The Effects of Pandemic Fiscal Relief for States and Localities

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Questions

Did fiscal transfers from the federal government help preserve state and local government jobs?

What was the broader macroeconomic impact of these transfers?

What was the public-health impact of these transfers?

Importance

- Scale of the transfers involved (close to $1T)
- State and local government employment during the Great Recession

Fiscal Federalism in the United States

Because states face balanced-budget requirements, the federal government is the primary source of macro stabilization policy in the US system of fiscal federalism:

- Absent counter-cyclical federal support, states must either raise tax rates or cut back on service provision during recessions, neither of which seems ideal
- States do some saving in rainy day funds, but not enough to smooth out large shocks

Baseline: Medicaid matching funds; half of standard Extended Benefits for UI during recessions; targeted funds for formally declared Disasters and Public Health Emergencies

Ad hoc: During both the Great Recession (roughly $232B) and the pandemic (roughly $900B), substantial supplemental support was enacted on an ad hoc basis

Pandemic Era Federal Aid to State and Local Governments

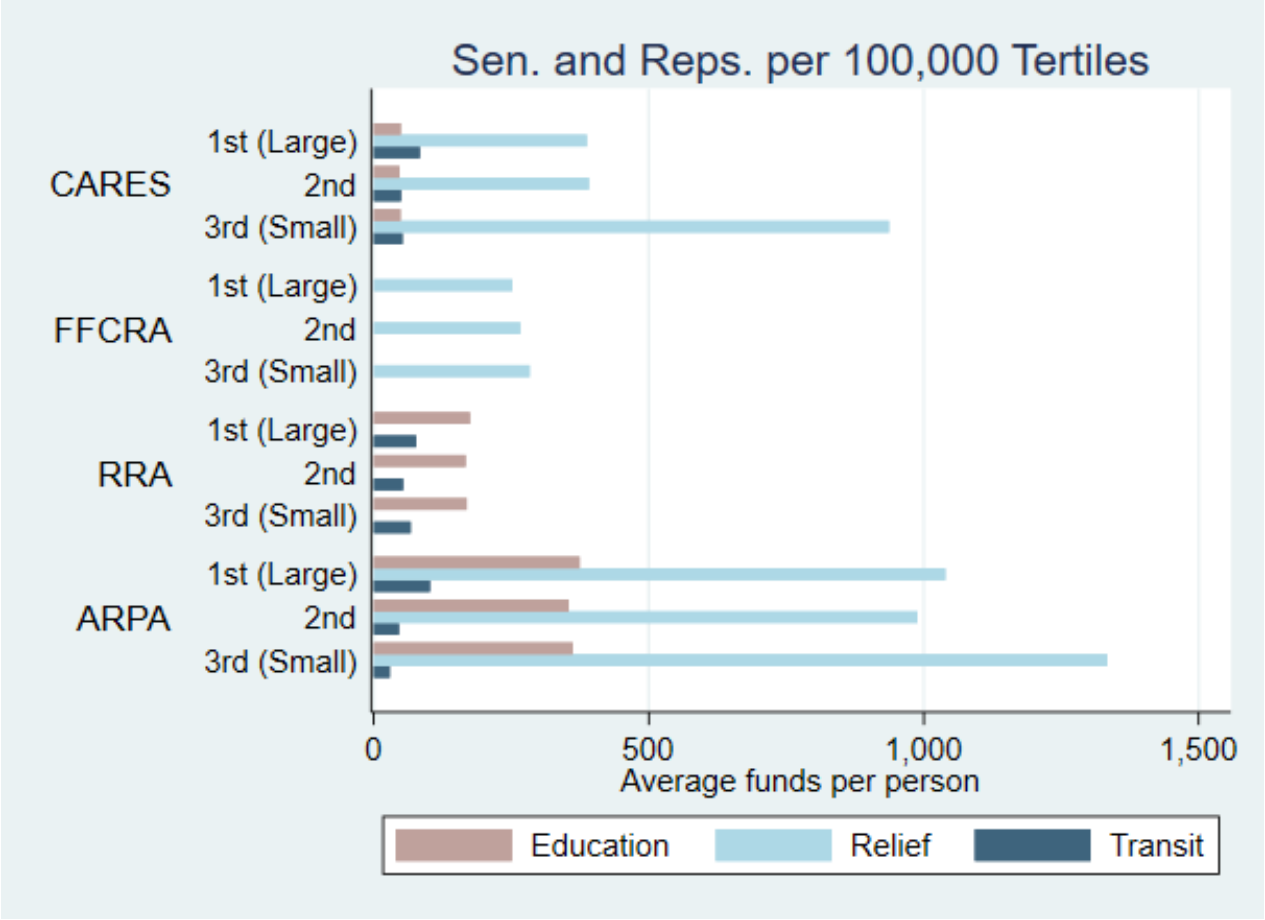
- Early in the pandemic, analysts who estimated state and local government shortfalls used CBO's macroeconomic forecasts as inputs
- The basic estimates involve two seemingly straightforward steps:
  - How far did CBO revise down its macroeconomic forecast relative to the January 2020 forecast?
  - How should we expect a given change in the forecast to translate into tax revenues?
- So why did Congress think state and local governments might need $1 trillion?
  - The unemployment rate is a poor proxy for state and local tax bases
  - Actual economic aggregates were boosted by federal support for households and businesses

Distribution of Federal Funds on a Bill-by-Bill Basis

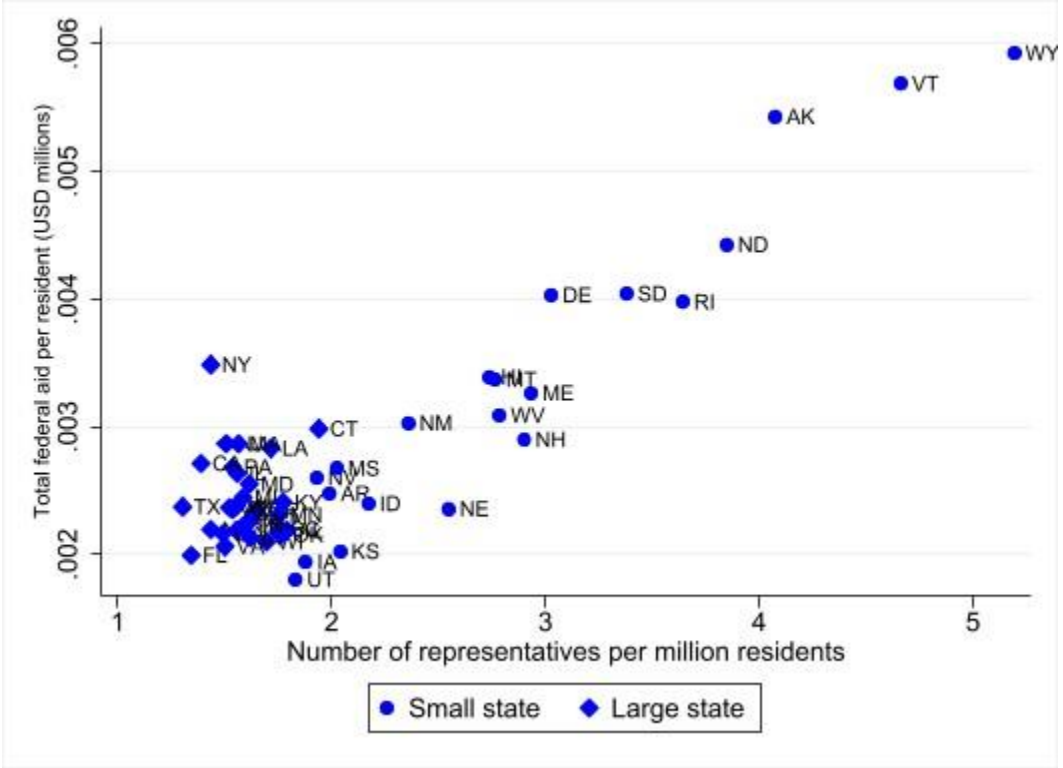
Small states enjoy more Senators and Representatives per resident. Does this predict additional federal funds per capita?

Answer: Yes.

(Clemens and Veuger, JPubE 2021)



Quasi-Experimental Variation: Relevance



Source: Clemens, Hoxie, and Veuger (2022)

Quasi-Experimental Variation: Exogeneity

- Conditional exogeneity is a priori plausible: no obvious epidemiological relationship between state population numbers and the novel coronavirus
- Small-state advantage more or less orthogonal to proxies for dimensions of state and local government funding needs, including states' revenue shocks, economic shocks, the size of their public sector, and acreage of federal land (Clemens and Veuger, 2021)
- Over-representation of small states is much less correlated with political partisanship than is commonly assumed
- We implement specifications that include covariates associated with the pandemic's health effects, with the stringency of states' policy responses to the pandemic, with states' political leanings, and with additional proxies for states' pre-pandemic economic trends
- Spending variation isolated by our instrument does not predict changes in employment over the months that preceded the pandemic's onset

Impact on State and Local Government Employment

	OLS	Baseline	Political	COVID-19	Economic	Combined	Simple
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Total Aid per Resident (USD millions)	0.176	0.780**	0.562	0.532*	1.040*	0.452	-0.0619
	(0.241)	(0.387)	(0.345)	(0.296)	(0.534)	(0.327)	(0.274)
Log(Population)	0.000314*	0.000467**	0.000539***	0.000439**	0.000578**	0.000545***	0.000214
	(0.000182)	(0.000194)	(0.000163)	(0.000195)	-0.000246	(0.000174)	(0.000216)
Share of Population Eligible for MLF	-0.000513	-0.00131	0.000129	-0.000855	-0.00136	0.000323	
	(0.000776)	(0.000975)	(0.000759)	(0.000783)	(0.00108)	(0.000731)	
Change S&L Employment per Resident (Dec 2018 – Dec 2019)	0.398	0.559**	0.171	0.325	0.751**	0.104	
	(0.243)	(0.265)	(0.219)	(0.253)	(0.299)	(0.216)	
Change Private Employment per Resident (Dec 2018 – Dec 2019)	0.110***	0.134***	0.140***	0.104***	0.203**	0.130***	
	(0.0377)	(0.0424)	(0.0318)	(0.0391)	(0.0803)	(0.0493)	
Average OSI (March 2020)	-0.00425*	-0.00528**	-0.000946	-0.00506**	-0.00453*	-0.000554	
	(0.00251)	(0.00230)	(0.00259)	(0.00244)	(0.00233)	(0.00301)	
Average OSI (Current Month)	-0.00353***	-0.00373***	-0.00104***	-0.00251***	-0.00364***	0.000226	
	(0.000553)	(0.000479)	(0.000315)	(0.000494)	(0.000526)	(0.000509)	
Political and Mobility Controls	N	N	Y	N	N	Y	N
COVID-19 Controls	N	N	N	Y	N	Y	N
Economic Controls	N	N	N	N	Y	Y	N
Dep. Var. Mean	-0.0026	-0.0026	-0.0026	-0.0026	-0.0026	-0.0026	-0.0026
Aggregate Impact Coef.	**0.264**	**1.17****	**0.843**	**0.798***	**1.56***	**0.678**	**-0.0929**
Observations	900	900	900	900	900	900	900
R^2	0.352	0.326	0.473	0.374	0.321	0.503	0.032
First-Stage F-Statistic	N/A	57.79	49.01	215.15	21.81	104.01	140.62
P-value on Test for Pre-Trends	0.513	0.416	0.616	0.372	0.063	0.137	0.435

Source: Clemens, Hoxie, and Veuger (2022)

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Log(Population)	0.000314*	0.000467**	0.000539***	0.000439**	0.000578**	0.000545***	0.000214
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Share of Population Eligible for MLF	-0.000513	-0.00131	0.000129	-0.000855	-0.00136	0.000323	
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	(0.0377)	(0.0424)	(0.0318)	(0.0391)	(0.0803)	(0.0493)	
		028**	-0.000946	-0.00506**	-0.00453*	-0.000554	
		230)	(0.00259)	(0.00244)	(0.00233)	(0.00301)	
		73***	-0.00104***	-0.00251***	-0.00364***	0.000226	
		0479)	(0.000315)	(0.000494)	(0.000526)	(0.000509)	
			Y	N	N	Y	N
			N	Y	N	Y	N
			N	N	Y	Y	N
		026	-0.0026	-0.0026	-0.0026	-0.0026	-0.0026
		7**	**0.843**	**0.798***	**1.56***	**0.678**	**-0.0929**
		0	900	900	900	900	900
		26	0.473	0.374	0.321	0.503	0.032
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P-value on Test for Pre-Trends	0.513	0.416	0.616	0.372	0.063	0.137	0.435

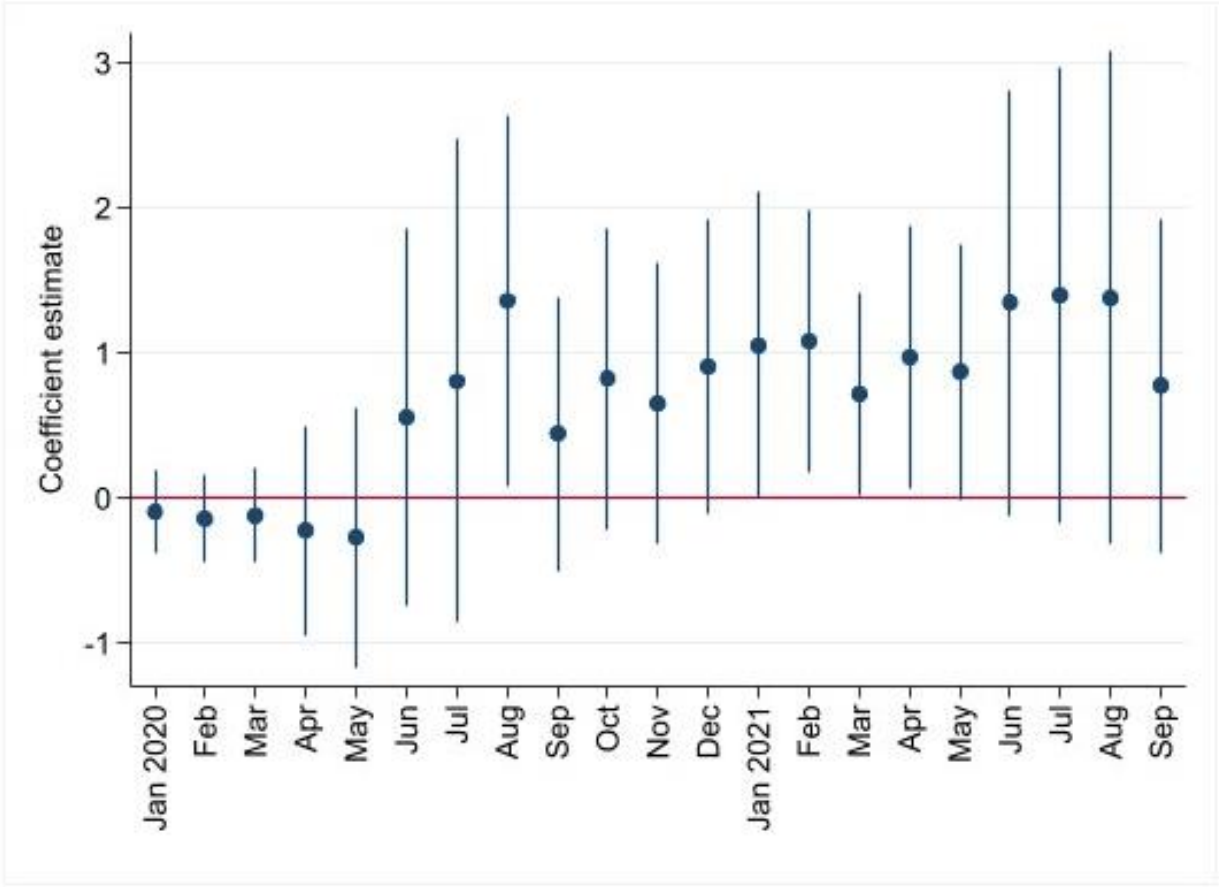
1 / (0.780*1.5) = 0.855

=> 1.5 because we cover 18 months
⇒ Invert to go from jobs/$M to $M/job
⇒ 855K / job

Source: Clemens, Hoxie, and Veuger (2022)

Impact on State and Local Government Employment

Local-Projection Impulse Response

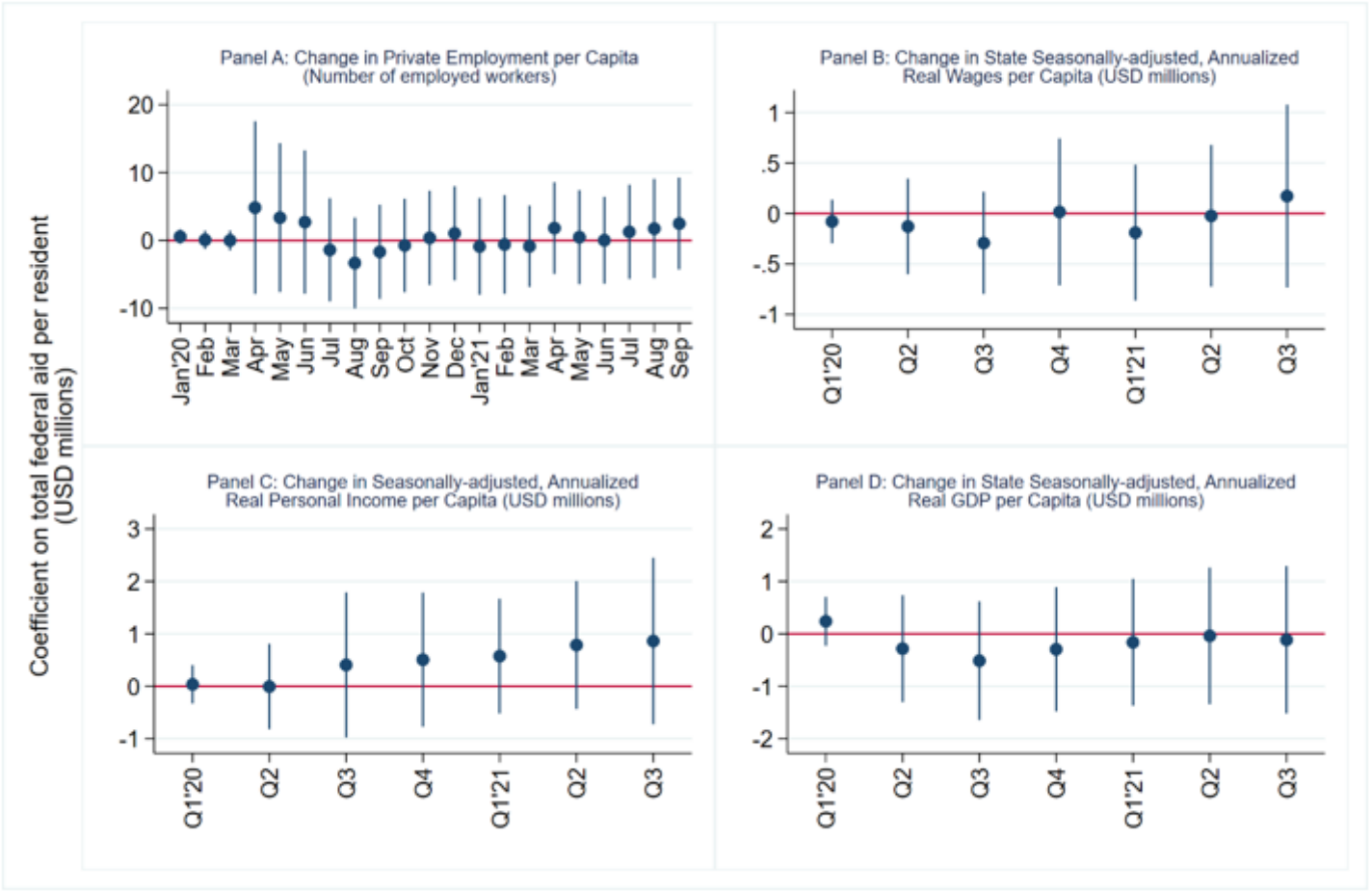


Source: Clemens, Hoxie, and Veuger (2022)

Discussion: Employment Effects

- $855,000 in federal spending was needed to preserve a state or local government job-year during the pandemic
- No significant additional effects in the broader labor market
- Comparisons:
  - Between $50,000 (Faulkender et al., 2020) and $258,000 (Autor et al., 2022) for PPP
  - ∞ (?) for stimulus checks (Chetty et al., 2020) and MLF (Haughwout et al., 2021)
  - - $125,000 for FPUC and PUA (Holzer et al., 2021)

Impact on Macro Outcomes



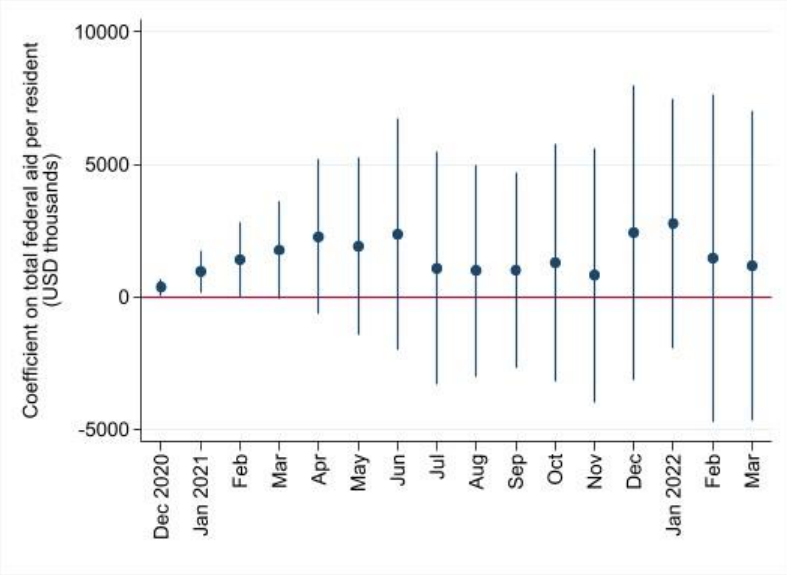
Source: Clemens, Hoxie, and Veuger (2022)

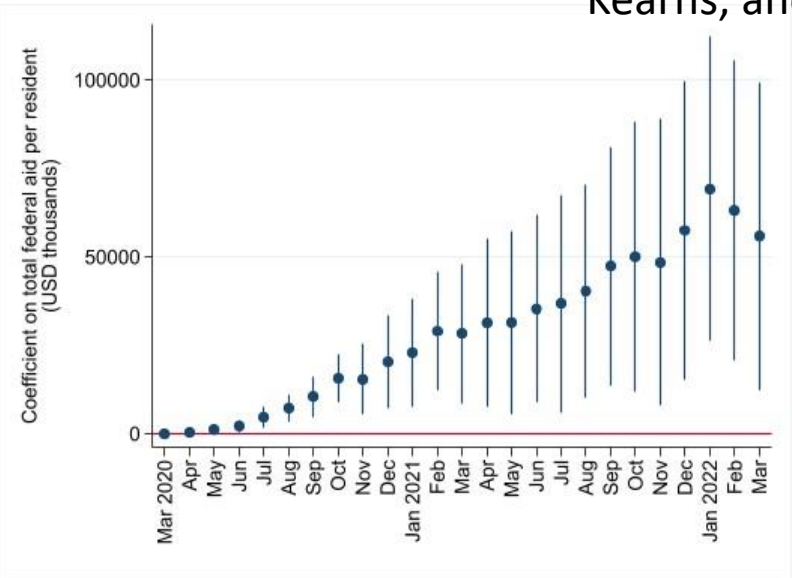
Discussion: Fiscal Multipliers

- Point estimates suggest an impact on GDP and income that is statistically indistinguishable from zero at conventional confidence levels
- Ramey (2019) reports multipliers in the 0.5-0.8 from the macro literature; Chodorow-Reich (2019) argues that cross-sectional estimates translate into national numbers between 1.5 and 2
- Factors to consider include:
  - Subnational multipliers
  - “External” financing
  - Aggregate demand environment
  - Public health context
  - Fungibility of funds

Impact on Public-Health Outcomes

Source: Clemens, Hoxie, Kearns, and Veuger (2022)





$1,000 in fiscal relief per resident, which would amount to $330 billion nationwide, translated into just under 1,200 extra doses of the vaccine being delivered per 100,000 people, with the upper bound of our confidence interval suggesting that we can rule out effects in excess of 7,030 extra doses per 100,000 people. We find that federal dollars predict a smaller gap between the vaccination rates of those with a college education relative to those with a high school education. Finally, our baseline estimate implies that each $1,000 in COVID-19 relief aid per capita generated 55,850 additional tests per 100,000 people.

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