Discussion of:
Federal Tax Deduction and the Demand for Local Public Goods

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Overview of the Paper

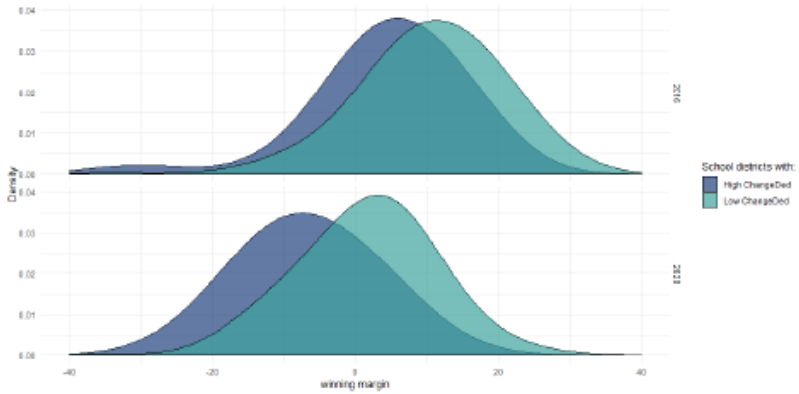
- **Federal tax deductions results in an increase in demand for local public goods**
  - Causal link between referendum approval rates and the share of residents who deduct local taxes
  - Theoretical model of local public goods capitalization that accounts for this federal tax provision
  - Empirically test the model's predictions
    - Cross-sectional analysis with data Pre TCJA
    - Lots of heterogeneity analysis
    - School district panel data
    - Transaction level analysis using border discontinuity

Key Strengths

- Important question
- Fantastic data
- Careful empirical work
- Novel finding
- Polished, well-written paper

Coolest Figure in the Paper!

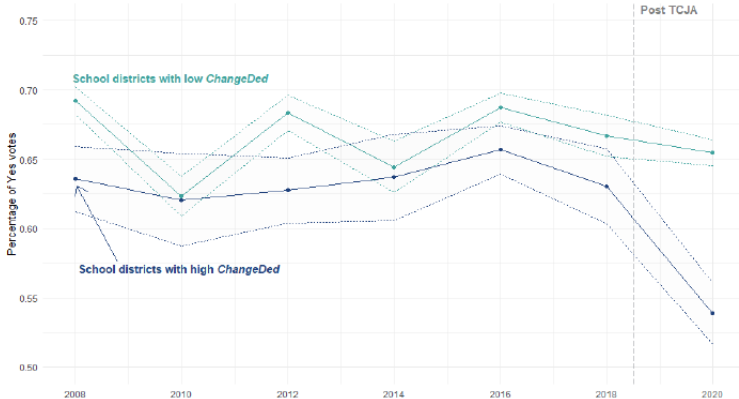
Figure B1: Distribution of school districts referendum results in 2016 and 2020



Note: These figures show the distribution of school districts referendum Winning margins for all referendums in 2016 (panel A) and 2020 (panel B). The dark blue distributions show the Winning margins for school districts with $ChangeDed_j > 0.18$ *(i.e. school districts that were impacted the most by the TCJA). The turquoise distribution shows the school districts with low* $ChangeDed_j$.

My Key Takeaway

Figure B2: Percentage of *Yes* votes on school district referendums



Note: These line graphs show the aggregated percentage of Yes votes on school district referendums in California. The dark blue line show the results for school districts with high DedShare, greater than the mean of 14%, while those with low DedShare, in turquoise, show the results for all other school districts. The shaded area represents the 95% confidence interval.

Cross Sectional Analysis: Household Sorting

- The analysis conditions on the test score, so what is school expenditure capturing?
  - Better infrastructure - athletic facilities, the aesthetic appeal of the school, safety?

- Alternative hypothesis - Is it a preference for high income neighborhoods?

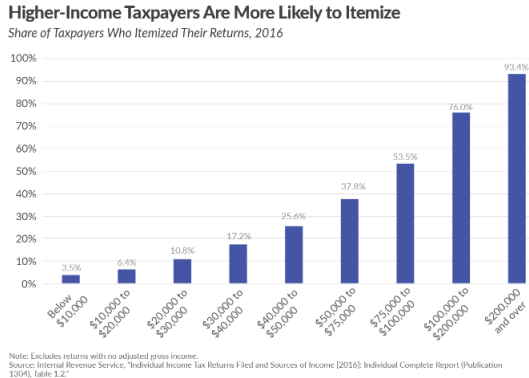
  - High income households have a higher willingness to pay for school,
  - and preference for having high income neighbors,
  - which attracts other high income households
  - and leads to further increases in property value and school quality

- Analysis controls for income and home ownership rate

- Also includes spatial fixed effects, but the share of property deducters is statistically significant in most specifications

Cross Sectional Analysis: Household Sorting

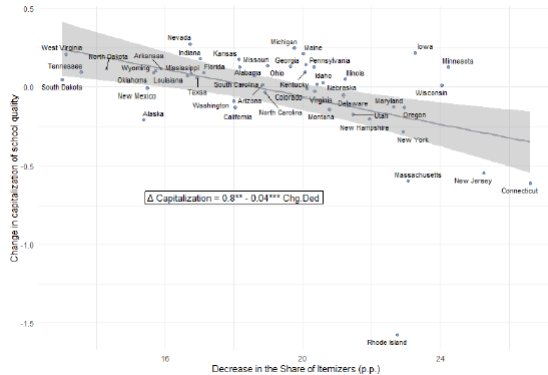
- Emphasize that the paper includes fixed effects for income quartiles
- What determines whether residents will deduct local taxes on the federal income tax bill?
  - Decomposition: What fraction can be explained by income, home ownership rate?
- Controlling for income, home ownership reduces some of the variation
  - What would the effects look like if we don't control for these variables?
- I really like the heterogeneity analysis!



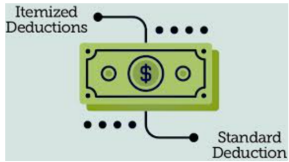
School District Panel Analysis

- Exploits exogenous decrease in the share of itemizers due to changes in TCJA
- Did these changes have a direct effect on house prices?
- More importantly, where the effects different for high priced vs low priced houses?
- What does change in home values as a function of the share of deducters look like?

Figure 4: Change in capitalization of local public goods and decrease in local tax deductions



Effect on School Quality?



Itemized Deduction

Demand for Schooling

Property Value

Schooling Expenditure

- Analyze the effect on school spending, test scores using TCJA as the exogenous shock

Conditioning on average test score

- Analysis controls for test scores alleviating concerns regarding input vs. output...
- ...but it might be nice to have one specification without controlling for test scores...
- ...because different amounts of input might be required to achieve the same output.

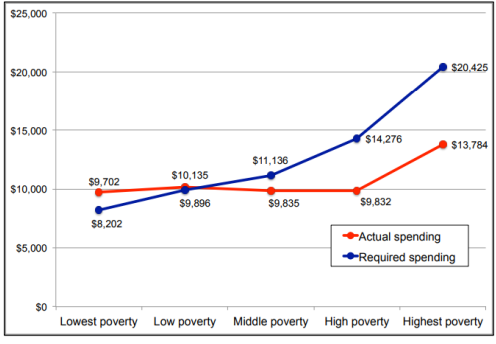
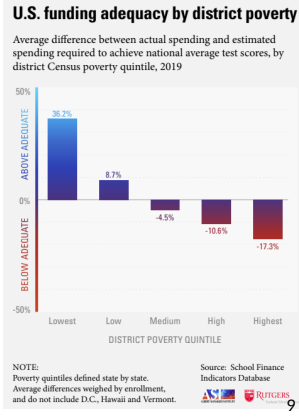


FIGURE 5
Adequacy of U.S. Education Spending
Predicted current per-pupil spending and predicted spending required to achieve national average test scores, by poverty quintile, 2016

Notes: Averages are weighted by state-level enrollment.

Variables used:
necm_predcost_q1 – q5
necm_ppcstot_q1 – q5
necm_enroll_q1 – q5



Referendum Study

- Positive relation between demand for public goods and share of residents deducting taxes

- Comments:
  - Dependent variable is the percent of Yes votes, would also be nice to see the effect on the probability of passing a bond
  - For the intensive margin results - use of categories rather than the continuous measure of change in SALT
  - Probability of referendum is likely to be higher if the previous one had failed, so some way of controlling for that
  - Some discussion of how California is unique

Minor Comments

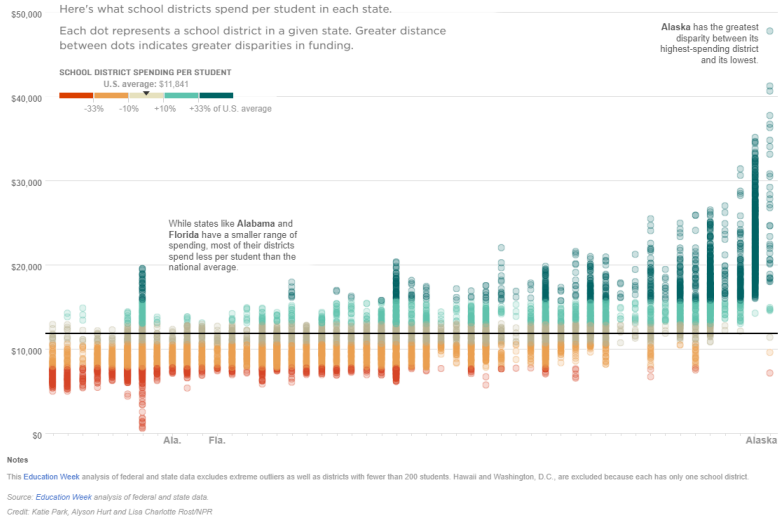
Effect of Reducing the Role of Local Property Tax

- States which rely heavily on property taxes might not have an adequate per pupil expenditure in high poverty districts!

	California	Massachusetts	Michigan
Percent of K–12 revenue from the property tax (FY 2019)	27%	52%	27%
Percent of K–12 revenue from state aid (FY 2019)	58%	39%	60%
Per-pupil school spending (state rank) (FY 2020)	$14,053 (16)	$18,269 (8)	$13,072 (19)
Is per-pupil spending adequate in high poverty districts? (Baker et al.)	Severely inadequate	Above adequate	Severely inadequate
Growth in real per-pupil school spending, 1970–2018 (in 2019–2020 dollars)	$7,454 131%	$13,616 253%	$6,387 111%
Strength of state-imposed property tax limits	Very restrictive	Modestly restrictive	Very restrictive

Sources: U.S. Census, National Center for Education Statistics, Wen et al. (2018), Baker et al. (2021).

Variation in Spending within the State



- Similar estimates with County fixed effects. Is there a lot of variation within county?

Heterogeneity Analysis

	Dependent variable: log(house value)					
	all		High tax rate		Low tax rate	
	(1a)	(1b)	(2a)	(2b)	(3a)	(3b)
Share of property deducters (ϕ)	0.656*	0.589	−0.506	−0.559	1.649***	1.687***
	(0.359)	(0.383)	(0.353)	(0.363)	(0.340)	(0.332)
Expenses per pupil ($\bar{\delta}$)	0.011		0.031**		−0.005	
	(0.010)		(0.015)		(0.005)	
Expenses per pupil (δ^{ND})		−0.027***		−0.006		0.014
		(0.010)		(0.023)		(0.016)
Expenses per pupil x DedShare (δ^{D})		0.147***		0.112**		−0.106
		(0.032)		(0.045)		(0.083)
Demographics	X	X	X	X	X	X
CBSA fixed effects	X	X	X	X	X	X
Observations	8,890	8,890	4,445	4,445	4,445	4,445
R^2	0.923	0.923	0.930	0.930	0.872	0.872
Adjusted R^2	0.914	0.914	0.918	0.918	0.843	0.843

Other Minor Comment

- Tight election results (within 25 percentage points of winning/losing) - reduces sample size by only 3.15%

Final Comments

- Great paper that makes an important point
  - **Federal tax deduction increase demand for local public goods**

- Makes significant contribution to the literature on the allocation of public goods

- I learned a lot from this paper

- **Thank you!**