

Addendum Regarding the 2019 Spending Data

We obtained spending data for both 2018 and 2019. Given some irregularities in the 2019 ESSA sheets,¹ we decided to focus our analysis of school finances on the 2018 data. However, to assuage concerns that our central conclusions rely on our exclusion of the 2019 data, we do explore patterns that use both years of data.

Note that because the 2019 data may have problem, we interpret these results with some caution. With all these caveats, note that the main conclusions are unchanged whether we use the 2019 data or not. For those variables that are reliable in both years (i.e., the average salary data paid per school and demographic data) the patterns are near identical between 2018 and 2019. Where there are some differences between the two years relates to the spending data (which are questionable for 2019). Even so, the main conclusions regarding the distribution of spending within districts are similar whether one uses the 2019 data or not. Note: *We inflation adjust the 2019 spending levels to be comparable to the 2018 levels using a 1.72 inflation rate.*

1. Spending Gaps Are similar in 2018 and 2019

Table 10 (2018):

Percentiles of the (School-level distribution) of School-Level Spending by the State

	5%-ile	10%-ile	25%-ile	50%-ile	75%-ile	90%-ile	95%-ile
Measure 1	\$5199.43	\$5824.66	\$6295.15	\$6757.07	\$7300.50	\$7880.64	\$8295.03
Measure 2	\$6784.10	\$7113.65	\$7448.98	\$8104.89	\$8753.46	\$9315.29	\$9527.40

Measure 1: Per-Pupil Direct Building Expenditures by State on Personnel and Non-Personnel

Measure 2: Per-Pupil Expenditures by State on Personnel and Non-Personnel (including Division I units)

Table 10 (2019):

Percentiles of the (School-level distribution) of School-Level Spending by the State

	5%-ile	10%-ile	25%-ile	50%-ile	75%-ile	90%-ile	95%-ile
Measure 1	\$5952.69	\$6197.91	\$6697.96	\$7338.79	\$7852.29	\$9015.15	\$9551.26
Measure 2	\$7239.27	\$7469.72	\$7889.92	\$8412.48	\$9080.71	\$9873.49	\$10203.05

Measure 1: Per-Pupil Direct Building Expenditures by State on Personnel and Non-Personnel

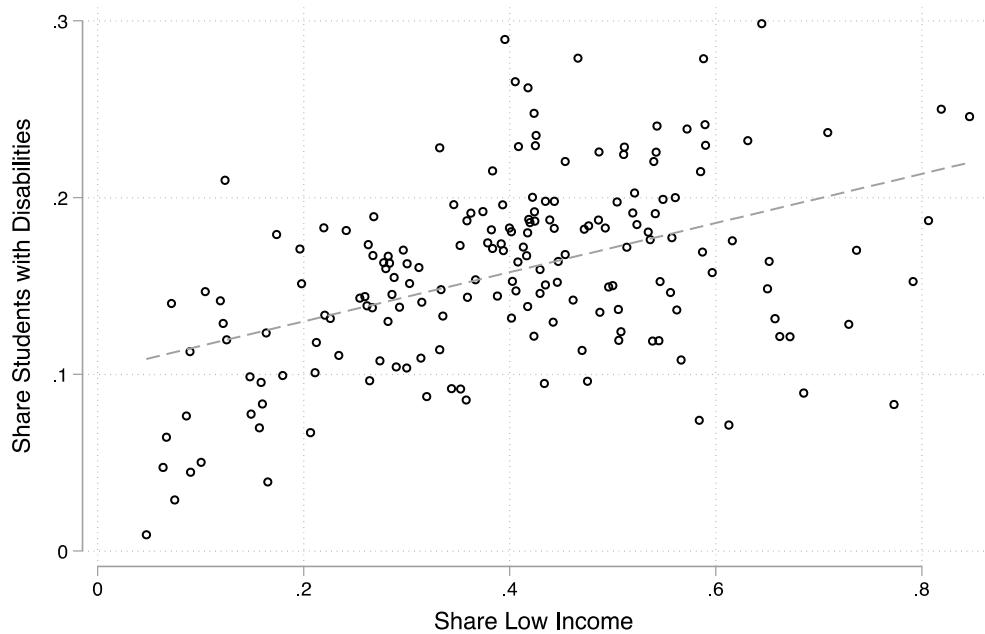
Measure 2: Per-Pupil Expenditures by State on Personnel and Non-Personnel (including Division I units)

As is common, state spending levels are higher in 2019 than in 2018. The gap between the top and bottom 5% of schools using Measure 2 is slightly larger in 2019 (\$3063) compared to 2018 (\$2743). The gap is about 11.6 percent large in 2019 than in 2018 – which is larger than can be accounted for by inflation (which was about 1.7 percent).

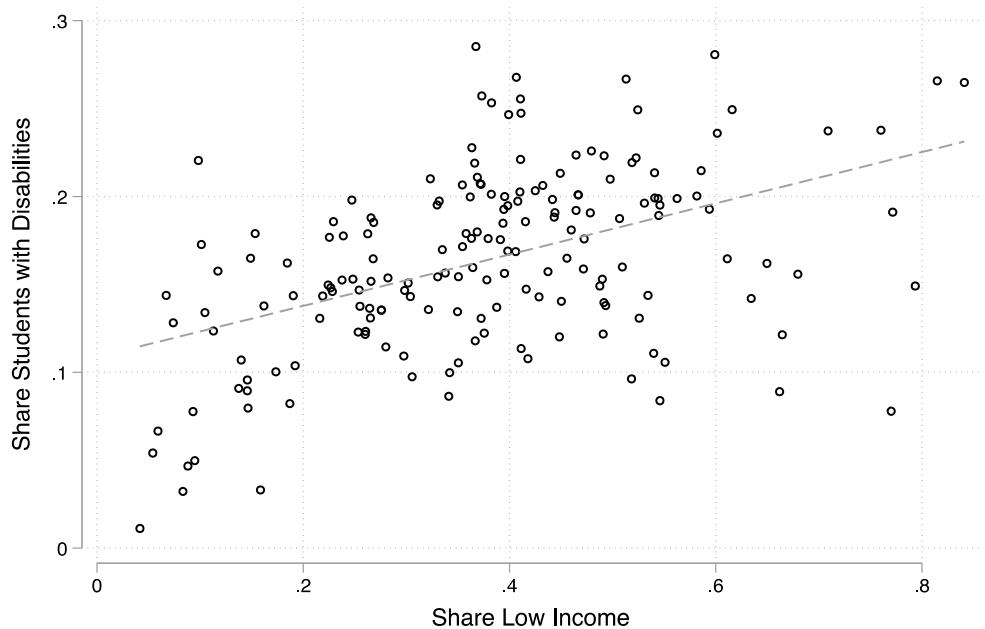
¹ The names of the individual district files are as follows: SD_0115656, SD_0115658, SD_0115662, SD_0115663, SD_0115667, SD_0115670, SD_0115673, SD_0115690, SD_0115693, SD_0115696, SD_0115698, SD_0115711, SD_0115713, SD_0115717, SD_0115722

2. The Relationship Between The share of student with Disabilities and the share Low Income Are similar in 2018 and 2019.

a. 2018



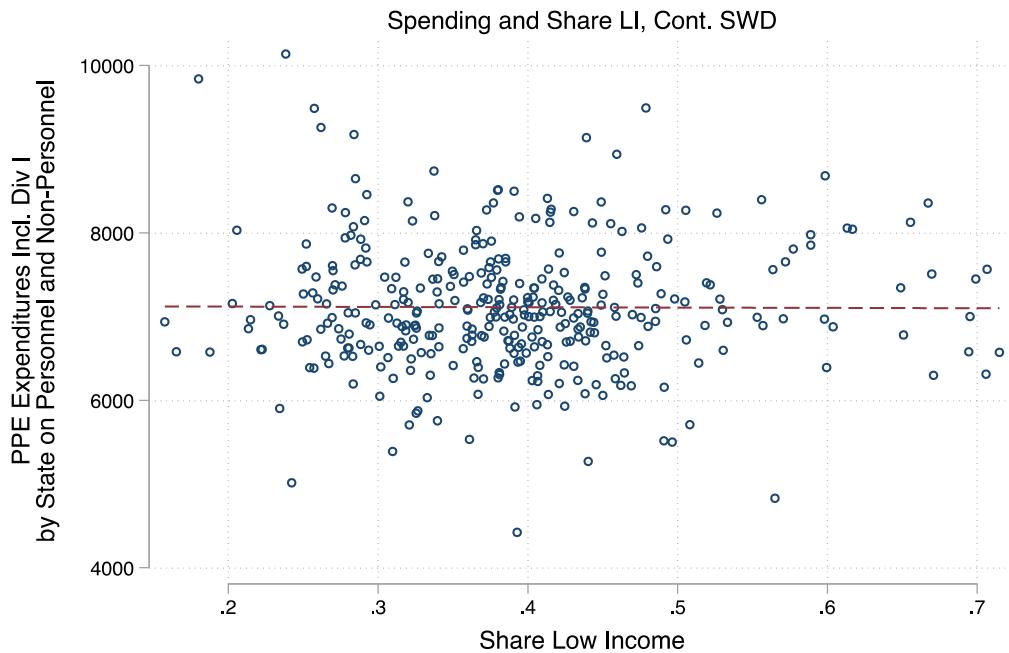
b. 2019



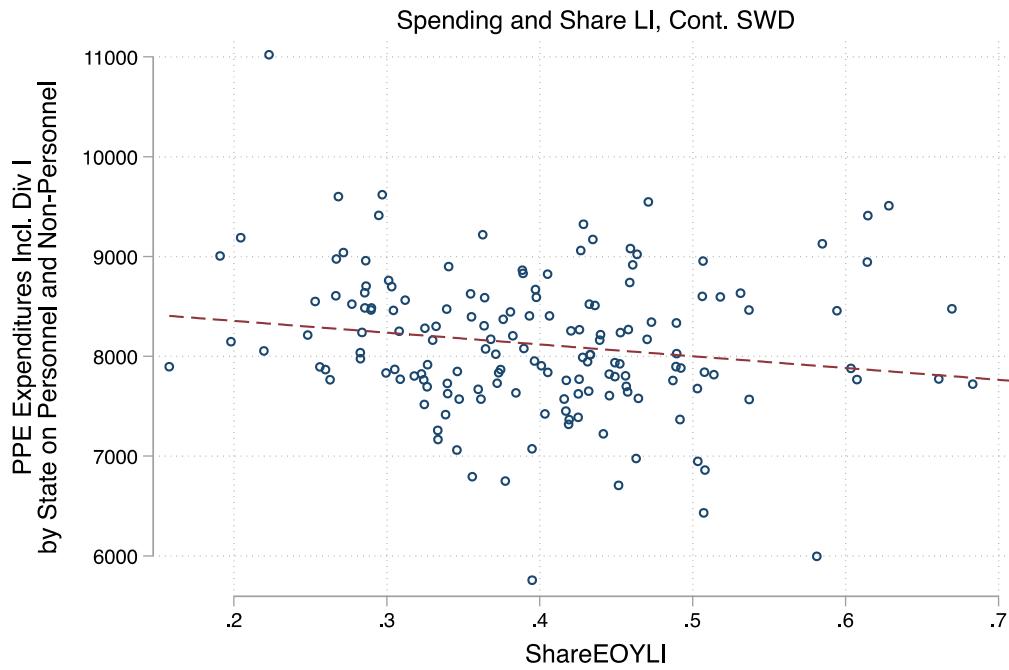
Note: these figures show the over 95% of schools with a share of students with disabilities less than 0.3.

3. Using both 2018 and 2019, the *overall* negative relationship between state per-pupil spending and the share of low-income students remains. However, it is less pronounced than when using 2018 alone.

a. Overall (2018 and 2019 combined)



b. 2018



c. 2019



We do see some differences in the overall pattern of spending across the two years -- whether this is because of errors in the 2019 data is unclear. In 2018, state spending was lower on average, in schools with larger low-income enrollment shares while the opposite was true in 2019. Note that the negative slope for 2018 is highly statistically significant (p -value=0.028), while the positive slope for 2019 is not significant (p -value=0.367). This is clear evidence of lower spending on low income students in 2018, while for the 2019 data on average spending is similar.

It is worth noting that in both years spending levels are higher for the lowest-poverty schools. In 2018, the schools with low-income shares of less than 15% had disability adjusted state per-pupil spending levels \$662 above higher poverty schools, and in 2019 these schools had disability-adjusted state per-pupil spending levels \$210 above higher-poverty schools.

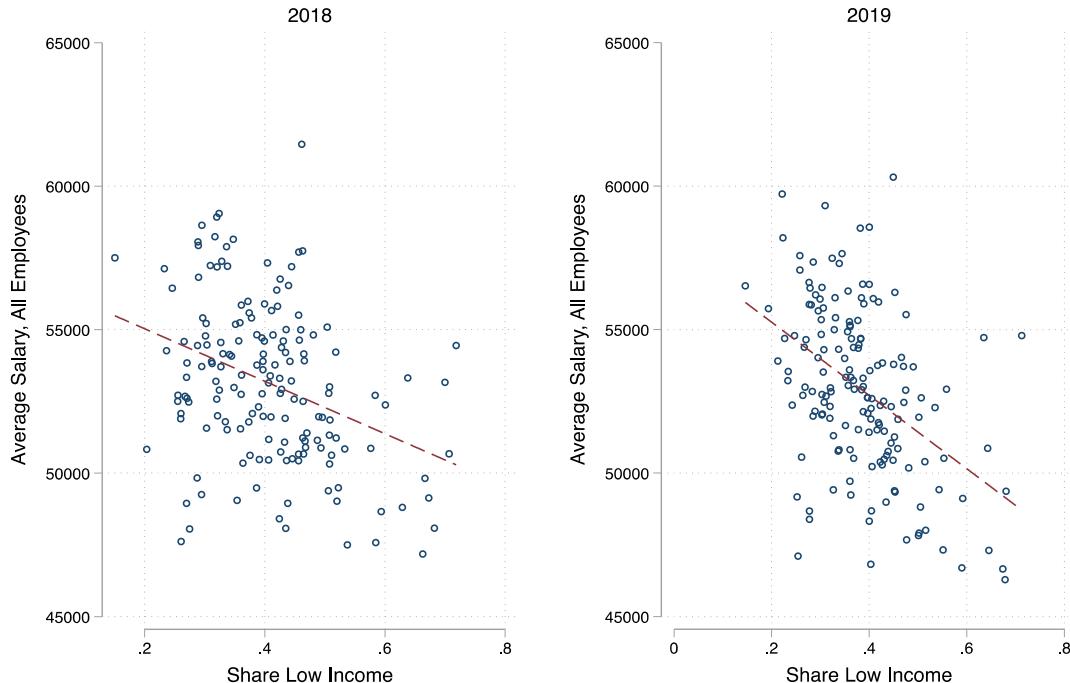
4. In both 2018 and 2019, several districts spend more money (Measure 2) on not-low-income students after making adjustment for student with disabilities.

PPE State on Personnel and Non-Personnel Incl. Div I				
Slope	Avg. Non-LI > Avg. LI	Slope (Cont. SWD)	Avg. Non-LI > Avg. LI (Cont. SWD)	
2018				
District 10	1907.43	Yes	381.58	Yes
District 13	1805.38	No	-705.97	No
District 15	-3677.23	Yes	-803.93	Yes
District 16	-757.81	Yes	637.58	Yes
District 17	4432.76	No	5814.87	No
District 18	-2010.1	Yes	-297.78	Yes
District 23	-5043.74	Yes	3821.96	Yes
District 24	4489.97	No	-2314.66	Yes
District 29	3585.14	No	1621.92	No
District 31	2498.1	No	1244.53	No
District 32	-713.72	Yes	-2092.85	Yes
District 33	517.99	No	-1387.99	Yes
District 34	2478.81	No	-1126.22	No
District 35	-8999.78	Yes	-10434.49	Yes
District 36	-4560.6	Yes	-9862.32	Yes
District 37	-47012.67	Yes	-49156.11	Yes
2019				
District 10	3598.23	No	5094.47	Yes
District 13	1064.75	No	1622.49	No
District 15	501.82	Yes	1721.94	Yes
District 16	-4229.83	Yes	-3389.96	Yes
District 17	-154.69	Yes	-152.68	Yes
District 18	-387.36	Yes	1856.65	No
District 23	2331.17	No	5553.46	No
District 24	5089.90	No	-2081.9	Yes
District 29	1858.64	No	154.26	No
District 31	2930.21	No	1331.56	No
District 32	3000.44	No	1967.48	No
District 33	1494.39	No	-540.59	No
District 34	1348.06	No	-195.75	No
District 35	-9386.92	Yes	-14654.79	Yes
District 36	-4317.8	Yes	-8826.29	Yes
District 37	-52017.15	Yes	-35259.59	Yes

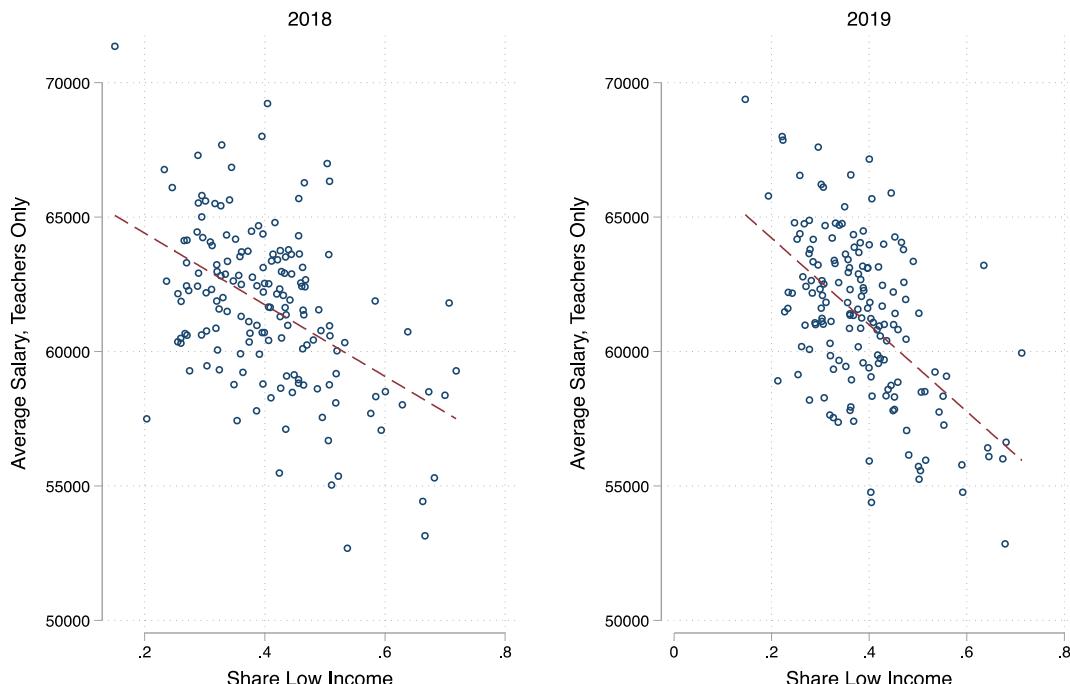
In 2018, 11 out of 16 districts spend less state money (per-pupil) on low income students in the districts (after accounting for students with disabilities). In 2019, 8 out of the 16 districts spend less state money (per-pupil) on low income students in the districts (after accounting for students with disabilities). In both years, half or more of the districts have higher state per-pupil spending levels for the non-low-income students than for the low-income students. Indeed, across both years, many of the same districts spend less money from the state on low-income students (districts 10, 15, 16, 24, 35, 36, and 37).

5. Schools with higher shares of low-income students pay lower average salaries overall (and to teachers specifically) in both 2018 and 2019.

a. Average Salary (All Employees)

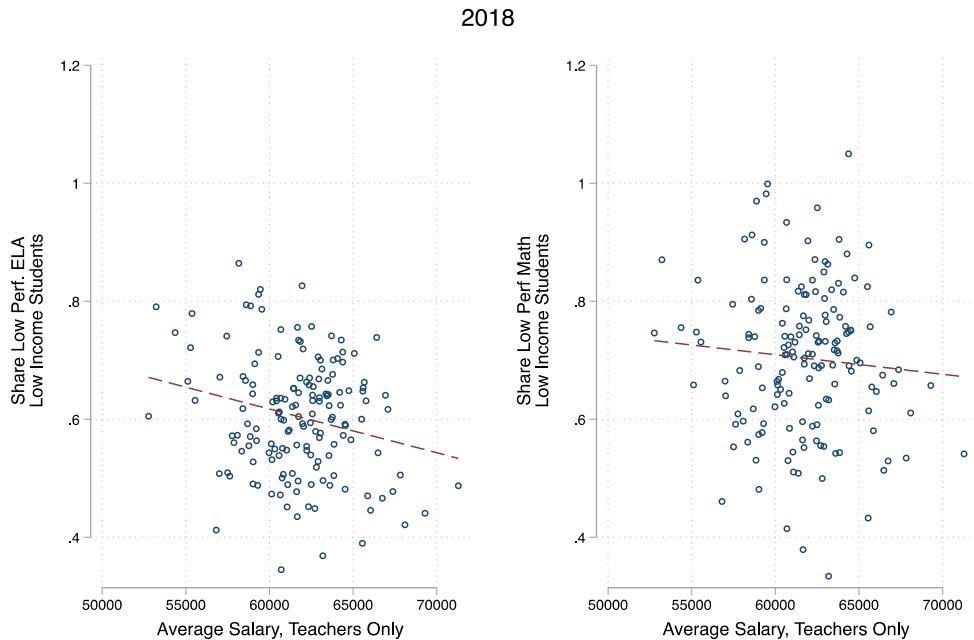


b. Average Salary (Teachers Only)

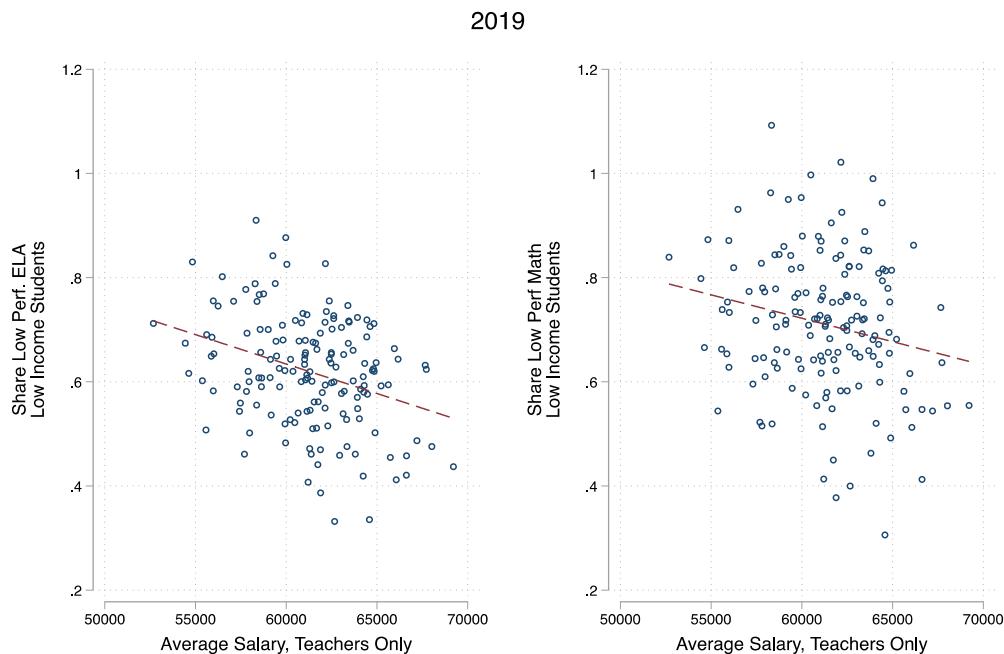


6. The performance of low-income students is better at schools that have higher teacher salaries (both in 2018 and 2019). See the combined patterns below.

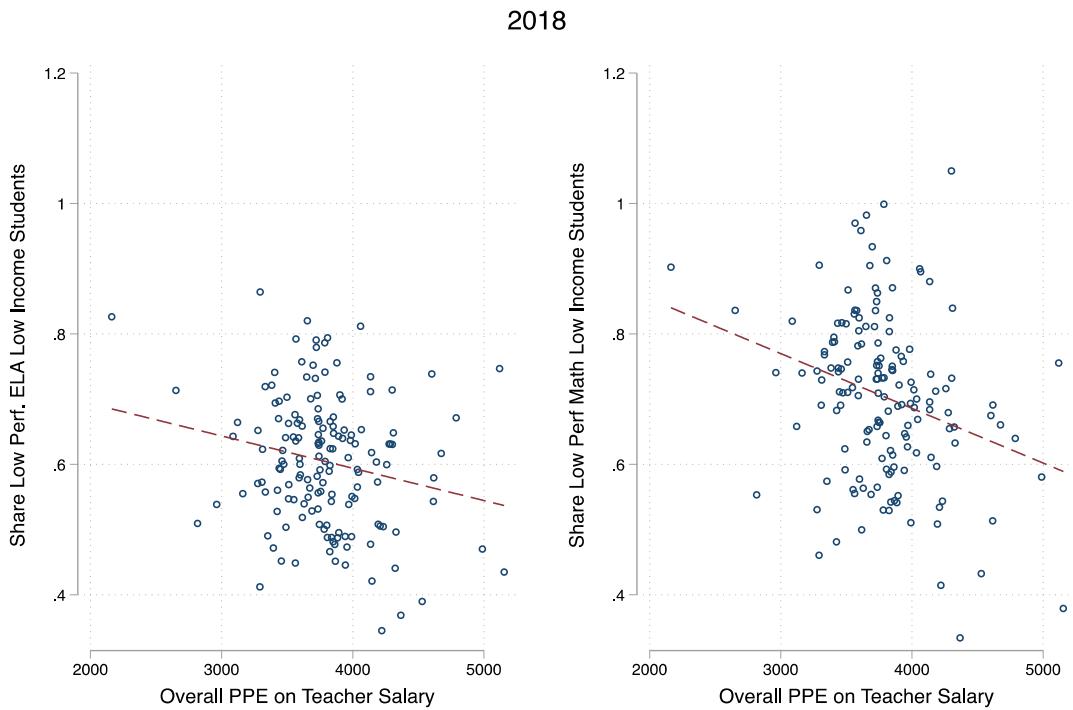
- a. 2018, Share of Low-Income students scoring below proficient on the state assessment against average Teacher Salary.



- b. 2019, Share of Low-Income students scoring below proficient on the state assessment against average Teacher Salary.



- c. 2018, Share of low-income students scoring below proficient on the state assessment against per-pupil spending on teacher salary.



- d. 2019, Share of low-income students scoring below proficient on the state assessment against per-pupil spending on teacher salary.

