SUPPLEMENTAL APPENDIX

to accompany

School District Revenue and Student Poverty in California: A Decade through the Great Recession and School Finance Reform

published in

Journal of Education Finance, 2022, Volume 27, Number 3, pp 296-323.

Heather Rose
School of Education
University of California, Davis
One Shields Avenue
Davis, CA 95616
Email: hmrose@ucdavis.edu

Appendix A: Data Sources

A. 1 Average Daily Attendance

Average daily attendance (ADA) is available at the district level, but not the school level. ADA data are available from two main sources at the CDE: (1) The Current Expense of Education Files[1] and (2) Standardized Account Code Structure Data (SACS) Local Education Agency (LEA) file and charter files.[2] I use ADA from the Current Expense data, because it contains adjustments not made in SACS files (personal communication with Kevin Turner at the California Department of Education confirmed this was the appropriate source and provided me with the adjustments to reconcile the SACS and Current expense ADA). The adjustments are primarily an issue in 2007-08, when the SACS ADA is about 3% lower than the Current Expense ADA. Using the SACS ADA would underestimate the growth in per-pupil revenue over time.

Although funding decisions are made using ADA, the ratio of ADA to enrollment is important to consider when thinking about how much funding is available for all students. Statewide, the ratio of ADA to enrollment has declined by 2.4 percentage points between 2007-08 and 2017-18, suggesting funding per enrolled student would have increased at about 97.6% of the rate at which funding per ADA increased. Whereas total revenue per ADA increased by 14% over the decade, funding per enrolled students increased only 11%.

More important when considering the relationship between funding and poverty is the ratio of ADA to enrollment for districts based on their poverty categories (see Table A.1). The differences in this ratio between high- and low-poverty districts are very small: 0.7 percentage points in 2007-8 and 1.1 percentage points in 2017-18. Because high-poverty districts have slightly lower ratios of ADA to enrollment and because the gap widened a bit over the decade, the per-enrollment correction is slightly larger for higher poverty districts. Revenue *per enrolled student* increased about 7.4% for low-poverty districts and 16.1% for high-poverty districts; the changes in revenue *per ADA* were 9.2% and 18.5% for

[1] Available at: https://www.cde.ca.gov/ds/fd/ec/currentexpense.asp.
[2] Available at: https://www.cde.ca.gov/ds/fd/fd/.

Table A.1: Ratio of ADA to Enrollment by Year and Poverty Category

		Poverty		
Year	All	Low	Medium	High
2007-08	97.7%	97.9%	97.8%	97.2%
2011-12	95.5%	96.6%	95.2%	95.1%
2017-18	95.3%	96.2%	95.0%	95.2%

Note: The percentages represent the total number of ADA in districts of the given type divided by the total enrollment in districts of the given type. Essentially, this is the average of the ratio of ADA to enrollment in districts of the given type weighted by enrollment.

low- and high-poverty districts, respectively. If Figures 1 and 2 were converted to per-enrollment numbers, the scatter plots would shift down ever so slightly, but slightly more for the higher poverty districts. It is worth pointing out that if aggregate spending on K-12 education were fixed and allocation decisions were based on enrollment rather than ADA, if the ADA to enrollment ratio were the same for all districts, the same allocation of revenue would exist. It's the differences in these ratios that would impact the distribution of revenue per enrolled student. Those differences are present, but small.

A.2 SACS Financial Data

The California School Accounting Manual (California Department of Education 2019) provides very specific information about every category in the SACS data.[3] I use the object code to classify financial data. Table A.2 shows the object codes used for each revenue category and expenditure category. I include the General Fund (fund 01), the Cafeteria and Cafeteria Enterprise funds (funds 13 and 61) and the Deferred Maintenance Fund (fund 14). It is critical to include the deferred maintenance fund because of an accounting change that occurred in 2013-14. In that year, some districts directed LCFF base funds directly to the deferred maintenance account while others opted to include that revenue in their general fund (San Diego County Office of Education, n.d.). To measure revenue consistently across districts, it is important to include revenue from both funds. Furthermore, about 25%-37% of federal funding goes directly to the cafeteria funds, so it is critical to include those funds as well.

[3] Available at: https://www.cde.ca.gov/ds/fd/fd/.

Table A.2: SACS Revenue and Expenditure Codes

Category	SACS Object Codes
Revenue Category	
State – General Purpose	8010-8099
State – Restricted	8300-8599
Local	8600-8799
Federal	8100-8299
Interfund Transfers	8900-8999
Expenditure Category	
Certificated Personnel	1000-1999
Classified Personnel	2000-2999
Employee Benefits	3000-3999
Books and Supplies	4000-4999
Services/Operating Exp.	5000-5999
Capital Outlay	6000-6999
Tuition and Transfers	7000-7499
Other financing uses	7600-7699

Note: There are no object codes from 7500-7999. The amount of funding in object codes 7615 and 7616 are subtracted from total revenue and total expenditures to avoid double counting.

Because I include multiple funds, I subtract transfers from the general fund to the cafeteria fund (object code 7616) and to the deferred maintenance fund (object code 7615) from revenue and expenditures to avoid double counting. This level of funding will count as revenue when it enters the general fund, so I do not want to count it as revenue in the cafeteria and deferred maintenance funds.[4] This funding will count as an expenditure when it is spent from the deferred maintenance and cafeteria funds, so I do not want to count it as an expenditure from the general fund.

Personnel expenditures are described in the main text. Non-personnel expenditures are fairly straightforward. Books and supplies refer to textbooks, other curriculum, reference materials for both instruction and non-instruction, as well as supplies such as those used in the cafeteria, for transportation, and grounds keeping. Services and operating expenses include expenditures for travel and conferences, membership dues for personnel, insurance, utilities, and non-capitalized rentals. Larger capital projects

[4] I subtract expenditure object codes 7615 and 7616 instead of revenue objects 8915 and 8916, because those revenue codes include transfers from funds other than the general fund that I still want to capture in revenue. The difference is small, however: only $4 per pupil in 2007-08, $1 per pupil in 2011-12, and non-existent in 2017-18.

are recorded in the capital outlays category, which includes expenditures for books for new libraries, computer systems, playground equipment, and the acquisition of land and buildings (although most of this latter category expenditures take place through capital accounts). Tuition and transfers include expenditures paid to other local education agencies for services as well as inter-fund transfers. Other financing primary represents transfers to other funds and some additional financing uses (e.g., discounts associated with issuing long-term debt.)

As Bruno (2018) highlights, many judgment calls must be made when categorizing SACS data to track resources over time. I have opted for the most simplified version to provide a baseline understanding of revenue and expenditures from the primary funds used by school districts for daily operations. But, I want to acknowledge three main differences between my approach and what others have done. First, Bruno (2018), and those who follow his lead, exclude revenue and expenditures for Adult Education programs. This exclusion is irrelevant for the funds in my analysis, because adult education revenue amounts to less than $1 per pupil. Most adult education revenue and expenditures are tracked through the adult education fund, which I exclude altogether.[5] Second, Bruno (2018) excludes PERS reductions (object 8092) and its corresponding expenditures. This is revenue that districts receive but then transfer back to the state for retirement plan contributions. The revenue is offset by an equal expenditure. This coding practice ended in 2013-14. This funding is a very small share of revenue, only $43/pupil in 2007-08, with little correlation to poverty. Excluding this revenue from 2007-08 would show a $43/pupil higher increase in revenue between 2007-08 and 2017-18. Lastly, Bruno (2018) excludes STRS on-behalf contributions, as well as their corresponding expenditures, which started in 2013-14 as the result of Governmental Accounting Standards Board (GASB) 68 reporting requirements that in part aimed to differentially account for unfunded pension liabilities. These are $388/pupil in 2017, also with little relationship between to district poverty. Excluding these revenues from my analysis

[5] In 2009, some adult education revenue became part of the categorical flexibility reforms so did not have to be spent on adult education programs (Weston 2011).

would show lower revenue gains over the decade. In other words, the intercepts in Figures 2 and 3 would be slightly lower, but the slopes would barely change.

A.3 Inflation

Inflation data come from the Implicit Price Deflator (IPD) for State and Local Governments.[6] The IPD weights the salaries of government employees more heavily than does the Consumer Price Index (CPI), because governments rely more heavily on human resources than on the goods in the CPI. For that reason, the IPD is more appropriate than the CPI for school district expenditures.[7] The IPD tends to rise faster than the CPI, so it tends to show less real growth. The IPD inflation correction for 2007-08 is 1.22, whereas with the CPI (All Urban Consumer Series) it would be 1.17.[8] For 2011-12, the IPD inflation correction is 1.12 compared to 1.09 with the CPI. To compute a CPI inflation adjusted value from IPD adjusted values in this paper, multiply the 2007-08 IPD adjusted value by .959 (1.17/1.22) and the 2011-12 IPD adjusted value by .974 (1.12/1.09). Using a CPI inflation adjustment shows a 9.8% decline in total revenue per pupil between 2007-08 and 2011-12 and an 18.6% increase between 2007-08 and 2017-18 (as opposed to an 11% decline and 14% gain, respectively).

With both indices, I use the seasonally adjusted monthly or quarterly values and compute an inflation adjustment for an academic school years using index values from the last two quarters of the base year the first two quarters of the end year. For example, for the 2007-08 academic year, I average the July through December indices from 2007 and the January through June indices from 2008. Shores and Candeleria (2020) highlight the importance of using academic year measures, especially during the era of the Great Recession. The index from 2017-18 serves as the base year from which inflation adjustments are calculated. Multiplying the revenue and expenditures for a given year by their inflation adjustment produces a measure in real 2017-18 dollars.

[6] Available at: https://fred.stlouisfed.org/series/A829RD3Q086SBEA
[7] However, in terms of thinking about what teachers can purchase with their salaries, the CPI may be a better indicator of real purchasing power changes from a teacher's, as opposed to a district's, perspective.
[8] Available at: https://fred.stlouisfed.org/series/CPIAUCSL.

Table A.3: The Components of Unduplicated Student Counts 2017-18

	Enrollment Weighted	Unweighted
Means		
Percent Eligible for FRPM	60%	57%
Percent English Learners	21%	19%
Percent Foster Youth	0.5%	0.6%
Percent Unduplicated	64%	61%
Correlations		
%FRPM with %Unduplicated	0.99	0.98
%FRPM with %English Learner	0.61	0.52
%FRPM with %Foster Youth	0.51	0.17

Note: FRPM is the free- or reduced-price meals program.

A.4 Unduplicated Student Counts and Free- or Reduced Price Meals Participation

Since the implementation of the LCFF in 2013-14, the California Department of Education provides district level data on the number students eligible for subsidized meals through the free- or reduced-price lunch program (FRPM), the number of English Learners, the number foster youth, and importantly the number of students who meet at least or more of those categories (the unduplicated count).[9] Prior to LCFF, the unduplicated count is not available even though number eligible for subsidized meals and the number of English learners was. Because students often belong to more than one category, the sum of the counts in each category is not the same as the unduplicated count. Yet, from a practical standpoint, using FRPM rate will provide nearly the same results. Table A.3 provides more details about the components of unduplicated counts.

In 2017-18, about 60% of students statewide are eligible for FRPM and only 21% of students are English Learners. Importantly, the percentage of students eligible for the meals program is highly indicative of the unduplicated count. On average, students who are eligible for the subsidized meals

[9] Data available from: https://www.cde.ca.gov/ds/sd/sd/filescupc.asp.

program make up 93% of the unduplicated counts in 2017-18. In earlier years, the Legislative Analyst's Office (2007) calculates (with data unavailable to researchers) that 85% of English Learners participate in the subsidized meal program.

To compute the share of students in the *district* who are eligible for FRPM, I computed a weighted average of the school FRPM rates within the district, where the weights are school enrollment in grades K-12. Charter schools that report financial data with their district are included, but the remaining charter schools are excluded. The school level FRPM rates are from the Student Poverty FRPM Data from the California Department of Education.[10]

[10] FRPM Data available from: https://www.cde.ca.gov/ds/sd/sd/filessp.asp

Appendix B: Additional Regression Results

The lines of best fit in the figures are estimated with equation (1) from the main text. Although that regression can indicate whether the slopes within a given year are statistically different for high and low poverty districts, it cannot measure whether the slopes are statistically different across years. To test statistically how the relationship between revenue and poverty changes in 2011-12 and 2017-18, I estimate the following model:

$$Y_{dt} = \beta_0 + \beta_1 * PovC_{dt} + \beta_2 * (PovC_{dt} * High_{dt}) +$$
$$\beta_3 * D2011_t + \beta_4 * (PovC_{dt} * D2011_t) + \beta_5 * (PovC_{dt} * High_{dt} * D2011_t) +$$
$$\beta_6 * D2017_t + \beta_7 * (PovC_{dt} * D2017_t) + \beta_8 * (PovC_{dt} * High_{dt} * D2017_t) + \varepsilon_{dt} \quad \text{(B.1)}$$

This expanded model includes all three years of data and interacts each of the original terms with two sets of dummy variables: one indicating whether the data come from year 2011-12 ($D2011_t$) and another indicating whether the data come from the year 2017-18 ($D2017_t$). Subscript *t* denotes the year the variable is measured. Like equation (1), regressions are weighted by the district's ADA and standard errors are corrected for heteroskedasicity. Table B.1 shows the combination of coefficients for all slopes and their differences within years and over time. For example, the coefficient β_7 measures the change from 2007-08 to 2017-18 in the slope for districts with a low concentration of poverty and ($\beta_7 + \beta_8$) measures the change between those years in the slope for districts with a high poverty concentration. The changes in intercept from year to year are much easier to read directly from the equation. The coefficient β_6 captures the change from 2007-08 to 2017-18.

Table B.1: Coefficient Combinations for All Poverty Slopes

	2007-08	2011-12	2017-18	2011-12 – 2007-08	2017-18 – 2007-08
Low-Poverty	β_1	$\beta_1 + \beta_4$	$\beta_1 + \beta_7$	β_4	β_7
High-Poverty	$\beta_1 + \beta_2$	$\beta_1 + \beta_2 + \beta_4 + \beta_5$	$\beta_1 + \beta_2 + \beta_7 + \beta_8$	$\beta_4 + \beta_5$	$\beta_7 + \beta_8$
Difference (High-Low)	β_2	$\beta_2 + \beta_5$	$\beta_2 + \beta_8$	β_5	β_8

Throughout this Supplemental Appendix, the regression tables present the actual coefficients from equation (B.1). Statistical significance of individual coefficients is determined by t-test for those variables. For easier interpretation, the tables also include select combinations of the coefficients, whose statistical significance is determined by an F-test on the sum of the corresponding coefficients. Table B.2 shows the regression coefficients from equation B.1 for all districts and parallels Table 3 in the main text.

Table B.2: Regression Results for Revenue as a Function of Poverty: All Districts

	State All	State General Purpose	State Restricted	Local	Federal	Total Revenue
Intercept (at .55)	9,598 ***	7,144 ***	2,454 ***	759 ***	1,141 ***	11,582 ***
	(154)	(53)	(170)	(69)	(45)	(195)
PovC	854	-953 ***	1,807 ***	-1,150 ***	1,665 ***	1,388 **
	(529)	(281)	(539)	(270)	(140)	(687)
PovC x High	1,365	148	1,216	459	796 ***	2,744 **
	(880)	(473)	(819)	(500)	(295)	(1,196)
Dummy 2011	-1,559 ***	-948 ***	-611 ***	-67	103 *	-1,527 ***
	(193)	(88)	(199)	(98)	(60)	(251)
PovC x D2011	-479	-144	-335	-411	119	-847
	(713)	(521)	(640)	(425)	(185)	(955)
PovC x High x D2011	393	317	76	576	-234	649
	(1,476)	(822)	(1,341)	(755)	(493)	(1,922)
Dummy 2017	1,028 ***	2,166 ***	-1,138 ***	64	-228 ***	870 ***
	(197)	(111)	(181)	(149)	(64)	(291)
PovC x D2017	51	1,434 **	-1,383 **	-272	-232	-469
	(834)	(674)	(586)	(570)	(204)	(1,188)
PovC x High x D2017	3,483 **	4,321 ***	-838	219	216	3,783
	(1,745)	(1,199)	(1,048)	(1,097)	(551)	(2,501)
2007 Low Slope	854	-953 ***	1,807 ***	-1,150 ***	1,665 ***	1,388 **
2007 High Slope	2,219 **	-805 ***	3,023 ***	-691 *	2,461 ***	4,132 ***
2017 Low Slope	905	481	424 *	-1,422 ***	1,433 ***	919
2017 High Slope	5,753 ***	4,950 ***	802	-744	2,445 ***	7,446 ***
N	2,858	2,858	2,858	2,858	2,858	2,858
R-squared	0.52	0.70	0.42	0.11	0.61	0.38
R-squared 2007	0.06	0.06	0.25	0.14	0.55	0.11
R-squared 2011	0.05	0.04	0.29	0.12	0.60	0.08
R-squared 2017	0.26	0.23	0.12	0.08	0.64	0.22
Districts	All	All	All	All	All	All

Notes: * p<0.10, ** p<0.05, *** p<0.01. Coefficients with standard errors in parentheses. Poverty is measured on a scale of 0 to 1, so the regression slopes correspond to changes from no poverty to 100% poverty. The table also includes linear combinations of the coefficients to show the slopes for low- and high-concentration districts. (N= 967 in 2007, 952 in 2011, and 939 in 2017.)

Appendix C: Excess Tax Districts

The number of excess tax districts fluctuates from year to year. In 2007-08, about 10% of districts (n=97) met this status. A decade later, 15% of districts were classified as excess tax. These districts tend to be smaller than average (enrolling 3% of students in 2007-08 and 6% in 2017-18) and lower in poverty. Table B.3 shows the regression results corresponding to Table 3 in the main text (and Appendix Table B.2) but excluding the excess tax districts. The primarily differences pertain to state general purpose revenue. Excluding the excess tax districts flattens the slope for low-concentration districts in 2007-08 so that it is not so negative sloping, and it increases the slope for low-concentration districts in 2017-18, better reflecting the impact the LCFF's supplemental grant based on LI/EL district rates.

Table C.1: Regression Results for Revenue as a Function of Poverty: Excludes Excess Tax Districts

	State All	State General Purpose	State Restricted	Local	Federal	Total Revenue
Intercept (at .55)	9,609 ***	7,166 ***	2,443 ***	785 ***	1,139 ***	11,620 ***
	(156)	(46)	(175)	(70)	(47)	(196)
PovC	1,594 ***	-115	1,710 ***	-774 ***	1,667 ***	2,524 ***
	(525)	(163)	(572)	(262)	(148)	(661)
PovC x High	525	-839 **	1,364 *	-48	800 ***	1,376
	(833)	(326)	(819)	(487)	(299)	(1,131)
Dummy 2011	-1,567 ***	-965 ***	-602 ***	-55	108 *	-1,524 ***
	(194)	(69)	(206)	(100)	(62)	(251)
PovC x D2011	12	582 **	-570	-185	143	-106
	(658)	(242)	(683)	(414)	(201)	(854)
PovC x High x D2011	-64	-333	269	315	-281	-97
	(1,390)	(498)	(1,343)	(741)	(502)	(1,803)
Dummy 2017	929 ***	2,054 ***	-1,125 ***	-63	-225 ***	643 **
	(192)	(83)	(188)	(87)	(68)	(251)
PovC x D2017	1,224 *	2,521 ***	-1,296 **	-266	-217	718
	(661)	(280)	(630)	(380)	(223)	(868)
PovC x High x D2017	2,707 *	3,689 ***	-982	735	187	3,515
	(1,618)	(880)	(1,074)	(654)	(577)	(2,140)
2007 Low Slope	1,594 ***	-115	1,710 ***	-774 ***	1,667 ***	2,524 ***
2007 High Slope	2,119 **	-954 ***	3,074 ***	-822 **	2,467 ***	3,900 ***
2017 Low Slope	2,818 ***	2,406 ***	414	-1,040 ***	1,450 ***	3,242 ***
2017 High Slope	6,050 ***	5,256 ***	796	-353	2,437 ***	8,133 ***
N	2,490	2,490	2,490	2,490	2,490	2,490
R-squared	0.68	0.89	0.40	0.07	0.59	0.52
R-squared 2007 (n=870)	0.13	0.04	0.23	0.11	0.55	0.19
R-squared 2011 (n=821)	0.14	0.01	0.24	0.07	0.58	0.18
R-squared 2017 (n=799)	0.61	0.70	0.11	0.04	0.62	0.48
Districts Types	All	All	All	All	All	All
Excess Tax Districts	Excluded	Excluded	Excluded	Excluded	Excluded	Excluded

Notes: * p<0.10, ** p<0.05, *** p<0.01. Coefficients with standard errors in parentheses. Poverty is measured on a scale of 0 to 1, so the regression slopes correspond to changes from no poverty to 100% poverty. The table also includes linear combinations of the coefficients to show the slopes for low- and high-concentration districts.

Appendix D: Analysis by District Type

The tables and figures in the main text include all districts, regardless of type. Most California students (71%) are in unified districts serving students from kindergarten through 12th grade, yet these districts only represent about one third of all districts (Table D.1).[11] More than half of all school districts are elementary districts, but these tend to be smaller than unified districts and only serve about 20% of the state's students. About eight percent of the state's districts are high school districts, and these serve only nine percent of the state's students. Elementary and high school districts may choose to stay separate, rather than unify, for financial reasons. Prior to LCFF, the revenue targets for each district were based on the type of district and the size and not explicitly related to the grade distribution of students (Weston 2010). For some districts, unifying could have meant a lower revenue target. As the LCFF guides revenue allocation and hold harmless conditions are minimized, these financial incentives may diminish.

One reason districts may exhibit spread around the regression line in Figures 1 and 2 of the main text is that the distribution of grade levels is different in unified, elementary, and high school districts, and the LCFF directs different base funding as a function of the districts grade spans served. Analyzing the relationship between revenue and poverty for each district type will help minimize that issue. Figure D.1 plots total state revenue per pupil by poverty for each district type. Like the main text, the solid lines represent regression lines that include all districts, and the grey dotted lines are the regressions that exclude excess tax districts (Table D.2 provides the regression results). Although there are very few students in unified excess tax districts (2%-4% depending on the year), nearly 8% of elementary district students and 13% of high school district students are in excess tax districts in 2017-18.

[11] I include common administration districts with unified districts. A common administration district is a pair of and elementary and high school districts that file their financial reports as one district. There are 5 pairs of these districts.

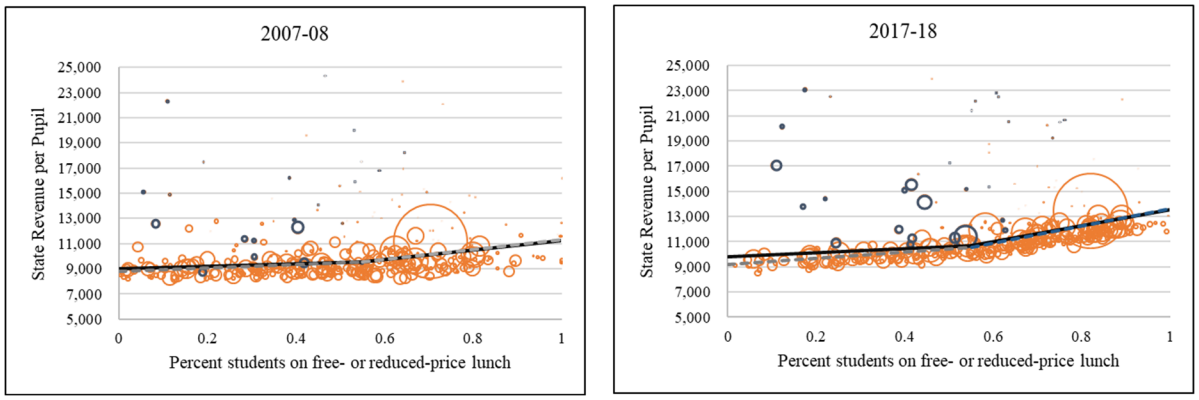
Table D.1. District Number and ADA by Type by Year

	2007-08			2011-12			2017-18		
District Type	Districts	ADA	Students	Districts	ADA	Students	Districts	ADA	Students
All	967	5,842,801	100%	952	5,537,926	100%	939	5,366,119	100%
Unified	337	4,169,798	71%	344	3,949,507	71%	349	3,808,788	71%
Elementary	554	1,129,622	19%	539	1,092,890	20%	519	1,069,536	20%
High	81	543,382	9%	76	495,538	9%	71	487,795	9%

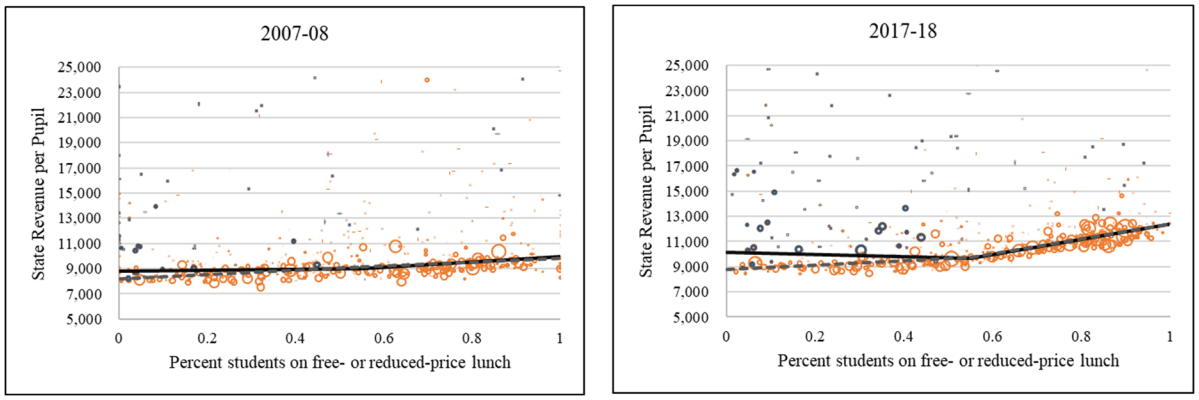
Note: Excludes one district with 8 students in 2011-12 that is missing poverty data.

Figure D.1. State Revenue and Student Poverty by District Type

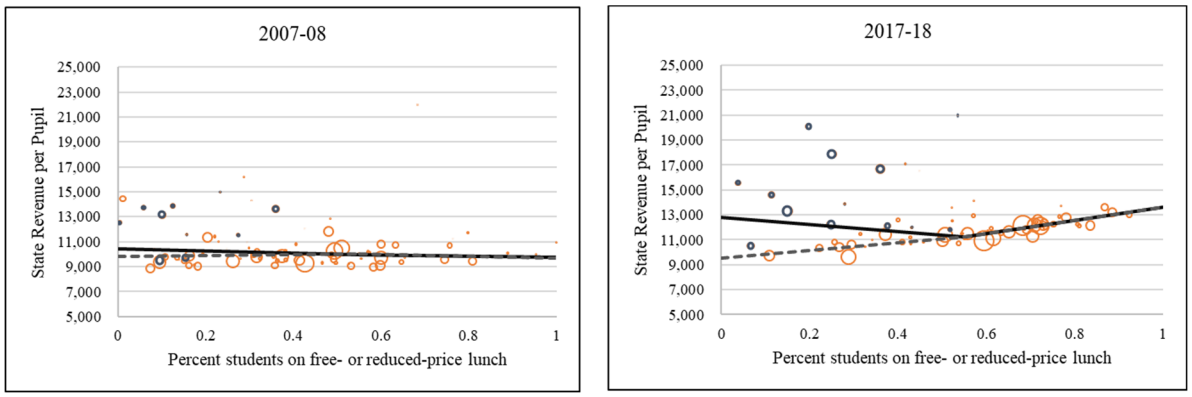
A. Unified School Districts



B. Elementary School Districts



C. High School Districts



Notes: Excess tax districts are denoted with grey circles. Regression lines excluding excess tax districts are dashed grey. These panels exclude districts with more than $25,000 per pupil. (However, the regression lines include these districts). In 2007-08, a total of 20 districts (9 of which are excess tax) with 2,200 students are excluded. In 2017-18, 29 districts (19 of which are excess tax) with 3,500 students are excluded.

Table D.2: State Revenue Regressions by District Type and Excess Tax Status

	All State	General Purpose	All State	General Purpose	All State	General Purpose	All State	General Purpose	All State	General Purpose	All State	General Purpose
Intercept (at .55)	9,559 ***	7,077 ***	9,525 ***	7,051 ***	9,010 ***	6,848 ***	9,133 ***	6,978 ***	9,983 ***	7,965 ***	10,038 ***	8,064 ***
	(148)	(48)	(147)	(33)	(161)	(72)	(160)	(56)	(280)	(184)	(272)	(141)
PovC	1,004 *	-648 **	1,359 ***	-251 **	375	-1,109 ***	1,765 ***	272 *	-870	-1,635 *	337	106
	(537)	(291)	(498)	(125)	(581)	(391)	(506)	(157)	(1,245)	(970)	(1,259)	(413)
PovC x High	2,780 *	169	2,594 *	-104	1,679	1,176 *	-279	-780 **	419	1,276	-1,088	-1,004
	(1,520)	(541)	(1,479)	(339)	(1,096)	(635)	(1,024)	(361)	(2,718)	(1,986)	(2,695)	(1,342)
Dummy 2011	-1,611 ***	-951 ***	-1,641 ***	-1,003 ***	-1,720 ***	-1,093 ***	-1,747 ***	-1,088 ***	-1,111 ***	-972 ***	-1,077 ***	-927 ***
	(196)	(86)	(192)	(42)	(192)	(121)	(181)	(81)	(402)	(246)	(397)	(179)
PovC x D2011	-441	160	-316	384 **	-1,011	-701	-758	23	-526	-1,823	1,139	370
	(765)	(562)	(657)	(167)	(805)	(707)	(593)	(256)	(1,993)	(1,794)	(1,585)	(552)
PovC x High x D2011	287	72	244	31	785	810	646	96	1,191	2,459	-613	97
	(2,263)	(916)	(2,188)	(413)	(1,423)	(1,093)	(1,200)	(534)	(3,889)	(2,882)	(3,605)	(1,577)
Dummy 2017	1,117 ***	2,215 ***	1,002 ***	2,087 ***	687 ***	1,882 ***	604 ***	1,793 ***	1,271 ***	2,024 ***	1,182 ***	1,867 ***
	(214)	(131)	(206)	(92)	(208)	(139)	(187)	(100)	(389)	(312)	(324)	(188)
PovC x D2017	628	1,923 **	1,126	2,395 ***	-1,221	258	36	1,380 ***	-1,957	-1,585	2,697 *	2,322 ***
	(983)	(818)	(713)	(302)	(941)	(806)	(619)	(349)	(2,682)	(2,483)	(1,538)	(760)
PovC x High x D2017	1,972	4,001 ***	1,860	3,980 ***	5,208 ***	4,757 ***	4,313 ***	4,007 ***	7,712 *	6,928 *	3,366	3,690 **
	(2,416)	(1,490)	(2,261)	(1,063)	(1,596)	(1,229)	(1,259)	(682)	(4,176)	(3,618)	(3,118)	(1,817)
2007 Low Slope	1,004 *	-648 **	1,359 ***	-251 **	375	-1,109 ***	1,765 ***	272 *	-870	-1,635 *	337	106
2007 High Slope	3,784 **	-479	3,953 **	-355	2,054 ***	67	1,486 **	-508 **	-451	-359	-751	-898
2017 Low Slope	1,632 **	1,275 *	2,485 ***	2,144 ***	-846	-851	1,801 ***	1,652 ***	-2,827	-3,220	3,034 ***	2,428 ***
2017 High Slope	6,384 ***	5,445 ***	6,939 ***	6,020 ***	6,041 ***	5,082 ***	5,835 ***	4,879 ***	5,304 ***	4,984 ***	5,312 ***	5,114 ***
N	1029	1029	932	932	1603	1603	1372	1372	226	226	186	186
R-squared	0.64	0.81	0.77	0.96	0.47	0.64	0.66	0.87	0.35	0.45	0.50	0.67
R-squared 2007	0.16	0.04	0.26	0.04	0.05	0.04	0.13	0.02	0.01	0.04	0.00	0.00
R-squared 2011	0.17	0.01	0.29	0.01	0.02	0.05	0.09	0.00	0.02	0.10	0.02	0.00
R-squared 2017	0.41	0.39	0.72	0.83	0.22	0.19	0.58	0.60	0.06	0.06	0.67	0.72
Districts	Unified	Unified	Unified	Unified	Elem	Elem	Elem	Elem	High	High	High	High
Excess Tax Districts	Included	Included	Excluded	Excluded	Included	Included	Excluded	Excluded	Included	Included	Excluded	Excluded

Notes: * p<0.10, ** p<0.05, *** p<0.01. Coefficients with standard errors in parentheses. Poverty is measured on a scale of 0 to 1, so the regression slopes correspond to changes from no poverty to 100% poverty. The table also includes linear combinations of the coefficients to show the slopes for low- and high-concentration districts.

Appendix E: Expenditures and Savings

Table E.1 shows spending per pupil in the various expenditure categories for districts based on their poverty classification. Looking at the three separate areas of personnel expenditures shows that spending on certificated personnel salaries grew 4% in high-poverty districts, but only 2% in low-poverty districts, a difference that is not statistically significant. High-poverty districts experienced even larger relative growth in the salaries of classified personnel (18% versus 11%), a difference that is statistically significant at the 5% level.

The difference in benefits growth is only marginally significant between high- and low-poverty districts. Benefits spending grew $878/pupil for low-poverty districts and $1,086/pupil for high-poverty districts (a difference of $208). Excluding the PERS Reductions and STRS on-behalf contributions, the growth in benefits spending is smaller: $552/pupil and $776/pupil for low- and high-poverty districts, respectively. This still represents the largest spending category increase. These adjusted benefits increased 82% more than the salaries of certificated and classified staff combined in low-poverty districts and 43% more that these salaries in high-poverty districts.

Table E.1: General Fund Expenditures per Pupil (2017$) by Category and Poverty Group

	2007-08			2011-12			2017-18		
	Low	Med	High	Low	Med	High	Low	Med	High
Certificated Personnel	5,205	5,368	5,352	4,594	4,703	4,611	5,322	5,426	5,558
Classified Personnel	1,680	1,872	1,818	1,525	1,670	1,625	1,868	2,070	2,153
Employee Benefits	1,855	2,164	2,192	1,854	2,225	2,198	2,733	3,297	3,278
Books and Supplies	632	829	1,030	441	588	715	539	777	1,032
Services/Operations	1,052	1,242	1,243	939	1,103	1,180	1,252	1,388	1,549
Capital Outlay	99	111	155	55	76	93	117	188	256
Tuition and Transfers	323	180	169	148	120	168	150	152	211
Other Financing Uses	71	85	104	114	111	112	121	188	272
Total Expenditures	10,917	11,850	12,063	9,671	10,596	10,703	12,102	13,486	14,308
Total Revenue	11,020	11,867	12,076	9,705	10,593	10,758	12,038	13,493	14,315
Savings (Rev - Exp)	103	17	13	34	-4	55	-63	7	7

Notes: Includes elementary, high, unified, and common administration districts. Charter schools are excluded, unless they report finances with sponsoring district's general fund. Dollars are inflation adjusted to 2017 using the IPD.

References

Bruno, Paul. 2018. District Dollars 2: California School District Finances, 2004-5 through 2016-17. Getting Down to Facts II Project, Stanford University and PACE. Retrieved 7-11-19 from https://gettingdowntofacts.com/sites/default/files/2018-09/GDTFII_Report_Bruno.pdf

California Department of Education. 2019. California School Accounting Manual. Retrieved 11-25-20 from https://www.cde.ca.gov/fg/ac/sa/documents/csam2019complete.pdf

Legislative Analyst's Office. 2007. "English Learners," Analysis of the 2007-08 Budget Bill: Education, February 21, 2007. Website: https://lao.ca.gov/analysis_2007/education/ed_11_anl07.aspx

San Diego County Office of Education (n.d.). Deferred Maintenance and the Routine Restricted Maintenance Account. Retrieved 10-12-20 from https://www.sdcoe.net/business-services/financial-services/financial-accounting/Documents/manual/_Sec10%20Deferred%20Maintenance.pdf

Shores, Kenneth and Christopher Candelaria. 2020. Get Real! Inflation Adjustments of Educational Finance Data. *Educational Researcher*, 49(1): pp 71-74. https://doi.org/10.3102/0013189X19890338

Weston, Margaret. 2010. Funding California School: The Revenue Limit System. Public Policy Institute of California. San Francisco. Retrieved 7-15-19 from http://www.ppic.org/content/pubs/report/R_310MWR.pdf.

Weston, Margaret. 2011. California's New Funding Flexibility. Public Policy Institute of California. San Francisco. Retrieved 7-15-19 from http://www.ppic.org/publication/californias-new-school-funding-flexibility/.