



GETTING DOWN — TO FACTS II —

RESEARCH BRIEF | OCTOBER 2018

Working Toward K-12 Funding Adequacy: California's Current Policies and Funding Levels

Jennifer Imazeki

San Diego State University

Paul Bruno

University of Southern California

Jesse Levin

American Institutes for Research (AIR)

Iliana Brodziak de los Reyes

American Institutes for Research (AIR)

Drew Atchison

American Institutes for Research (AIR)

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 three *Getting Down to Facts II* technical reports on funding levels in California:

Adequacy and State Funding Formulas: What Can California Learn From the Research and National Context?

Jennifer Imazeki, September 2018.

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

Paul Bruno, September 2018.

What Does It Cost to Educate California's Students? A Professional Judgment Approach

Jesse Levin, Iliana Brodziak de los Reyes, Drew Atchison, Karen Manship, Melissa Arellanes, and Lynn Hu, September 2018.

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

Introduction

California policymakers have established the expectation that all public school students should have access to a broad course of study, in classes where instruction is consistent with the state's content standards. Further, the state holds schools and school districts accountable for their ability to ensure that all students achieve at a specified level of academic proficiency, attend school regularly, and graduate from high school prepared for adult success.

For decades, many educators charged with these responsibilities have said that California's state-controlled school funding system fails to provide a level of resources adequate for meeting these responsibilities. Prior research and comparisons with per-pupil spending in other states support the position that the state's public education system is underfunded, and there seems to be growing political agreement as well.

More complicated, and subject to much greater debate, is the question of what it would cost to successfully educate California's students, including how funds should be allocated across school districts.

This brief puts California's K-12 funding system into context by comparing the state's school finance system to other states, both in terms of funding levels and policy. It also summarizes the results of an adequacy study that takes on the difficult task of estimating how much funding might be enough, using a professional judgment approach to provide some insights into the resources likely needed for adequate schooling.

KEY FINDINGS

Policy and funding context and comparisons

- Funding levels for schools in California have been improving, but remain well below many other states.
- Although a fundamental change in state policy, California’s adoption of the Local Control Funding Formula left important aspects of the prior K-12 funding system intact.
- Other states’ weighting strategies vary, and most are based on limited evidence.
- California stands apart from other states in its limits on local districts’ ability to raise revenues.

Funding adequacy

- AIR’s adequacy study, using a professional judgment approach, estimated that providing an adequate education would have required California to spend \$25.6 billion more in 2016-17—over a third more than that year’s spending levels.
- Comparing actual operational spending to adequate costs shows needed increases in almost every district, with variations based on the needs of students served and locale.
- A validation analysis indicated that larger gaps between actual spending and adequate costs were associated with lower student performance.

Summary of Key Findings: Policy and Funding Context and Comparisons

In adopting the Local Control Funding Formula (LCFF), California moved from one of the least transparent school funding systems in the country to one of the most straightforward. In the years since that adoption, the state has also increased funding substantially. Researchers Paul Bruno and Jennifer Imazeki put both those policy and funding changes into a broader context by examining California’s new approach through the lenses of school finance research and the policies in other states.

Funding levels for schools in California have been improving, but remain well below many other states

Increased revenue has helped California school district resources and expenditures recover from the reduced levels experienced during the recession, which hit their lowest point in 2012-13. In 2016-17, under the LCFF, they reached their highest level since at least 2004-05. Despite that, per-pupil spending in California remains consistently below the national average.

Imazeki compares California to several states of comparable size and demographics, showing that the average school revenue per pupil in California in 2016-17 is above that in Florida, on par with Texas and Ohio, but lower than in Illinois and substantially lower than many northeastern states such as New York (see Table 1). However, at least in part due to the higher cost of living and wages of college graduates in California, average teacher salaries are higher in California than in these comparison states, except for New York. As a result, given California’s relatively low spending on schools, the number of students per teacher (a number smaller than average class size) is much higher in California (22.5) than in any of the comparison states. In New York, for example, it is less than 13, but even in the other comparison states it is below 17. More broadly, the shortage of resources combined with high salaries has resulted in California having far fewer adults across all roles in schools than most other states.

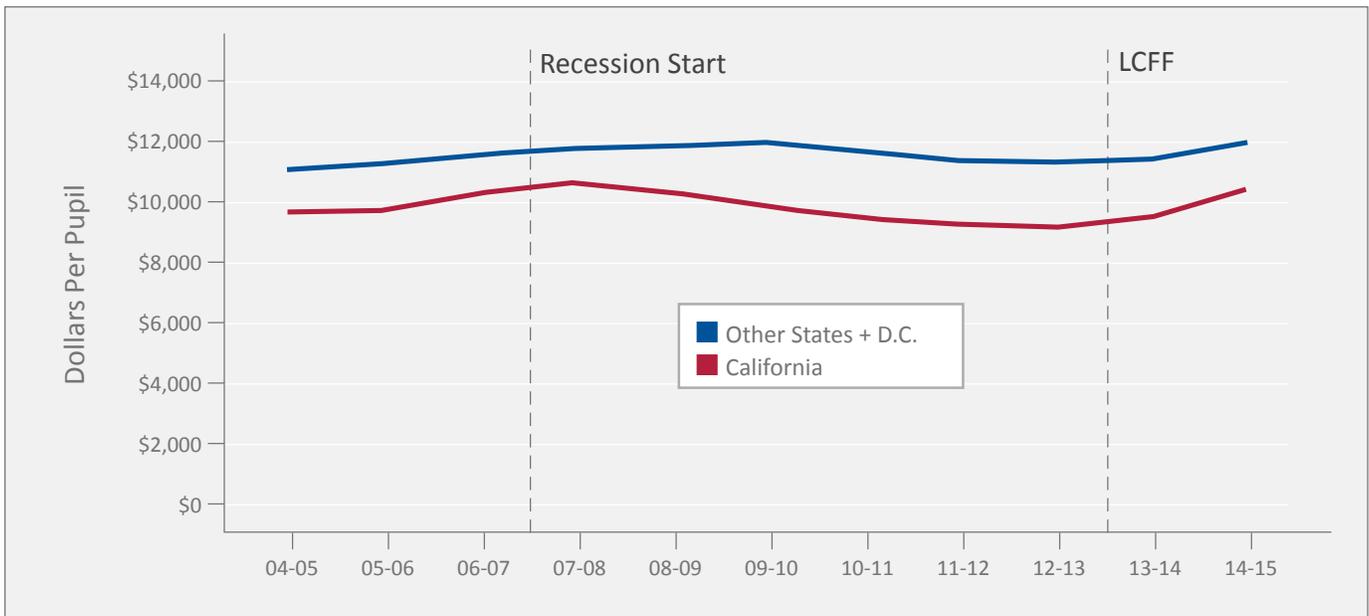
Table 1: California Compares Favorably to Some States and Less Favorably to Others in a Comparison of State School Characteristics, 2016

	Student/Teacher Ratio	Average Teacher Salary	School Revenue Per Pupil	Instruction as Percentage of Current Expenditures
California	22.53	\$77,179	\$10,484	59.5%
Texas	15.23	\$48,882	\$10,064	61.4%
Florida	16.11	\$40,717	\$ 8,067	60.9%
New York	12.65	\$81,255	\$24,342	70.1%
Illinois	16.69	\$56,991	\$12,856	58.7%
Ohio	16.02	\$47,560	\$10,760	58.9%

Data: National Education Association (Rankings & Estimates: Rankings of the States 2016 and Estimates of School Statistics 2017).

The data needed to accurately track changes in states’ school spending over time and compile a national average are collected and analyzed by the federal government and generally lag behind estimates such as those above. Bruno compares California’s K-12 operational expenditures to other states based on data through 2014-15. The analysis shows that per-pupil spending in California has been consistently below the national average since at least 2004-05, and fell further than average in the aftermath of the Great Recession. Under the LCFF, that gap closed somewhat but was still substantial as of 2014-15 (see Figure 1 on the following page).

Figure 1: Average Per-Pupil Operational Spending in California and Nationally from 2004-05 to 2014-15



Data: 2004-05 to 2013-14, National Center for Education Statistics. 2014-15, U.S. Census. This is a comparison between the average per-pupil spending in school districts in California to district averages in all other states and Washington D.C., weighted by the number of students in each district and expressed in 2017 dollars.

In order to account for differences in the cost of providing educational services across regions, the per-pupil spending figures cited above can be adjusted using a comparable wage index.¹ Using data from 2013-14, Bruno makes this adjustment and estimates that California districts at that time had total revenues that were three to four percent lower than in Texas or Florida, 52% lower than in New York, and 23% percent lower than in other states and D.C.

Based on these analyses, California’s current education funding relative to other states has changed little despite the recent funding increases. The impact of the LCFF has, however, resulted in some substantive changes related to how funding is distributed.

Although a fundamental change in state policy, California’s adoption of the Local Control Funding Formula left important aspects of the prior K-12 funding system intact

California’s Local Control Funding Formula substantially reconfigured the way the state distributes funding to local school districts. It specifies a standard “base grant” for each student (with different amounts based on grade levels). It then adds additional funds—through supplemental and concentration grants—to support educational services for students with high needs based on an “unduplicated count” of students who are from low-income families, identified as English learners, or are foster youth. The LCFF did not change the state’s approach of combining local property tax proceeds and state funding to provide each district with its allocation.

¹ See Dr. Lori Taylor’s website for more information: http://bush.tamu.edu/research/faculty/Taylor_CWI/

In her comparison of state funding formulas, Imazeki notes that state aid made up about 58% of total K-12 revenues in California in 2016, but in most other states local property taxes provide a larger proportion of education funding than is true in California. In many states, constitutional requirements to ensure equitable resources for all students (enforced by courts) have led to increases in the amount of state aid. Such aid is generally determined through formulas that are meant to reduce the extent to which the funding available to any district is related to local property wealth.

By setting a minimum floor for district revenue and adding funding based on student needs, the intent of the LCFF is consistent with equity goals. In most districts, the LCFF allocation is funded by first applying local property tax revenues and then adding state aid as necessary.

Property tax revenues exceed the LCFF allocation in a small number of districts commonly called “basic aid” districts (many of which have very few students). Those revenues remain with the local district, and thus these districts have higher revenues even though they do not necessarily have greater student need. Higher wealth districts also are more effective at raising additional funding through both private and public sources. This aspect of the prior “revenue limit” funding system was preserved when the LCFF was adopted. Bruno estimates that basic aid districts have total per-pupil resources that are 43% higher than other districts on average.

Special education funding was also left largely unchanged when California adopted the LCFF. It is one of the few large categorical programs handled outside of the new formula. Although there are some advantages to the current system, allocations are based on historical patterns that are often inequitable and do not account well for current need.

By contrast, since 2008 the state has largely dismantled the funding streams and accompanying regulations for a plethora of categorical programs. Imazeki notes that there is little prior research indicating whether increased local district flexibility improves outcomes. This shift has raised concerns among some advocates who question whether local districts are using their supplemental and concentration grant funds to benefit their high-needs students. Nonetheless, researchers Rucker Johnson and Sean Tanner, in their 2018 *Getting Down to Facts II* study, find initial evidence of positive effects of the changes—including the increased flexibility—on student outcomes.

Other states’ weighting strategies vary, and most are based on limited evidence

California’s funding formula under the LCFF adjusts the base grant for per-pupil funding based on three considerations: the grade level of the students, the needs of students based on their family income and English learner status,² and the concentration of these types of high-needs students in a district.

Under the LCFF, the base per-pupil funding for high school students is about 20% higher than for grades 4-6 (the lowest funded grade levels). Imazeki finds that the research is not clear regarding whether students’ needs differ or how much more educational services cost at different grade levels. There are plausible arguments for higher costs at both younger grades and in high school, though there is little evidence on the magnitude of such costs or the relative impact of investing in some grades more than others. Compared to

² The LCFF also explicitly mentions foster, homeless, and migrant youth, but for funding purposes they are included in the count of low-income students.

those states that have higher weights for K-3 and/or high school, Imazeki finds that California's weight for K-3 is a little lower, but the percent of extra funding for grades 9-12 is quite similar to other states.

The LCFF weight of 0.2 for low-income students or English learners puts California on the lower end nationally. However, taking into consideration both the 0.2 base weight and the additional 0.5 weight for districts with more than 55% of their population low-income students and English learners, the weighting provided to the average district in California is quite close to the national average. On the other hand, most other states 'double count' students who are both low-income and English learners for funding purposes. In contrast, California uses an unduplicated count of students, so a student who is low income and an English learner generates a single extra weight. Imazeki finds no research directly supporting or refuting that practice.

California also currently has no adjustment in the formula for differential labor costs, suggesting that districts in high-wage areas may be underfunded. The three states most comparable to California in size (Texas, New York, and Florida) all provide additional funding for districts with higher teacher labor costs, using adjustments based on wages for comparable workers. The research suggests that this should be accompanied by a larger adjustment for small district size or sparsity in order to address equity concerns.

Other states typically have separate funding streams for gifted and talented programs and career technical education, so the decision to include these in the LCFF base makes California an outlier. However, Imazeki says there is little research to support any one particular funding approach or allocation level for these programs.

California stands apart from other states in its limits on local districts' ability to raise revenues

In many other states, local school districts can raise additional revenue by increasing local property tax rates (though there may be caps on the size of increases). In California, the provisions of Proposition 13 (enacted in 1978) included a prohibition on districts increasing their local property tax rates for the purpose of operations, even with voter approval. (Districts can go to local voters for passage of general obligation bonds for facilities, which require a minimum 55% voter approval.) One option California districts do have is the parcel tax. California districts can also raise revenue through sales taxes and private donations. All of these options raise equity concerns. An additional option, used in a few other states, is a local income tax; however, income is a more volatile base and also may raise equity concerns.

Summary of Findings: Funding Adequacy

THE GOAL SET BY THE CALIFORNIA STATE BOARD OF EDUCATION

All California students of the 21st century will attain the highest level of academic knowledge, applied learning, and performance skills to ensure fulfilling personal lives and careers and contribute to civic and economic progress in our diverse and changing democratic society.

AIR's adequacy study, using a professional judgment approach, estimated that providing an adequate education would have required California to spend \$25.6 billion more in 2016-17—over a third more than that year's spending levels

The AIR research team used a professional judgment approach (see description below) to answer the following question:

What is the cost of providing all California public school students with access to the California content standards and achieving appropriate levels of proficiency in accordance with standards established by the California State Board of Education?

The State Board of Education has outlined a diverse set of content standards that they expect students to have access to, as well as outcome standards that all students should have an opportunity to achieve. The AIR study used these standards as its definition of educational adequacy for costing-out purposes. It then compared the estimated cost of meeting those standards—using the dollar values of resources specified by professional judgment panels (PJPs) made up of expert educators—against the most recent school district expenditure data available.

In 2016-17, California public K-12 schools reported about \$66.7 billion in *actual operational spending* was used to educate their students. The main results of this study suggest that an additional \$25.6 billion—38% above actual spending—would have been necessary to ensure that all students had the opportunity to meet the state's goals.

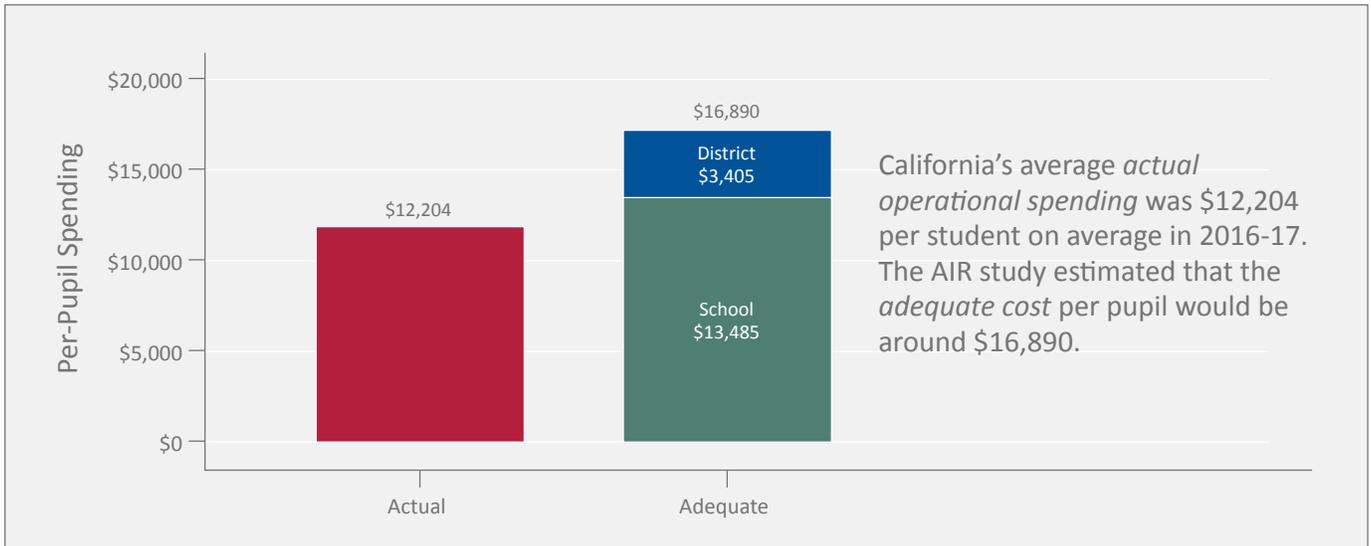
The AIR study estimated the adequate cost per pupil at \$16,890, as shown in Figure 2 on the following page. This amount is consistent with or less than spending in many other states. The researchers say their results also reflect the notable increase in school funding that has occurred in California in recent years. The \$25.6 billion is substantially lower, as a percent of total spending, than the amount projected in the 2006 AIR adequacy study done as part of the original Getting Down to Facts project.³ The researchers also note that their estimate is based on 2016-17 circumstances and does not account for projected future district cost increases related, in particular, to rising employee pension costs.

The study involved two major phases. First, expert educators went through multiple steps to create models that specified the staff and nonpersonnel resources necessary to provide an adequate education based on school characteristics, including the needs of the students served. Next, AIR researchers estimated the corresponding costs for those models, adding district-level costs to the school models the educators created. Of the total adequate cost per pupil (\$16,890), \$13,485 or about 80% was predicted based on the school-level specifications of the PJPs. The remaining \$3,405 was predicted based on the district-level spending calculations.

³ In the 2006 AIR adequacy study, the estimate was that an increase of between \$24.1 billion and \$32.0 billion would be needed, with those amounts representing 53% and 71%, respectively, of the state's \$45.3 billion in spending at that time. Another study for Getting Down to Facts, by Sonstelie, et al. (2007), used a PJP-inspired model and similar goals, based on the state's student test score targets at the time. Sonstelie's results showed that a minimum 40% increase in funding would be necessary to provide an adequate education, also larger than the results presented in the current study.

The adequacy estimates from AIR differ from the first version of this research brief due to some double counting included in the initial calculation of actual spending in 2016-17. Please see the technical report for a detailed explanation of the update. <http://gettingdowntofacts.com/publications/what-does-it-cost-educate-californias-students-professional-judgment-approach>

Figure 2: Differences in Actual Operational Spending and Adequate Cost Per Pupil in 2016-17 Dollars



Data: AIR calculations from PJP resource specifications; California Department of Education (CDE) Student & School Data Files (<https://www.cde.ca.gov/ds/sd/sd/>); and Standardized Account Code Structure (SACS), California Department of Education (CDE) (<https://www.cde.ca.gov/fg/ac/ac/>).

TERMS USED IN THE AIR STUDY

- **Adequate education:** a program designed and funded to provide all students with a reasonable opportunity to reach specified outcomes.
- **Adequate costs:** an estimate of the operational spending needed at the school and district levels to provide an adequate education to all students.
- **Actual operational spending:** a calculation of the funds spent on school operations, based on school district financial data reported through the state's SACS accounting system. (Operational costs do not include capital spending or debt service associated with construction and land acquisition.)

Comparing actual operational spending to adequate costs shows needed increases in almost every district, with variations based on the needs of students served and locale

In addition to examining actual spending and adequate cost across the state as a whole, the researchers looked at how actual spending and projected adequate cost varied depending on district characteristics. With a very small number of exceptions, actual spending was below adequate costs.

- Actual spending exceeded adequate cost in only 8% of districts (which served just 2% of students).
- For 87% of districts, adequate cost was at least 10% higher than actual spending.
- More than half of students attended districts where adequate cost was at least 40% higher than actual spending.

Overall, the AIR study finds that 98% of public school students in California attended school in a district that was spending less than would be necessary to provide an adequate program. The size of the gap between spending and projected adequate costs is related to both the needs of students served and where districts are located.

Figure 3 (on the following page) compares pupil-weighted quartiles of districts based on student poverty (measured as incidence of free or reduced-price meals eligibility). **It shows that the gap between actual spending and adequate costs grows as poverty increases.**

- The average student in the quartile of districts with the lowest level of poverty had a projected adequate cost that was \$2,454 above actual spending levels—a difference of 19%.
- The average student in the two district quartiles with the highest poverty had a projected adequate cost that was approximately \$5,700 to \$6,200—46% to 47% higher than average actual spending.

It is also notable that of the 2.7 million students in the two highest district-poverty quartiles, all but a few hundred students attended school in districts where actual spending did not meet projected adequate cost levels.

Total adequate cost across the state of California for 2016-17 amounted to \$92.3 billion. Actual spending in 2016-17 was \$66.7 billion—\$25.6 billion lower than projected adequate cost. **About 64% of the additional funding needed to close the gap (marginal adequate cost) would be attributed to the half of students included in the two highest-poverty quartiles.**

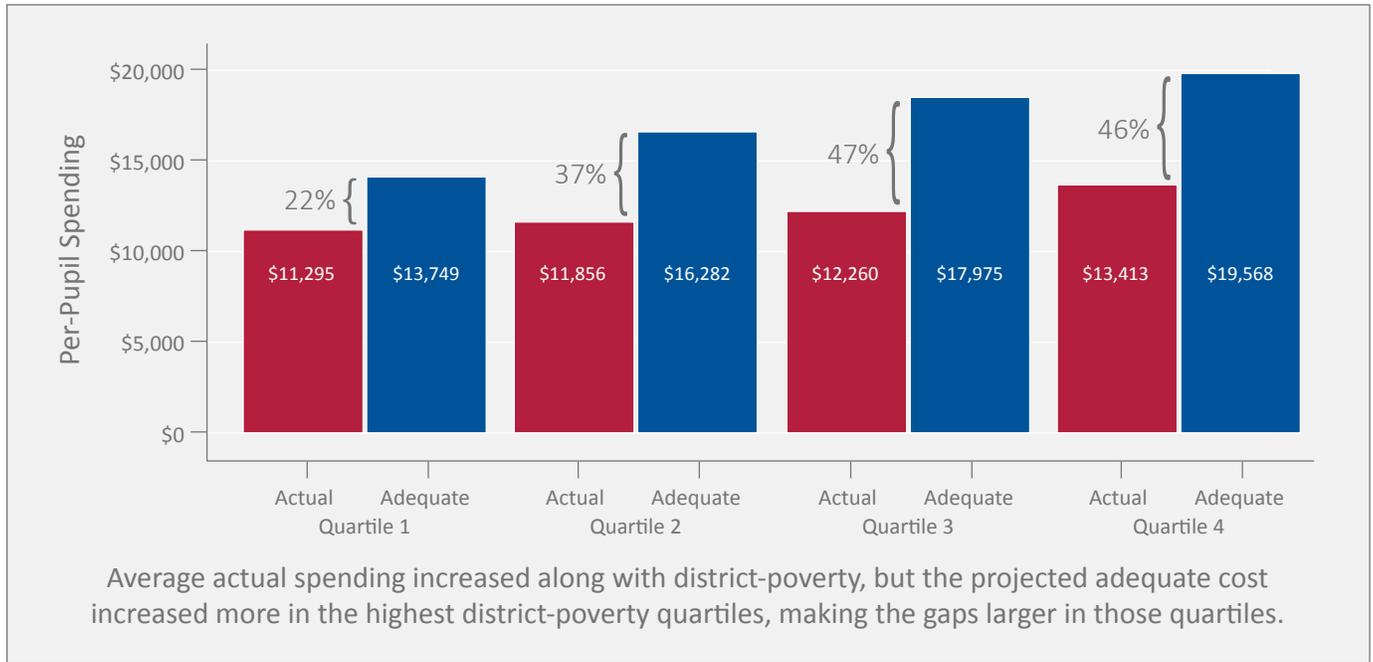
Dividing districts by locale provides another way to look at the gap between actual spending and adequate cost levels. **The gap is highest in rural and town districts, but the cost of closing the gap in these smaller types of districts is relatively modest.**

- In both rural and town districts, 2016-17 spending levels would have needed to be 46% to 52% higher than actual spending levels to support an adequate education.
- In cities and suburbs, adequate spending needed to be 37% to 38% higher than actual spending.

Compared to districts in cities and suburbs, town and rural districts serve a relatively small number of students. Thus, the total cost of achieving adequacy in these districts is lower than it would be for the larger districts in cities and suburbs. Investments in rural and town locales would amount to only an additional

\$3.1 billion to achieve adequate levels of spending, while city and suburban districts would require an additional \$22.6 billion.

Figure 3: Actual Spending and Projected Adequate Cost Per Pupil by Free or Reduced-Price Lunch Eligibility Quartile



Data: AIR calculations from PJP resource specifications; California Department of Education (CDE) Student & School Data Files; Assessment of Student Performance and Progress (CAASPP); and Standardized Account Code Structure (SACS), CDE.

Note: Quartile 1 includes the wealthiest districts. Quartile 4 includes the poorest districts.

A validation analysis indicated that larger gaps between actual spending and adequate costs were associated with lower student performance

The researchers conducted a validation analysis in order to evaluate the relationship between the projected additional funding necessary to provide an adequate education and outcomes such as student achievement. They wanted to test their basic premise that if adequate funding is provided in an equitable manner that affords all students an equal opportunity to achieve regardless of their needs or location, then it should be possible to see a systematic relationship between a district’s adequacy funding gap (how much more they need to provide an adequate education) and student outcomes, such as achievement on standardized tests.

To that end, they conducted a validation analysis that examined the relationship between grades 3–8 test scores in mathematics and English language arts and the relative difference between adequate cost and actual spending. Consistent with their hypothesis, they found that districts with larger funding gaps tended to have lower student achievement.

Conclusion

Since California's adoption of the LCFF, per-pupil funding has increased and the state has used much of that increase to support districts that serve a higher percentage of low-income students and English learners. However, the LCFF left in place some aspects of the prior funding system that affect the amount of funding different school districts receive, including basic aid districts and the special education funding formula.

The LCFF weighting strategies for high-needs students and grade-level differences are relatively consistent with policies in other states that use pupil weighting but do not consider the geographic differences in cost-of-living that are used in the funding formulas of the other three largest states. In addition, California stands somewhat apart from other states in its dependence on state aid for K-12 schools and limits on the revenue-raising ability of local school districts.

The state also continues to fund its schools at an amount per pupil that is below the national average and well below what many other states provide. To answer the question of how much funding would be needed in order for California schools to adequately educate the state's students, AIR used a professional judgment approach to estimate an overall cost of providing an adequate education and an analysis of how additional funds should be distributed. Using program designs and resource models prepared by expert educators, AIR estimates that California would have needed to invest \$25.6 billion more in 2016-17—a 38% increase in funding—in order to cover the costs of an adequate education. However, this does not account for projected cost increases, such as pension contributions, going forward.

Further, the AIR analysis concludes that funding shortfalls occur in almost all California districts. Despite increased funding that has gone to districts with higher-needs students under the LCFF, the most dramatic gaps between actual spending and adequate costs, on a per-pupil basis, are still in districts that serve high concentrations of both low-income students and English learners.

Lead Author Biographies

Jennifer Imazeki, professor of Economics at San Diego State University, studies school finance reform, adequacy, and teacher labor markets. She was also an author for the prior Getting Down to Facts project.

Jesse Levin, principal research economist, Iliana Brodziak de los Reyes, senior researcher, and Drew Atchison, researcher, served as lead researchers for the AIR study. Levin was the principal analyst on the research team that conducted the AIR adequacy study for the 2007 Getting Down to Facts project.

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