



GETTING DOWN — TO FACTS II —

RESEARCH BRIEF | SEPTEMBER 2018

Effects of the Local Control Funding Formula on Revenues, Expenditures, and Student Outcomes

Rucker C. Johnson

University of California, Berkeley

Paul Bruno

University of Southern California

Sean Tanner

Learning Policy Institute

About: The Getting Down to Facts project seeks to create a common evidence base for understanding the current state of California school systems and lay the foundation for substantive conversations about what education policies should be sustained and what might be improved to ensure increased opportunity and success for all students in California in the decades ahead. *Getting Down to Facts II* follows approximately a decade after the first Getting Down to Facts effort in 2007. This research brief is one of 19 that summarize 36 research studies that cover four main areas related to state education policy: student success, governance, personnel, and funding.

This brief summarizes two *Getting Down to Facts II* technical reports that examine changes in revenues, expenditures, and student outcomes that have occurred since the adoption of California’s Local Control Funding Formula (LCFF):

Money and Freedom: The Impact of California’s School Finance Reform on Academic Achievement and the Composition of District Spending

Rucker C. Johnson and Sean Tanner, September 2018.

District Dollars 2: California School District Finances, 2004-05 Through 2016-17

Paul Bruno, September 2018.

These and all GDTFII studies can be found at www.gettingdowntofacts.com.

Introduction

California’s Local Control Funding Formula (LCFF), signed into law in 2013, represents a substantial investment in school districts serving disadvantaged students and a modest relaxation of restrictions on district expenditures.

The policy came at a time when the state was able to increase K-12 funding, thereby restoring cuts made a few years earlier. Through the LCFF, the state distributed a large portion of those increased funds based on the proportion of disadvantaged students in each school district—those who qualify for free or reduced-price meals, have limited English proficiency, or are in foster care. Moreover, the state relinquished many of the restrictions on how districts could spend their revenues, creating more flexibility for districts.

This brief summarizes two analyses of school district funding and expenditures under the LCFF.

- Paul Bruno’s analysis looks at school finance patterns since 2004-05, providing a reminder that the new policy—and the additional state funding it provided—was laid on top of existing patterns of revenue distribution from federal, local property tax, and other local sources, and followed a period of dramatic school funding cuts because of the Great Recession.
- Rucker C. Johnson and Sean Tanner document the more recent changes in district expenditures and flexibility under the LCFF and tie those to improvements in student outcomes that have occurred since the policy was enacted.

KEY FINDINGS

- Per-pupil revenues have increased since 2013-14, particularly for districts with predominantly low-income students.
- The data provide initial evidence that money targeted to districts with the greatest student needs has led to improvements in student outcomes.
- Expenditure increases largely went toward teachers, pensions, and special education.

THE BASIC WORKINGS OF THE LOCAL CONTROL FUNDING FORMULA

California's LCFF funding system, which first took effect in the 2013-14 school year, replaced a long-standing system based on revenue limits. Revenue limits, calculated for each district, were based on historical formulas and were funded through a combination of local property taxes and state money.

Districts also received categorical programs that, at their peak, represented about 20% of the funds allocated by the state.

The LCFF replaced this prior system. The three core components of the LCFF include:

1. base grants, which are funded at different amounts based on students' grade levels;
2. supplemental grants that provide extra funds for each student identified as low-income, an English learner, or a foster youth, based on an unduplicated count; and
3. concentration grants that provide additional funds based on a district-level concentration of unduplicated pupils that is more than 55%.

(Unduplicated means that a student with more than one disadvantage, such as a low-income English learner, is counted only once.)

Roughly 10% of state funding is outside the LCFF in the form of special education, home-to-school transportation, targeted instructional improvement block grants, and school meals.

About 100 districts with high property tax income, called Basic Aid districts, receive local property tax revenue per pupil in excess of LCFF targets and receive no extra state funds as part of the LCFF formula. They are able to retain their local tax revenue that is above their LCFF targets.

Districts also receive federal funds, generally tied to student needs, and some local miscellaneous revenues in amounts that vary widely by district.

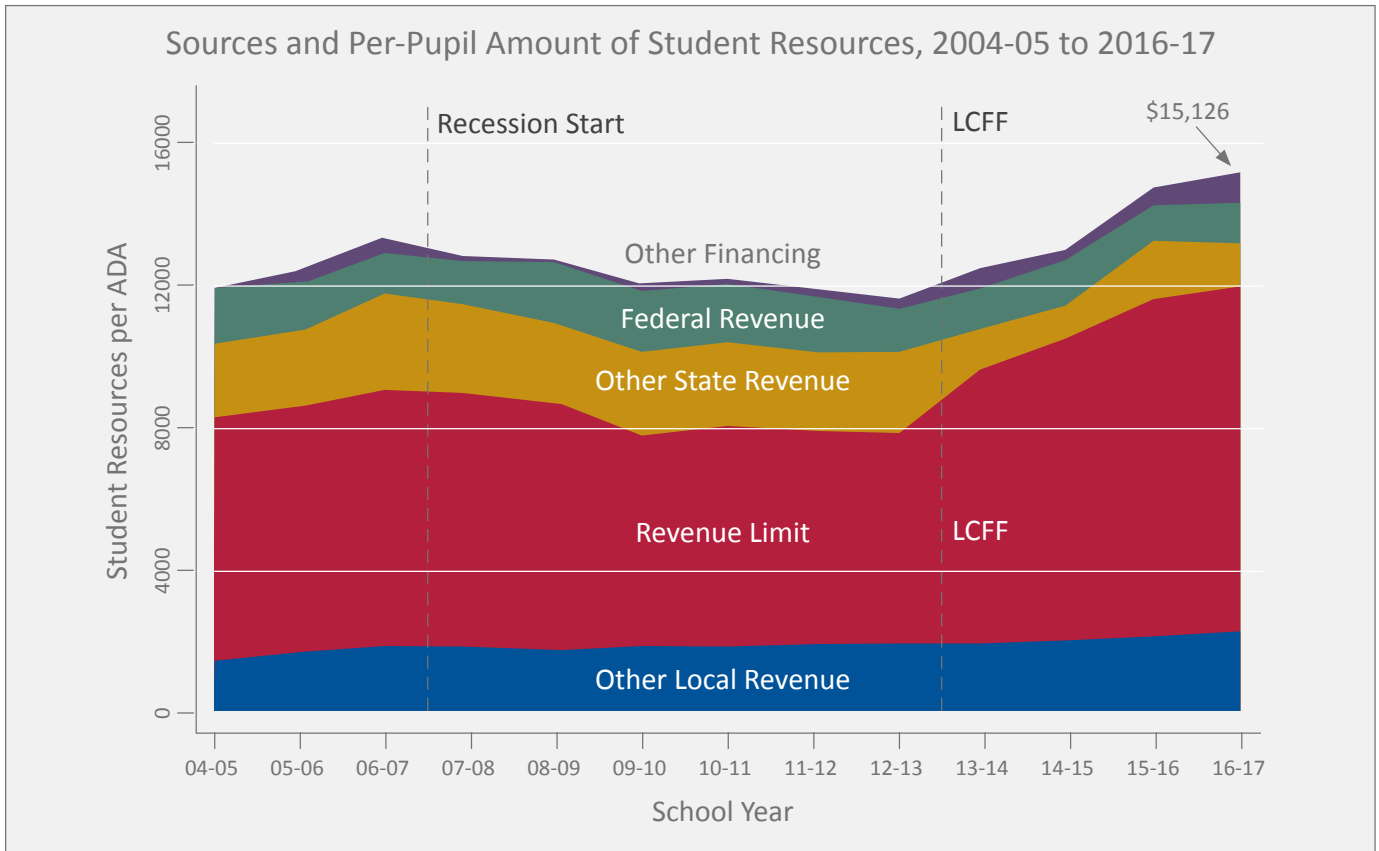
Summary of Key Findings

Per-pupil revenues have increased since 2013-14, particularly for districts with predominantly low-income students

The Great Recession and the subsequent recovery affected district resources. Figure 1 plots per-pupil revenues from 2004-05 to 2016-17, showing a drop in revenues after 2006 and then an increase after 2013. Total student resources were higher in inflation-adjusted dollars, based on average daily attendance, in the 2016-17 school year than in any previous year for which data are available.

Figure 1 also shows how funding *sources* changed during this time period. Since the passage of the LCFF, districts have seen increases in the total state financial commitment and a shift in that funding away from categorical aid (Other State Revenue in Figure 1) and toward more flexible LCFF revenues, which are unrestricted.

Figure 1: Since the Passage of the LCFF, Districts Have Had Access to More Unrestricted Revenues



Data: California Department of Education, SACS reports.

Note: Per-pupil amounts are based on average daily attendance (ADA) and expressed in 2017 dollars. Excludes districts ever having ADA less than 250 during this time period.

Funding for districts with high proportions of low-income students, English learners, or students in the foster care system (unduplicated pupil counts) are higher than for other districts (see Table 1). This pattern holds across all revenue categories except local revenues, which tend to be highest in districts with the fewest disadvantaged pupils. “Student revenues” in Table 1 excludes resources not likely to be used to directly educate K-12 students, such as funds for adult education and resources set aside for capital investments such as new facilities. Thus, the data primarily include revenues available for day-to-day operations, similar to the manner in which various reports use “the current expense of education” to focus on operating expenses only.

Table 1: Mean Student Revenues by District Characteristic, 2016-17

TOTAL Student Revenues	Unrestricted	Restricted (% of total)	Federal	LCFF	Other State	Other Local	
Percent Unduplicated Students							
Bottom 25%	\$13,158	\$10,842	\$2,316 (18%)	\$507	\$8,932	\$1,014	\$2,704
Middle 50%	\$13,615	\$11,089	\$2,526 (19%)	\$1,068	\$9,516	\$1,072	\$1,959
Upper 25%	\$16,050	\$12,469	\$3,581 (22%)	\$1,737	\$10,651	\$1,360	\$2,303
District Basic Aid Status							
Not Basic Aid	\$14,153	\$11,345	\$2,808 (25%)	\$1,191	\$9,652	\$1,164	\$2,146
Basic Aid	\$18,487	\$15,265	\$3,222 (21%)	\$625	\$12,865	\$845	\$4,152

Data: California Department of Education, SACS reports.

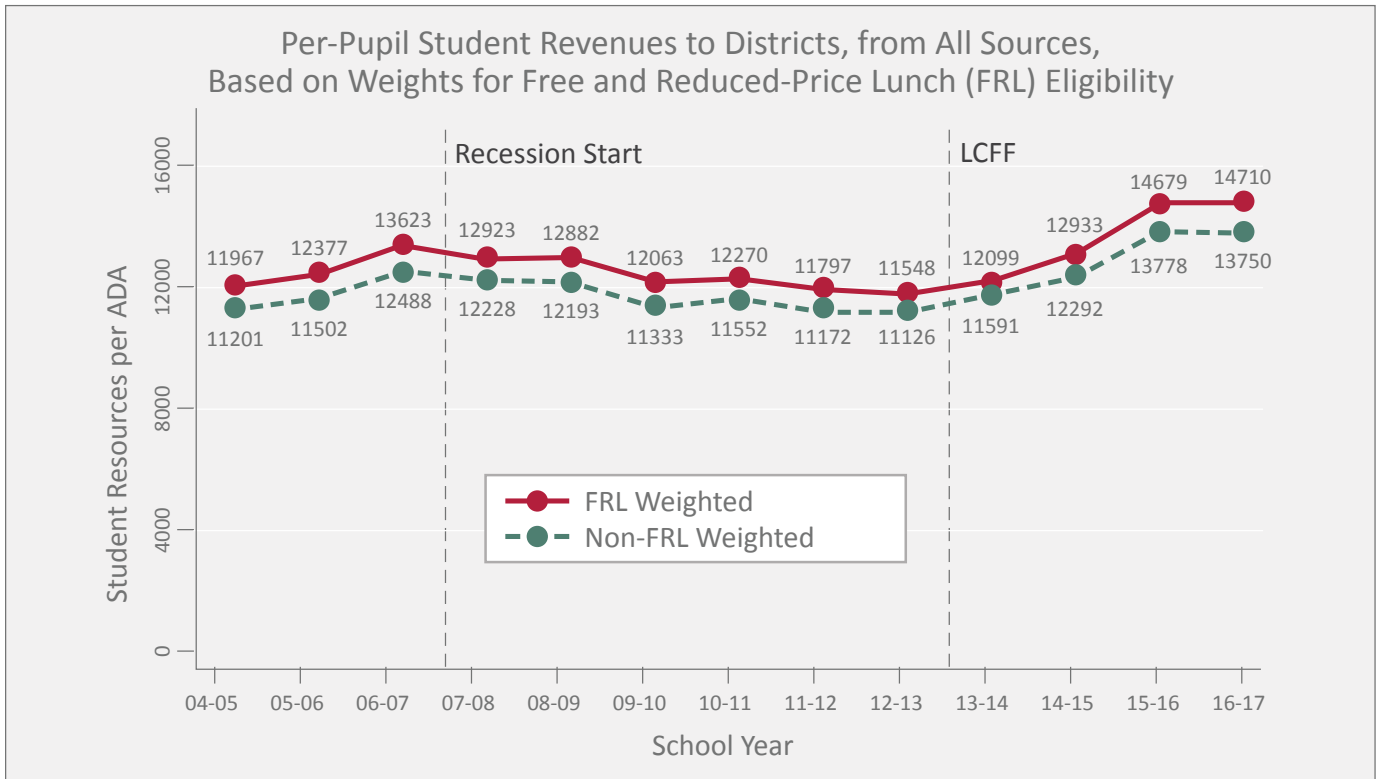
Note: Weighted based on average daily attendance (ADA) and expressed in 2017 dollars. Excludes districts that had ADA below 250 at any time from 2004-05 through 2016-17. The number of students is an unduplicated count, meaning that a student with more than one disadvantage, such as a low-income English learner, is counted only once.

This pattern is not new. California’s school funding system has, on average, provided greater revenues for low-income students, with the “average” lower-income student in California consistently in a district that receives slightly more revenue per student than the “average” higher-income student. Since the adoption of the LCFF, that revenue advantage has grown somewhat, increasing from \$422 (4% of revenues) in 2012-13 to \$960 (7% of revenues) in 2016-17 (see Figure 2).

This calculation comes with two caveats that center on which districts are selected for comparison. First, these measures are somewhat sensitive to the presence of Los Angeles Unified School District, which has relatively high revenues and enrolls 14% of students eligible for free and reduced-price lunches (FRL) in the state. Excluding LA Unified reduces these revenue advantages substantially. Second, despite the targeting of additional LCFF dollars to districts with more disadvantaged pupils, there is still considerable variation in resource levels among districts with similar shares of these students because districts receive revenues from a variety of sources outside LCFF state aid. Despite the LCFF, total revenue and spending levels in California are only weakly-to-moderately correlated with student disadvantage levels.

Although, on average, districts with higher proportions of low-income students have higher revenues, there is an important exception. Basic Aid districts—those that do not require state assistance to meet their LCFF funding targets due to high levels of local property tax revenues—stand out for their high per-pupil revenues and low number of FRL-eligible students. In 2016-17, they accounted for about 10% of all districts and served 4% of all students. Given the small portion of all students that they educate, their impact on the comparison of funding across districts is relatively modest.

Figure 2: Per-Pupil Funding for the Average Low-Income Student Was \$960 Higher in 2016-17



Data: California Department of Education, SACS reports.

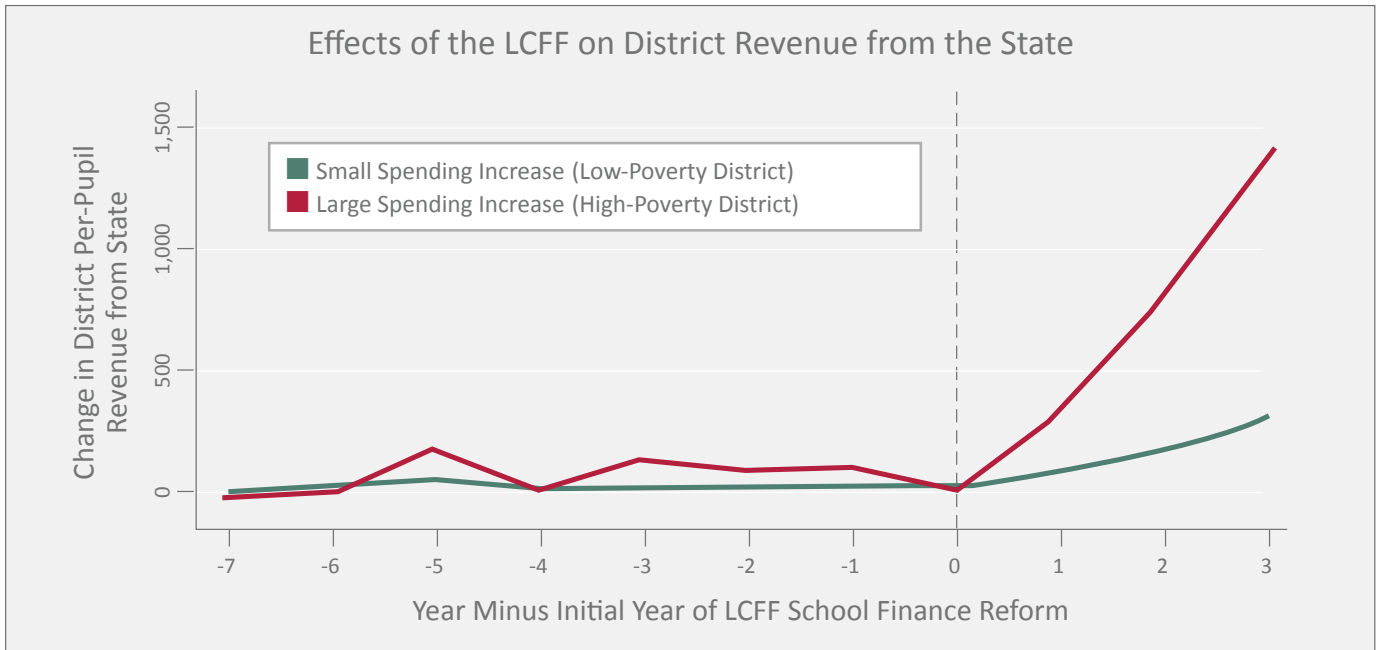
Note: Weighted based on average daily attendance (ADA) and expressed in 2017 dollars. Excludes districts that had ADA less than 250 during this time period.

The data provide initial evidence that money targeted to districts with the greatest student needs has led to improvements in student outcomes

Progressive funding formulas such as the LCFF are intended to counteract the tendency for high-poverty districts with higher concentrations of low-income students to face higher costs and, in some cases, more difficulty raising local revenue. California’s school finance reform attempts to address resource inequity by reallocating school finances on the basis of student disadvantage and relinquishing many of the restrictions on how revenues can be spent.

Figures 3a, 3b, and 3c all mark the beginning of the implementation of the LCFF as the “0” year and track changes in revenue, student graduation rates, and scores on the state’s 11th-grade mathematics test, respectively. The figures differentiate between two types of districts: low-poverty districts that received *small spending increases* under the LCFF, and high-poverty districts that received *large spending increases*.

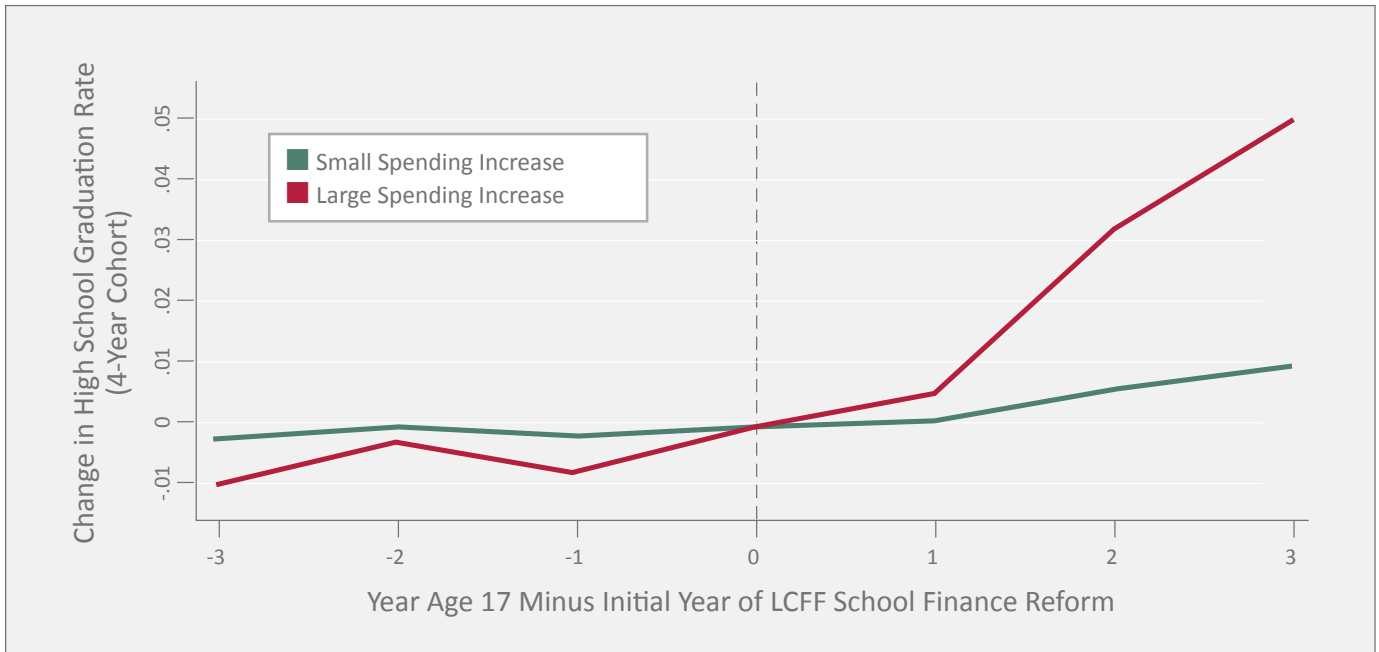
Figure 3a: High-Poverty Districts Received More Funding from the State Through 2016-17 Under the LCFF



Data: California Department of Education, SACS reports.

Figure 3a shows the evolution of per-pupil revenues provided by the state from the year the LCFF was passed until 2016-17. When the LCFF is fully funded in 2018-19, a high-poverty district will, on average, receive \$2,500 in per-pupil revenue from the state, whereas a low-poverty district will receive \$500 in per-pupil revenue (over and above the base grants, in accordance with the funding formula).

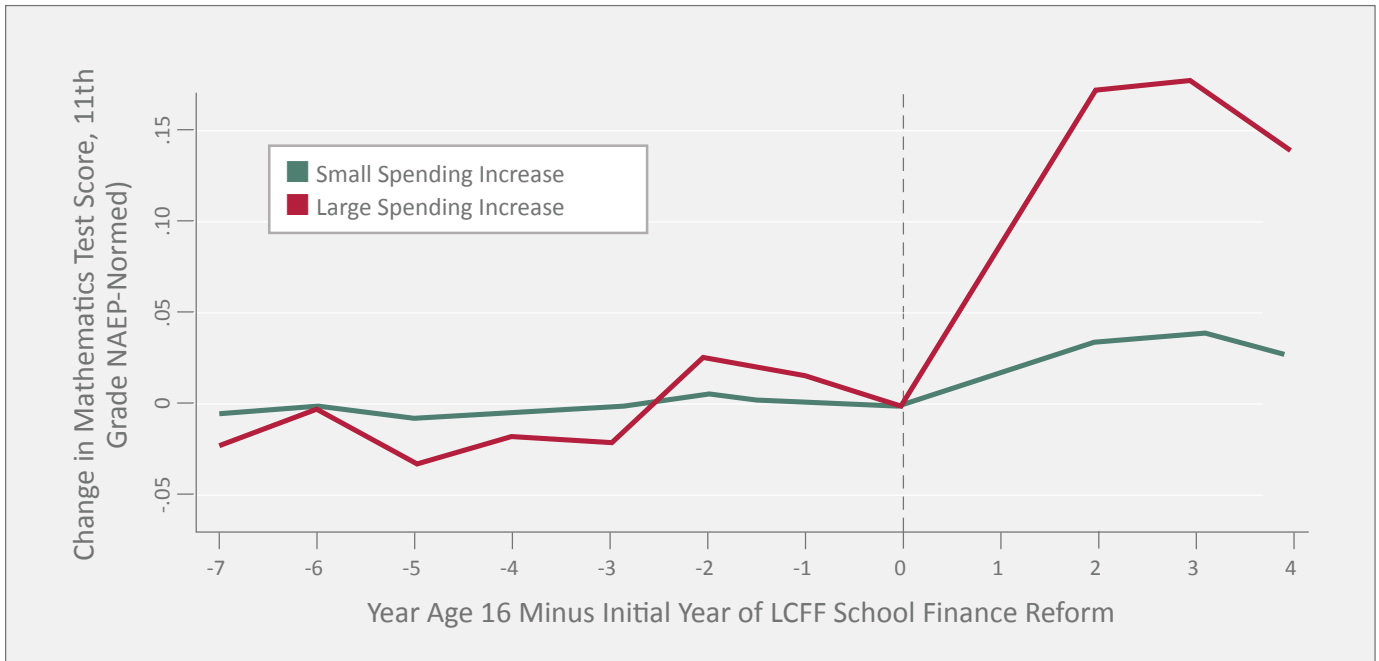
Figure 3b: Effects of the LCFF Per-Pupil Increase of \$1,000 on High School Graduation Rate for Students from Low-Income Families



Data: California Department of Education, SACS reports.

Figure 3b looks at the four-year cohort graduation rates. It compares rates for low-income students who attended districts with large spending increases to low-income students who attended districts with small spending increases. It summarizes Johnson and Tanner study results that show a change in trajectory for the group of students whose entry into high school coincided with the extra funding some districts received under the LCFF. A \$1,000 increase in district per-pupil spending experienced by students in grades 10 to 12 leads to a 5.9 percentage-point increase in high school graduation rates, on average, with similar effects by race and poverty. All student subgroups showed these positive effects, with the strongest results for African American students.

Figure 3c: Effects of the LCFF on High School Mathematics Achievement for Students from Low-Income Families



Data: California Department of Education, SACS reports.

Although the reform is still recent, the available data provide evidence that the increases in per-pupil spending improved test scores as well, with the additional expenditures significantly boosting numeracy and literacy for Hispanic and low-income children in particular. Figure 3c shows that, for low-income students, a \$1,000 increase in district per-pupil spending during ages 13 to 16 led to an average increase in 11th-grade mathematics test scores equivalent to approximately seven months of learning. The impact on high school reading achievement was somewhat lower, with an average equivalent to approximately three months of learning. The authors note that these are meant as rough, back-of-the-envelope calculations to help put the magnitudes into perspective. In sum, the evidence shows that money targeted to students’ needs made a significant difference in student outcomes and narrowed achievement gaps.

ABOUT THE METHODOLOGIES USED BY JOHNSON AND TANNER

The authors set out to test the hypothesis that California’s new school finance policy would result in improved student outcomes when students experience multiple years of “exposure” to spending increases and greater local spending flexibility.

The research design used an “instrumental variables” approach to isolate the effects of the policy on the statewide cohort of low-income high school students. The outcomes measured included the four-year graduation rate and state test scores in mathematics and English.

A full description of the research methods is presented in the report.

DID INCREASED FLEXIBILITY RESULT IN BETTER STUDENT OUTCOMES?

Throughout their analyses, Johnson and Tanner attempt to estimate the effects of the LCFF's elimination of many categorical spending restrictions. They report a far less consistent pattern of results across outcomes and subgroups than is produced by increased funding. The change also appears to have had little impact on overall spending patterns, with the most notable exceptions being an increased proportion of spending on teacher and administrator salaries, special education, and employee pension benefits.

Approximately 9% of state revenues are still tied up in categorical revenue streams. As Bruno's data show (see Table 1), when that is combined with federal funds, districts on average have about 20% of their total funding earmarked for specific purposes.

Expenditure increases largely went toward teachers, pensions, and special education

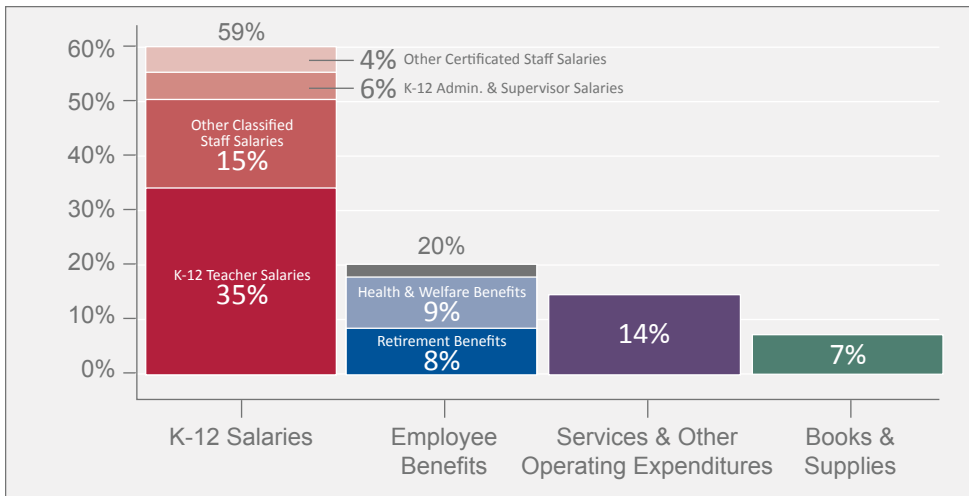
It is natural to ask how the schools and districts achieved the improvements described above, but clarity around the answer is more problematic. One challenge is that, though immense, the dataset the state uses to track expenditures across approximately 950 school districts does not currently require districts to account for how they spend targeted LCFF funds or require accounting at individual schools. A second challenge is the relatively short span of time since the LCFF's implementation and that its rollout followed on the heels of the huge financial dislocations many districts experienced during and after the Great Recession.

EDUCATION EXPENDITURE REPORTING

School districts report their expenditures using three different coding categories: expenditures by goal, by function/activity, and by object.

- Goal codes can answer questions like the proportion of funds used for special education services.
- Function/activity codes look at differences in expenditures for things like instruction and administration.
- Object codes are the most specific and identify the good or service that a district purchases, such as personnel costs versus instructional materials.

Figure 4: Expenditure Pattern Among Districts, 2016-17



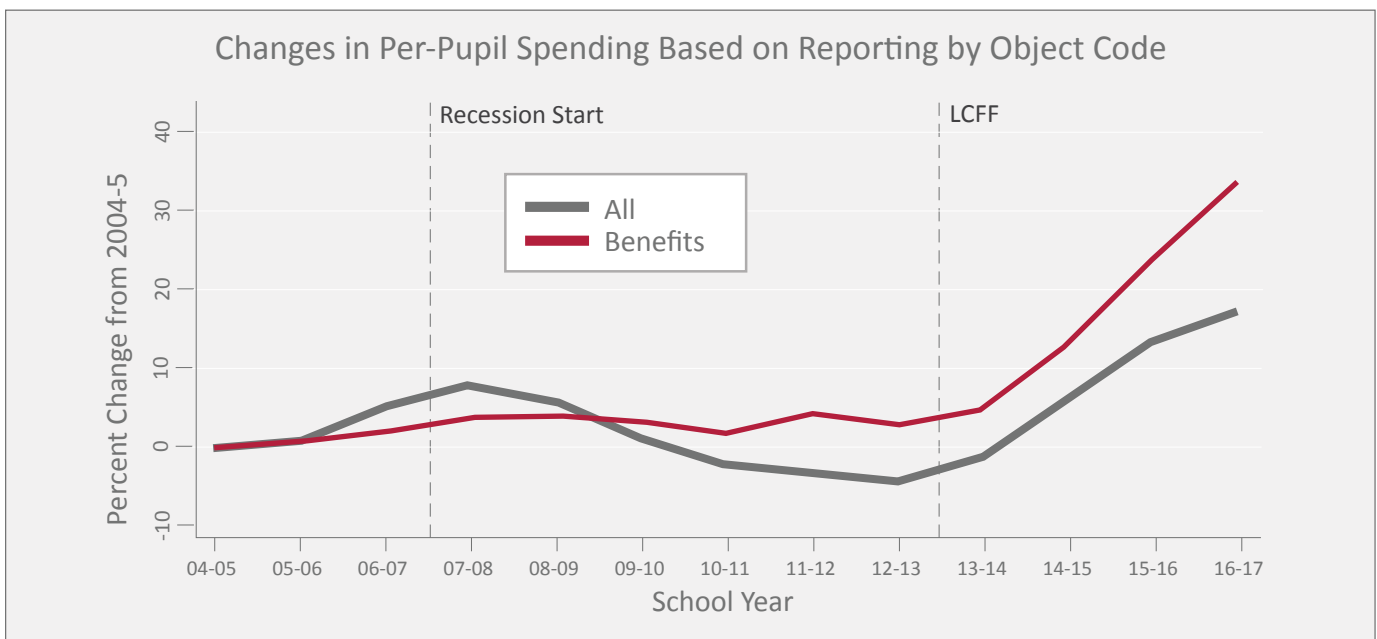
Data: California Department of Education, SACS reports.

Note: Weighted based on average daily attendance (ADA). Includes 716 districts, excluding those that had ADA less than 250 at any time since 2004-05.

Whether district spending patterns have changed over time—and in what ways—depends on what you look at and when you start looking. Figure 4 shows how districts’ operational expenditures were distributed across object codes in 2016-17.

Looking at changes over time, Bruno shows that since 2004-05, spending for staff benefits (specifically pension benefits) has increased by substantially more than overall expenditures have increased (see Figure 5). Johnson and Tanner also highlight the increased school district contributions to the state pension programs since the LCFF was implemented in 2013-14. However, Johnson and Tanner also show that since LCFF was implemented, per-pupil instructional expenditures also increased.

Figure 5: Changes in Pension Costs Have Increased Substantially Compared with Other Expenditures

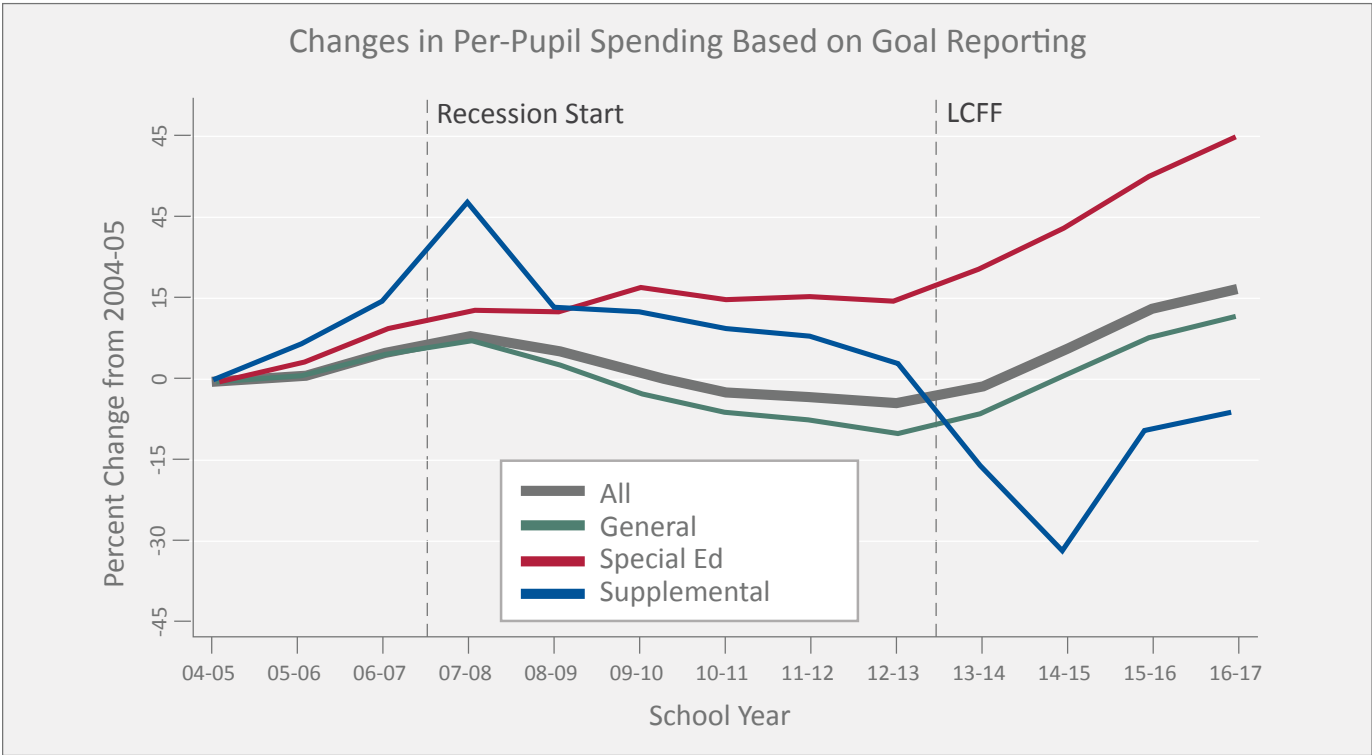


Data: California Department of Education, SACS reports.

Note: Weighted based on average daily attendance (ADA) and expressed in 2017 dollars. Excludes districts that had ADA below 250 during this time period.

Another notable increase in expenditures, whether the baseline is 2004-05 or 2013-14, is for special education. Figure 6 contrasts the trend for all expenditures, general education, and special education. These data, based on reports by goal code, illustrate that costs for students with disabilities remained stable even while other spending decreased during the recession. Since the recovery, special education expenditures have climbed dramatically.

Figure 6: Unlike Other Expenditures, Costs for Students with Disabilities Remained Stable During the Recession



Data: California Department of Education, SACS reports.
 Note: Weighted based on average daily attendance (ADA) and expressed in 2017 dollars. Excludes districts that had ADA below 250 during this time period.

While tying specific expenditures to student outcomes is not possible, Johnson and Tanner find that LCFF-induced increases in expenditures, particularly teacher salary expenditures per pupil (which include both increases in the number of teachers hired and increases in teacher salary) significantly predict student achievement gains, particularly for children from low-income families and Hispanic students. While acknowledging that these exploratory patterns fail to identify the precise mechanisms for how and why money matters, the authors emphasize that the overall pattern of results support the importance of school resources.

Conclusion

Looking at financial trends over a decade, Bruno finds that while California districts' resources deteriorated after the Great Recession, they have more recently experienced notable improvements. Districts serving lower-income students experienced greater revenue increases but, on average, these changes have not been dramatic. When districts are compared based on their total resource levels, their relative positions have changed only modestly during the past decade, particularly among Basic Aid districts not affected by LCFF formulas due to their small size or pre-existing funding advantages. Together, these districts represent roughly half of districts, but they only serve about 10% of the public school students in Bruno's main sample.

Since the end of the recession, the LCFF has successfully provided increases in state aid to schools more progressively on the basis of student need. As district revenues were being restored, the LCFF represented a redistribution of a portion of state dollars with the net effect that a larger increase went to districts with high concentrations of low-income students and English learners. During that span of years, expenditures on teacher salaries (including both salary levels and the number of teachers) saw relatively large increases.

The impacts of the new policy are still reverberating, and the verdict is still out. But given the magnitude of redistribution in the LCFF, the policy provides a test of how state policy and school resources can shape student achievement and reduce inequality.

Johnson and Tanner examine the impacts of the LCFF on student outcomes, test the effect of a simultaneous change in school district revenues directed toward disadvantaged students, and examine flexibility regarding how such revenues can be spent. They find that revenue increases in particular can be productive in enhancing the academic achievement and educational attainment of disadvantaged students. These findings are particularly noteworthy in light of the fact that the LCFF is a recent reform and has been rolled out gradually, nearing full funding and implementation just in the past year.

Time will tell. In the interim, this new research evidence suggests that money targeted to the needs of students, and allocated by local districts to meet those needs, can make a difference in student outcomes.

Author Biographies

Rucker Johnson is associate professor of public policy at the Goldman School of Public Policy, University of California, Berkeley.

Paul Bruno is a doctoral student at the University of Southern California's Rossier School of Education, where he is studying school finance and teacher quality. He is also a former middle school teacher.

Sean Tanner is a senior research associate with the Center for School Accountability and Performance (CSAP) Program at WestEd. He previously served as a senior researcher for the Learning Policy Institute, where he wrote the report with Johnson.