

Reflections on Employment Interventions during COVID-19

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The Employment Challenges of the Pandemic

- Challenge # 1: Avoiding individual suffering
- Challenge # 2: Avoiding recession (related to # 1 but not identical)
- Challenge # 3: Minimizing the spread of COVID-19
- Presumably we also wanted to limit extreme public spending levels, reduce risks of inflation, etc., although we showed little sign of caring about that.

Funding the Person vs. Funding the Firm

- Conceptually, PPP is something like a ramped up Earned Income Tax Credit that essentially subsidizes job creation or maintenance.
- Conceptually, paying people on furlough is like enhanced unemployment insurance.
- In normal circumstances, this is an equity/efficiency type problem.
- Unemployment insurance reduces short-term hardship.
- Subsidizing job creation helps to offset the fiscal externality created by unemployment insurance.
- There is also a place-specific element here – doing more for job creation in high joblessness areas

But during a time of COVID

- The case for subsidizing employment is lower because of the risk of contagion → at some points, we may want everyone to stay home.
- The government (in the US at least) had very limited capacity to respond nimbly. There was some doubt as to whether the UI system would be overwhelmed by a major increase in payment.
- And so we just decided to dump trillions of dollars on the private sector in the hope that it would get it out.
- Certainly this was a classic Keynesian money dump → the incentives were weak (you had to spend on payoff, supposedly) and the targeting was close to non-existent.

My work on PPP with Bartik, Cullen, Luca, Stanton and Sunderam

- A framework that looks at the tradeoff between delegation (which means speed but poor targeting) and government control.
- Estimates of the treatment effect of PPP receipt that use relatively standard instruments (different banks had a different propensity to give cash in the first tranches).
- We estimate short run employment effects and longer term survival expectations (and check with realization).
- Short-term estimates are about 3.7 jobs/100k.
- Longer-term estimates at 1 job/100k (about survival).

This table reports OLS and IV estimates relating whether a firm was approved for the PPP program as of April 25, 2022 to employment outcomes. The sample is restricted to firms that applied for PPP, including firms that were ultimately denied and firms that tried to apply but were unable to submit an application. In Panels A and B the dependent variable is the level of April 25, 2020 employment and we control for employment in January of 2020. Column 6 reweights the sample to match the industry and size composition of the population of firms receiving PPP in SBA data. The instrument for PPP approval in Panels B and D is the tranche 1 share of loans approved relative to all loans within the first 3 weeks of tranche 2, calculated from the SBA administrative data. The first stage F statistics and adjusted t_f standard errors using the 1% level adjustment from Lee et al. (AER, 2022) are reported below these panels. All standard errors are clustered by bank and reported in parentheses.

	(1)	(2)	(3)	(4)	(5)	(6)
Panel A: OLS Estimates of Employment Level Effects						
PPP approved	2.34*	2.18*	1.90*	1.73*	1.72*	2.45*
	(1.01)	(0.90)	(0.89)	(0.83)	(0.83)	(1.03)
Adj R2	0.54	0.55	0.55	0.55	0.55	0.60
N	3941	3941	3941	3941	3941	3906
Panel B: IV Estimates of Employment Level Effects						
PPP approved	6.35***	6.06***	5.54**	5.49**	5.31**	7.54**
	(2.01)	(2.18)	(2.17)	(2.20)	(2.21)	(3.05)
N	3941.00	3941.00	3941.00	3941.00	3941.00	3906.00
First Stage F	206.40	164.63	158.93	158.74	162.71	142.90
t _f Standard Error	2.17	2.41	2.40	2.44	2.44	3.42
Industry FE	N	Y	Y	Y	Y	Y
State FE	N	Y	Y	Y	Y	Y
Bus Status FE	N	N	Y	Y	Y	N
Cash FE	N	N	N	Y	Y	N
Zipcode Proximity	N	N	N	N	Y	N
Reweightd	N	N	N	N	N	Y

The losses from moving swiftly.

- We estimate heterogeneous treatment effects and then show what different allocation rules might produce.
- Reasonable allocation rules might target industries or being hit hard by COVID or not being able to work live.
- These show trivial or no improvement.
- If we knew all the treatment effects we know now, and if we could craft a system that perfectly targeted the highest impact firms, then the gains would be considerable.
- But that thought experiment seems wildly far-fetched.

	S-learner			T-learner		X-learner	
Base Learner	Lasso	RF	Lasso	RF	Lasso	RF	
Lasso Penalty Details	Plug-in (1)	CV-min (2)	- (3)	CV-min (4)	- (5)	CV-min (6)	- (7)
Panel A. Jobs saved per \$100k in spending using survival expectations							
<i>Panel B1. Treatment effects under observed allocation</i>							
Treatment effects for recipients	1.07	1.36	1.36	1.44	1.39	1.44	1.38
SD of treatment effects (full sample)	INSERT	1.74	2.8	2.43	3.62	2.39	2.68
<i>Panel B2. Treatment effects under alternative loan allocations</i>							
Diff relative to random allocation	0.05 (0.05)	0.28 (0.06)	0.3 (0.10)	0.36 (0.08)	0.26 (0.11)	0.35 (0.08)	0.25 (0.09)
Diff relative to industry targeting*	INSERT	-0.19 (0.08)	0.17 (0.14)	-0.16 (0.11)	0.14 (0.18)	-0.19 (0.11)	0.16 (0.14)
Diff relative to geography targeting	INSERT	0.16 (0.08)	0.26 (0.13)	0.14 (0.10)	0.24 (0.15)	0.15 (0.10)	0.21 (0.13)
Diff relative to high COVID impact firms	INSERT	0.09 (0.08)	-0.02 (0.13)	0.01 (0.11)	-0.06 (0.17)	0.04 (0.10)	-0.01 (0.12)
Diff relative to best allocation	-1.58 (0.28)	-2.27 (0.11)	-3.81 (0.17)	-2.83 (0.14)	-4.66 (0.20)	-2.81 (0.13)	-3.5 (0.15)