-poverty ones.⁴⁴

TABLE 2

Great Recession resource changes at the school level, for high- and low-poverty schools within district

	Lowest-poverty schools	Highest-poverty schools	Within-district difference
Great Recession Change, 2007–08 to 2012–13			
Pupil-teacher ratio	3.1	3.0	–0.1
Teaching FTEs (% change)	–13.3%	–16.6%	–3.3%
Pupil-services staff ratio	81.1	–26.6	–121.2
Pupil services FTEs (% change)	–4.5%	12.1%	14.8%
Mean teacher experience	2.2	2.4	0.2
Share novice teachers	–7.6%	–8.5%	–0.8%
Mean teacher salary	–\$5,794	–\$5,004	\$760
Teacher salary spending, per pupil	–\$611	–\$646	–\$38
Baseline, 2007–08			
Share of Free/Reduced-Price Eligible	32.0%	76.8%	44.9%

SOURCES: SACS district financial data, Staff Demographics, and Staff Assignment files; authors’ calculations.

NOTES: Only elementary and middle schools are included. Averages are weighted by district average daily attendance (ADA). Districts with ADA less than 250 are excluded. A small number of districts with more than 500 percent or less than 20 percent of the California mean spending per pupil in a given year are also excluded. See [Technical Appendix C](#) for further detail on sample restrictions and data sources. For teacher spending variables, districts with a salary match rate of less than 95 percent are excluded. See Lafortune (2019) for detail on the estimation of school-level teacher salaries.

⁴¹ Despite differences across schools in staff seniority, the small differences in staffing reductions across schools may be expected if budgetary and class-size policies are centrally determined at the district level and/or through collective bargaining.

⁴² Defined here as full-time-equivalent teachers.

⁴³ To illustrate, consider a simple example. The average high-poverty school had pupil-teacher ratios of roughly 20 in 2007–08, while low-poverty schools had 22. For the average school size of 600 students, this implies a teaching staff of 30 teachers at the high-poverty school and 27 at the low-poverty school. An increase in pupil-teacher ratios of three would imply a reduction to 26 teachers at the high-poverty school and 24 teachers at the low-poverty school. In other words, a reduction of four teachers in the high-poverty school, but only three at the low-poverty school.

⁴⁴ Recall from Table 1 that pupil services staffing still decreased on average across the most affected three quartiles of districts. Table 2 does not show changes in the middle poverty quartiles of schools within a district, and also excludes high schools and districts with fewer than 10 schools.

Finally, we use existing data on teacher demographics and district salary schedules to estimate teacher salary spending by school.⁴⁵ The average teacher salary decreased by more in low-poverty schools (–\$5,794) than in high-poverty schools (–\$5,004). This suggests that the teachers who were laid off or retired at low-poverty schools were slightly more experienced and/or educated, on average.⁴⁶ When aggregating to the total teacher salary spending per student in a school—which will include all changes related to staffing levels and qualifications that relate to salaries—we find very similar declines. The average difference in the decline in teacher spending between high- and low-poverty schools in a district was very small (roughly \$38 per student).

Current Downturn: What Is Different This Time?

The onset of the COVID-19 pandemic has brought dramatic new challenges that go far beyond a district’s fiscal position. Schools will face significant new demands to provide adequate and equitable distance learning while they are unable to open, and to protect the health and safety of students and teachers when in-person learning resumes. Moreover, schools must address the learning loss stemming from prolonged closures and limited distance learning capacity as well as manage broader psychological effects from the pandemic and the economic downturn that have touched student life beyond the classroom.

To address these needs, districts will need significant financial resources, at a time when billions in state funding may be cut from K–12 education in coming years. Providing expanded access to school meals, ensuring students have adequate devices and internet connectivity for distance learning, and adapting to new health, safety, and sanitation requirements will continue to strain district budgets. Importantly, the state is in a much better position than before the last recession, as a significant reserve fund has been accumulated at the state level. In the most recent budget for the 2020–21 fiscal year (released June 2020), K–12 education was able to avoid funding cuts in part due to the drawing down of roughly \$8.8 billion in reserves, including \$7.8 billion from the BSA and the entire \$377 million balance of the PSSA. Nearly \$5 billion in federal stimulus funding has also been allocated to address learning loss and to support the needs of students and schools amid the pandemic.

Nevertheless, the budgetary situation for K–12 education over the coming years is precarious. Cuts were avoided in 2020–21, but not without deferrals: the enacted budget includes \$11 billion of LCFF apportionment deferrals, significantly larger than the deferrals used for K–12 education in any year during the previous recession. Moreover, federal stimulus funding is intended to support schools’ responses to the COVID-19 pandemic; these dollars will be used for additional costs associated with the pandemic rather than to backfill reductions in state revenues. Finally, revenue projections are highly uncertain but suggest large operating deficits in the coming years that may require cuts to K–12 education.

In the rest of this section, we examine how prepared districts are to manage budget cuts and fiscal uncertainty, focusing on the level and distribution of reserves built up since the last recession. We then highlight the differential impact of deferral policies, which are more disruptive to schools that receive a higher share of their funding from state sources. Finally, we discuss how uniform cuts to the LCFF formula in percentage terms will lead to larger reductions in resources in high-need districts.

⁴⁵ See the Technical Appendix in Lafortune (2019) for more details on these data and the procedure to estimate teacher salaries by school.

⁴⁶ Early retirement incentives were a tool used by some districts during the recession, but we lack any comprehensive data on these policies that would allow a more in-depth examination of these changes. These incentives were offered by roughly 30 percent of districts during the recession (LAO, 2012).

District Reserves are Larger and More Equitably Distributed

Uncertainty over the state’s economy and related funding cuts highlights the importance of district-held reserves. During the current pandemic, districts had to spend more to expand distance learning, to provide meals during school closures, and to offer professional development to educators on how to best aid student learning. Schools will incur other expenses to open safely.⁴⁷ For these reasons, district-held reserve funds can be a backstop to mitigate lower funding and to manage unplanned expenditures related to the COVID-19 pandemic.

Table 3 reports the most recent data on district-held reserves, from the 2018–19 school year. Compared to 2007–08, most districts are in a better financial position. Reserve levels are higher in dollars and as a percentage of district spending: the average student in 2018–19 attended a district with nearly \$2,200 per pupil in unrestricted reserves, equivalent to about 17 percent of annual student expenditures. If, as in the Great Recession, these reserves can mitigate spending cuts dollar-per-dollar, the district serving the average student may be able to manage a 5-percent funding drop for three years without needing to cut spending and student resources. On the other hand, if districts held reserves at their 2007–08 levels (proportional to current spending), they would be able to fully mitigate only a 3-percent funding drop for three years.

TABLE 3

Larger, more disadvantaged districts now hold higher reserves

	Quartile 4 (highest reserves)	Quartile 3	Quartile 2	Quartile 1 (lowest reserves)	Overall
Student spending pp, 2018–19	\$15,485	\$12,882	\$13,024	\$12,827	\$13,546
Total General Fund reserves	\$4,718	\$3,009	\$2,129	\$1,478	\$2,817
Unrestricted General Fund reserves	\$4,318	\$2,505	\$1,742	\$978	\$2,370
Percent Free/ Reduced Price Meals	68.0%	59.1%	56.3%	52.7%	58.9%
Percent Asian	7.3%	10.1%	10.2%	12.7%	10.1%
Percent African American	5.7%	4.3%	4.9%	6.3%	5.3%
Percent Hispanic/Latino	64.7%	55.9%	51.1%	46.6%	54.5%
Percent White	17.1%	22.7%	25.8%	24.5%	22.6%
Percent English Learner	21.7%	18.7%	17.6%	20.0%	19.5%
Enrollment	224,619	19,856	22,945	31,421	74,624

SOURCES: SACS district financial data, CDE school enrollment files; authors’ calculations.

NOTES: Averages are weighted by district average daily attendance (ADA). Districts with ADA less than 250 are excluded. A small number of districts with more than 500 percent or less than 20 percent of the California mean spending per pupil in a given year are also excluded. See [Technical Appendix C](#) for further detail on sample restrictions and data sources. See [Technical Appendix D](#) for analogous tables excluding LAUSD.

As before the last recession, there are large differences in the reserves held by different districts. While the top quartile of districts holds over \$4,300 per student in unrestricted reserves (28% of annual student spending), the bottom quartile holds just under \$1,000 (8% of annual student spending).⁴⁸ Notably, the differences across student demographic groups run in the opposite direction as those prior to the last recession. Unlike in 2007–08, the

⁴⁷ Many districts also have unmet facilities needs, which will further add to financial difficulties. Gao and Lafortune (2020) find that nearly 40 percent of the state’s students attend a school that does not meet minimum facility standards under guidelines established after the *Williams* settlement.

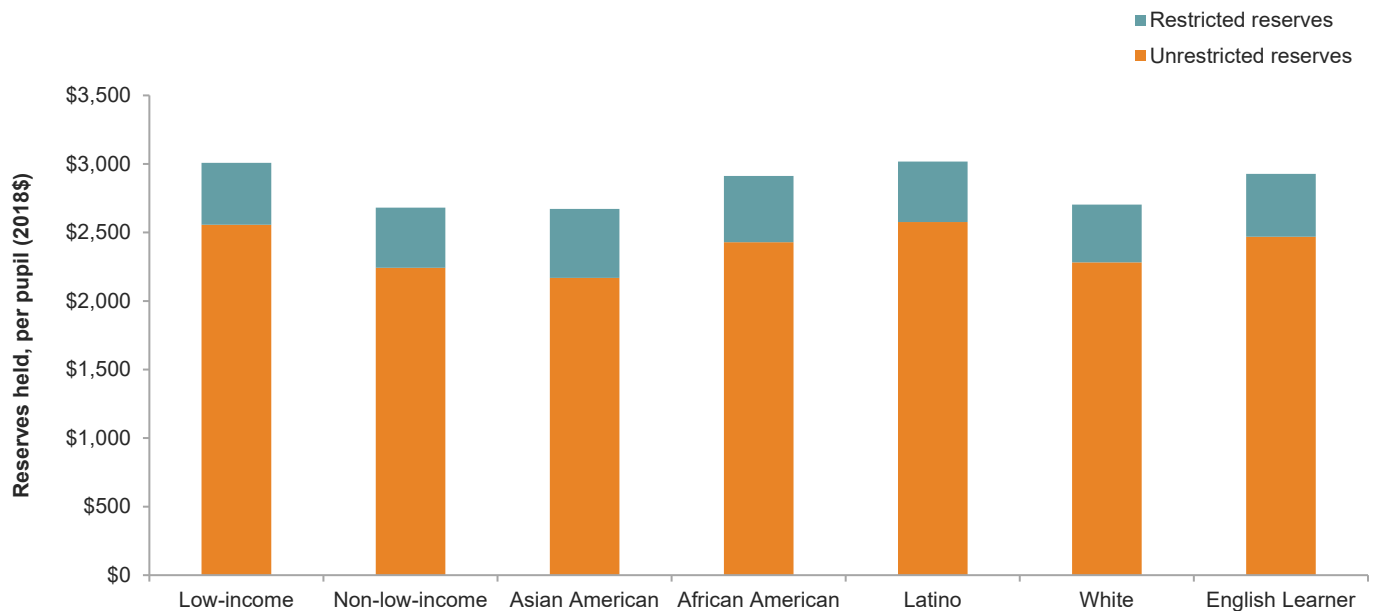
⁴⁸ See [Technical Appendix](#) Figures A7 and A8 for the full distribution of district reserves held in 2007–08 and 2018–19, respectively.

districts with the highest reserve levels tend to be larger, have more low-income and EL students, and have a higher share of African American and Latino students than those districts holding the least reserves.⁴⁹

At the student level, reserves are nearly \$350 per pupil higher for low-income than non-low-income students (\$2,419 vs. \$2,074), and are higher for African American and Latino students than for Asian and white students (Figure 8). Increased costs due to COVID-19—especially those pertaining to school meals, internet connectivity, student devices, and mitigation of learning loss—are likely much higher for districts serving more disadvantaged student populations. As the districts serving these students now have higher reserves than in the past, they will have greater capacity and flexibility to weather funding cuts—and deal with any unplanned expenditures resulting from the pandemic.

FIGURE 8

Current district-held reserves are slightly higher on average for low-income students (2018–19 school year)



SOURCE: SACS district financial data, CDE school enrollment files; authors’ calculations.

NOTE: Weighted averages for each student demographic group are based on district enrollment. Districts with ADA less than 250 are excluded. A small number of districts with more than 500 percent or less than 20 percent of the California mean spending per pupil in a given year are also excluded. See [Technical Appendix C](#) for further detail on sample restrictions and data sources.

Deferrals Have Larger Impact on High-need Districts

Some tools used to balance the 2020–21 state budget and avoid cuts to K–12 education are “one-time” solutions that may not be as effective in future years. Most notable are payment deferrals from this current fiscal year into the following year. As discussed earlier, deferrals are an implicit form of borrowing that allow the state to balance its budget without reducing funding for K–12 schools. Importantly, this money must be paid back to schools in

⁴⁹ As mentioned earlier, growth in reserves between 2013–14 and 2018–19 was highly correlated with LCFF funding increases. See [Technical Appendix Table B2](#) for regression results on the correlates of district-level reserve fund growth.

the following year, or additional deferrals must be issued until eventually the state can fulfill its payments under a balanced budget.⁵⁰

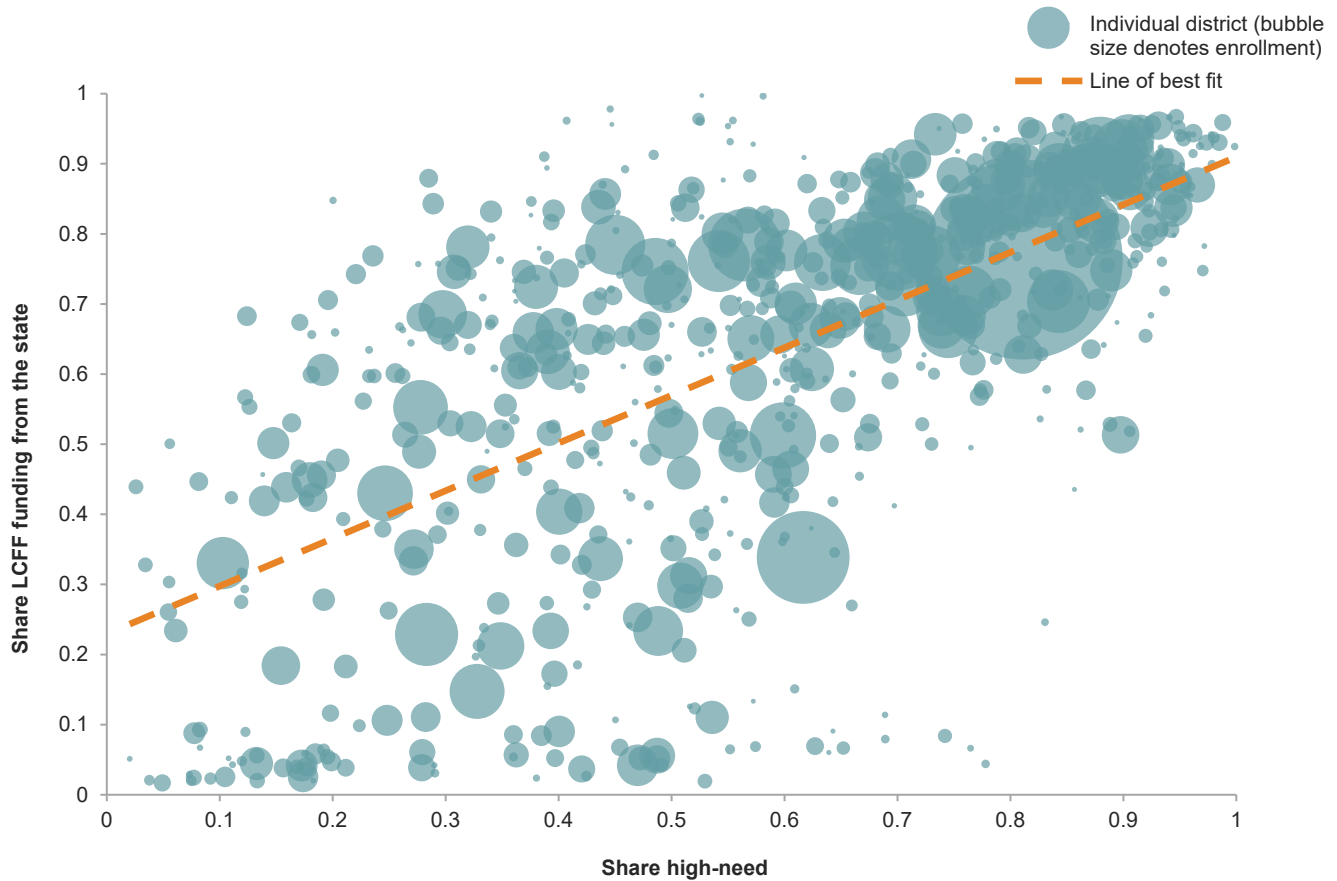
The current 2020–21 budget contains roughly \$11 billion in deferred LCFF payments. These delayed payments do not uniformly affect districts: districts with more revenue from local sources receive smaller payments from the state to meet their target LCFF funding levels. This means that districts with higher local property wealth and property tax collections will have less of their total LCFF funding deferred, while those with less local property wealth will see a higher share of revenues deferred.

Figure 9 plots the state share of a district’s LCFF funding against the district share of high-need students. The relationship between the two is remarkably strong: districts with a higher share of funding from the state—and therefore a higher share of deferred funding—have greater shares of high-need students. Deferrals will eventually be repaid by the state, but the districts that receive more of their funding from the state must rely on their own borrowing or reserves to maintain spending in the current fiscal year. While certainly preferable to budget cuts, the mechanics of state payment deferrals burden districts that receive more state funding, which are predominately those that serve the highest-need students in the state.

⁵⁰ See Decker (2015), for a more detailed description of deferrals and other similar policy choices used in the Great Recession.

FIGURE 9

Districts with more high-need students receive a greater share of funding from the state



SOURCE: SACS district financial data, CDE school enrollment files; authors' calculations.

NOTE: Figure plots the state share of LCFF funding for a district (vertical axis) and the district share high-need under LCFF (horizontal axis), for the 2018–19 school year. Each bubble depicts a single district, with larger bubbles indicating districts with greater ADA. The diagonal line plots the line of best fit, determined via an unweighted linear regression. Only districts with ADA greater than 250 are shown. Districts without data on funding or high-need student share in 2018–19 are omitted.

Other policies in the current budget are one-time solutions that will not offer long-term resources. Federal stimulus under the CARES act—provided to alleviate costs associated with COVID-19—is one example of a one-off funding stream. While additional federal stimulus is under negotiation, future state budgets may not be able to rely on the same magnitude of federal support. The most recent state budget also redirects \$2.3 billion in payments to the state's public retirement funds to reduce the contribution rates to school district pensions, which will generate equivalent savings for districts over the next two fiscal years. Similar future reductions are unlikely, especially considering the large unfunded liabilities in the state's public pension systems (Koedel and Gassman 2018).

Local Control Funding Formula and Potential Budget Cuts

Whether current reserves will be enough to maintain stable district budgets will depend on how the economic situation unfolds over the coming years. A prolonged decline in state funding similar to the past recession would demand nearly all districts make budget cuts. In the past recession, these cuts were asymmetric and had disproportionate impacts across districts, with larger impacts on low-income students and students from

disadvantaged racial/ethnic backgrounds. Similarly, how the state chooses to distribute any future cuts under the current funding formula will have important impacts on students of different socioeconomic backgrounds.

The Local Control Funding Formula (LCFF) provides additional funding to districts with greater shares of high-need students, but this also means that high-need students will also see larger cuts in terms of dollars for any proportional decrease in the funding formula. For example, in a district with more than 80 percent high-need students, a 10 percent cut to LCFF funding is a decrease of nearly \$1,200 per student. On the other hand, in a district with under 30 percent high-need students, the average decrease per student is just under \$1,000.⁵¹ This \$200 difference per student is modest, but not inconsequential: national evidence from the Great Recession shows that, on average, a \$1,000 decline in per-pupil spending (a) reduces test scores by about 4 percent of a standard deviation; (b) increases the test score gap between African American and white students by 6 percent, and reduces the college-going rate by 2.6 percent (Jackson et al. *forthcoming*).

Policy Implications

The COVID-19 pandemic has brought unprecedented challenges for school districts. However, budget cuts and fiscal distress are threats districts have confronted before. During the past recession, California schools faced massive cuts that affected their ability to provide the resources necessary for student success. Some districts fared worse than others, and in this report, we show that reserves—specifically unrestricted reserves or “rainy day funds”—allowed districts to shield budgets from deeper cuts. Local reserves were not enough to completely insure against all spending declines, and lower-income and nonwhite students fared slightly worse in the past recession. Evidence comparing spending declines at high- and low-poverty schools in the same districts show that cuts were generally proportional across schools in the same district, but higher-poverty schools made slightly deeper cuts to teacher staffing.

Current reserve levels are now higher in districts with more disadvantaged students, but uniform decreases to the Local Control Funding Formula would mean that these districts would face deeper cuts due to their proportionally higher levels of spending and state support. Moreover, high-need districts often rely heavily on state funding and face additional burdens as a higher share of their LCFF funding is subject to deferral. As the current crisis unfolds, local reserves would not be enough to protect most districts from even moderate revenue declines, and a more prolonged economic downturn could lead to several years of painful cuts to school spending.

Over the longer term and into the recovery, state policymakers should consider actions to lessen the volatility in school funding to ensure a more stable and effective public education system. Guided by our empirical findings, we propose three general recommendations that could improve the stability and resilience of California’s system of school finance:

Avoid policies that disproportionately impact disadvantaged students when balancing budgets. The budget cuts of the past recession highlight the disparate impacts on disadvantaged students and the districts that serve them. Future budget cuts under LCFF, if proportionally applied to the formula, would mean fewer dollars allocated to high-need students, schools, and districts. Moreover, even without cuts, policies to defer funding can more heavily impact districts with less property wealth that receive more state funding. Balancing budgets

⁵¹ These funding amounts are approximations calculated based on the average district (student weighted). Actual funding levels for districts with similar high-need shares vary across districts for several reasons, including past enrollment trends and the distribution of enrollment across grade levels.

requires inherently political decisions based in unique circumstances, so a one-size-fits-all rule is unlikely to govern how to distribute these cuts. Nevertheless, policymakers should actively seek to avoid situations in which budget cuts and fiscal crises disproportionately affect the school funding for disadvantaged students, many of whom are already adversely affected by economic downturns (e.g., parental job loss, housing instability).

Develop a more robust statewide K–12 reserve to insure against large, system-wide shocks. District-held reserves allow districts to flexibly respond to local needs, and these needs vary across the state. However, the largest fiscal shocks to California’s K–12 school system come from state revenue fluctuations—mainly driven by recessionary events—and not local shocks. The comparatively low share of local K–12 funding in California (compared to other states) even overstates the control local districts have over their finances; funding levels are largely determined through state decisions, and districts have little capacity to raise funding locally for operational expenditures.

Given that the state is the main source of revenue instability, it would be most efficient and equitable for the state to coordinate policies that insure against these fluctuations and that can maintain stable K–12 funding. Conversely, policies to reduce the volatility around state funding—for example, allowing districts to rely more on local revenue sources that are traditionally more stable—would help to promote stability without requiring continued state action for districts to build up reserves. However, depending on the design of the funding system, greater reliance on local funding sources could lead to discrepancies between communities with different levels of local property wealth.

Encourage districts to build up local reserves in the next recovery. Our findings show that local reserves—to the extent that districts are able to hold them—help protect from spending cuts when state revenue declines. While a more robust statewide K–12 reserve would eliminate some of the need to self-insure against fiscal downturns, local reserves can still play an important role. Moreover, reserves are also important when unplanned expenditures emerge, like during the COVID-19 pandemic.

Districts could build larger reserves if they are allowed to set aside larger shares of one-time money or if the state matches funds for local reserve deposits, up to a reasonable maximum threshold. The state should also consider eliminating or increasing the local reserves cap. While the reserve cap has not yet been binding for school districts because of the small size of the state’s K–12 reserve, it may reemerge as an issue in the recovery.

Of course, if districts have incentives to hold reserves, some warn it may be to the detriment of current students, for whom insurance against future economic crises provides little solace if current funding is inadequate. This is the inherent tradeoff in any reserve policy; sacrificing current dollars to shore up future budgets is a difficult prospect. Still, budget cuts are destabilizing to schools and evidence shows that they are damaging to students (Jackson et al. *forthcoming*). Allowing districts to accumulate robust reserves in the next economic recovery would help to ensure greater fiscal stability and would let districts quickly respond to unforeseen shocks, such as natural disasters.

The repeating boom-bust cycle in school funding hurts students and contributes instability to school operations. Moreover, these fluctuations may disproportionately affect low-income and disadvantaged students, as was the case in the Great Recession—and as it may be for the current crisis. Setting aside funding to insure the system against future downfalls is financially and politically difficult, especially after years of painful cuts. Nevertheless, state and local policymakers would be wise to consider a longer-term view of school finance policy and enact measures to maintain a stable system and ensure that the cycle of dramatic cuts every decade does not become the long-term status quo.

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