

ENTREPRENEURSHIP AND THE PLATFORM ECONOMY: EVIDENCE FROM U.S. TAX RETURNS

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THIS PAPER: ACCESS TO GIG WORK → NEW BUSINESS FORMATION

- **Confidential tax return data improves measurement of gig work and new firms**
 - ▶ Comprehensive coverage and based on *taxable* income classifications
 - ▶ Literature relies on state-level business registrations and/or employment cutoffs from employer-employee matched LEHD/LBD (e.g. Wallskog 2021)
 - ▶ Drawback: can't look at platform firm-by-firm effects due to disclosure restrictions
- **Main result:** gig work availability increases prob. of starting a new firm, and these firms are more likely to survive, be profitable, and employ workers 2 years later
- **Policy implications: platforming acts as a local stimulus**
 - ▶ Costless policy in that not financed through local revenues, but might entail cannibalization of pre-existing business activity (more on this later)
 - ▶ Due to GE spillover effects, might be more effective than tax subsidies from a cost-per-job accounting or PDV welfare decomposition (e.g. Busso, Gregory, Kline 2013) perspective

COMMENT #1: ECONOMETRICS & ALTERNATE SPECIFICATIONS (1)

- Estimate standard staggered “treated \times post” specifications, as in event study:

$$Y_{j,t} = \alpha_j + \delta_t + \beta \cdot \text{Flex_Labor}_{j,t-1} + \sum_{p=-m}^{p=+n} \gamma_p \cdot \text{Flex_Labor}_{j,t+p-1} \times \text{Gig}_{j,t+p-1} + \varepsilon_{j,t}$$

- ▶ Panel unbalanced in event-time, so **bin endpoints** $p \geq +n$, $p \leq -m$ to separate secular time trends from dynamic treatment effects (Schmidheiny & Siegloch 2020)
 - ★ First treatment introduced in 2008, so a lot of variation in dosage length across
- Authors check robustness of main results on new firm creation to using non-OLS estimators which accommodate heterogeneous treatment effects by time cohort ✓
 - ▶ Small point: why do point estimates and sample size vary so much between Callaway-Sant’Anna and Sun-Abraham estimators (Table 3)?
 - ▶ W/o time-varying covariates, these should be (nearly) identical since both use never-treated units as control group \rightarrow check package options to fix sample across estimators
 - ▶ Check Borusyak, Jaravel, Spiess (2022) estimator with different anticipatory lags since platform entry announced in advance \rightarrow **permanent income hypothesis test**

COMMENT #1: ECONOMETRICS & OTHER SPECIFICATIONS (2)

- What is the “correct” level of aggregation to identify treatment effects?

- ▶ County-level outcomes justified on grounds that outcome matches level of variation
- ▶ At same time, if use county-level outcomes, diminishes advantage of using confidential individual tax returns, and occludes extensive vs. intensive margin of entrepreneurial activity
- ▶ Econometric tradeoffs: county-level analysis provides frame of “platforming as stimulus”, avoids issues of LPM vs. logit/probit but then have to deal with Poisson vs. log

- If using county-level specification as main one, use continuous or quantile bin definition of *GigFounded* in firm-level regression:

$$Y_{k,t} = \alpha_j + \eta_s + \delta_t + i.GigFounded_{k,t-1} + \varepsilon_{k,t}$$

- ▶ Distinguish between people who drive for Uber once vs. those who have a viable platform income stream – also binary vs. cont. outcomes for employment/profits → multipliers

- Panel dimension + pre-trends for firm-level outcomes just like baseline event study

COMMENT #2: MEASURING FINANCING CONSTRAINTS (1)

- This paper uses taxpayer age and the “unbanked” as proxies for financing constraints
 - ▶ Contentious literature on doing this using “indices” from textual analysis of Compustat firm filings (e.g. Hadlock & Pierce 2010), or survey evidence (Berger & Udell 1995)
 - ▶ Entrepreneurs are somewhere in between a firm and individual
 - ▶ Like firms, rely on external financing, but like people can leverage personal assets like home equity (Schmalz, Sraer, Thesmar 2017; Bahaj, Foulis, Pinter 2020)
- **If gig founders are unbanked, how do they receive platform income?**
 - ▶ Also need physical capital inputs in some cases: cars for Uber/Lyft, craft tools for Etsy, etc.
 - ★ Split platforms along physical rather than human capital needs
 - ▶ Try alternative cuts based on information from personal tax returns: do they itemize? if so, do they claim mortgage interest deduction?
- How do you deal with non-filers who might be financed by family members?

COMMENT #2: MEASURING FINANCING CONSTRAINTS (2)

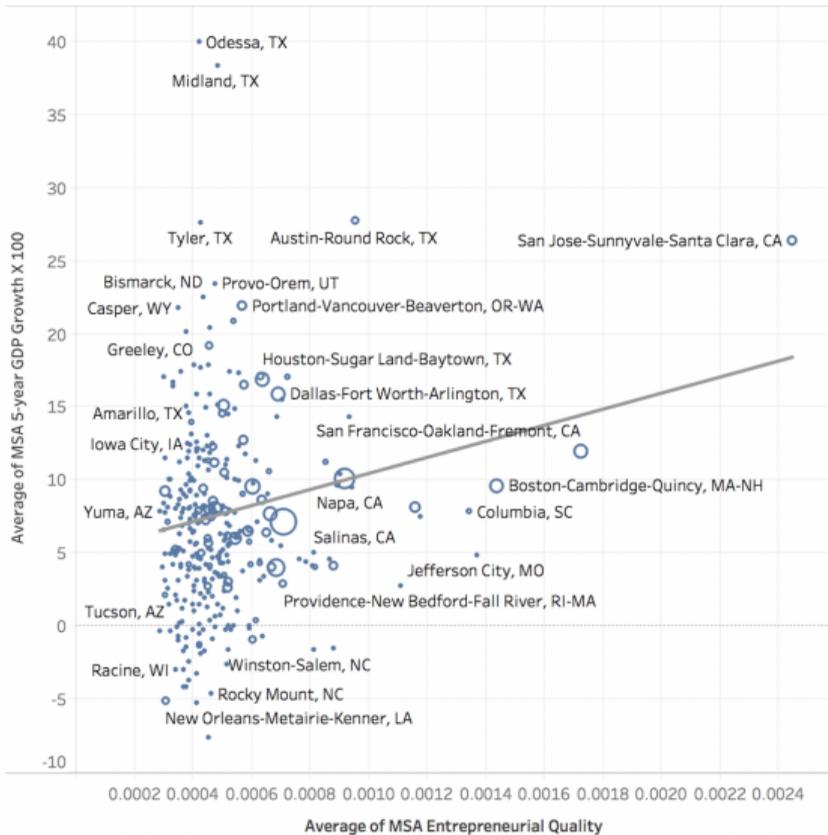
Panel B: Access to Financial Institutions

Dependent Variable	Founder		Ln(Number Founded)	
	Unbanked	Banked	Unbanked	Banked
Flexible Labor	0.0052*** (0.0001)	0.0039*** (0.0001)	0.0037*** (0.0001)	0.0028*** (0.0001)
Gig Worker	0.0031*** (0.0005)	0.0055*** (0.0004)	0.0023*** (0.0004)	0.0040*** (0.0003)
Individual FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
R ²	0.242	0.148	0.243	0.149
Observations	44,453,395	154,381,300	44,453,395	154,381,300

- Avg. effect of flexible work availability higher for unbanked → liquidity constraints
- But for the confirmed gig workers, larger effect for banked
 - ▶ Are there some platforms which don't require a bank account? How are people getting paid?

COMMENT #3: UBER AS A PLACE-BASED POLICY (1)

- Given results that platforming \implies local non-tradable firm/job creation, can we think of permitting Uber et al. as a **place-based policy (PBP)**?
- Platforming becomes very wide-spread among struggling areas by end of sample period
 - ▶ Gig economy might help rust belt diversify away from the “**China trade shock**”
 - ▶ Interact treatment w/import penetration measures from Autor, Dorn, Hanson (2013, 2016)
- **Are there agglomeration effects?** Stronger effects on firm creation/employment if already more activity in a particular industry?
 - ▶ Interact with *ex ante* labor market conditions (e.g. QCEW)
 - ▶ Relatedly, platforms (mostly) offer non-tradable services with increasing returns
- Do people **migrate** to take advantage of platforms in neighboring areas?
 - ▶ Address information from tax returns \longrightarrow construct cross-county migration probabilities



- How does this picture look if replace the x-axis with gig-founded share of firm income/profits?
- Longer-run local macro variables on y-axis compared to 2-year viability measures?
- **General point:** how does **geographic footprint** of entrepreneurial activity derived from tax data compare to Startup Cartography Project?

Source: Andrews et al. (2022): "The Startup Cartography Project"

COMMENT #3: UBER AS A PLACE-BASED POLICY (2)

- **Intermediary regulator idea:** ride-sharing helps local governments achieve policy objectives like lowering carbon emissions (Buchak 2018 Chicago Law Review)
 - ▶ Authors show platforming may be more successful than direct subsidies to start new firms
 - ▶ Govt. is bad at picking “winners” and targeting funds (e.g. misallocation of PPP loans)
- Differentiate from Buchak (2021) by focusing on welfare growth from new business creation rather than role of relaxing financing constraints
- **Welfare computation exercises:**
 1. Cost-per-job (CPJ) created: take DiD effects on (total) local industry employment and compare to lost/gained tax revenues (could be negative!)
 - ★ Compare to local firm subsidies or SBA which have CPJ of \$20k-\$30k (Brown & Earle 2017 *JF*)
 2. **PDV surplus** of value-added (profits) + local tax revenues + wage bill implied by DiD estimates (e.g. LaPoint & Sakabe 2022) $\rightarrow \Delta\pi = \pi \cdot \hat{\beta}^{profits} / (1 + \hat{\beta}^{profits})$

When Calling an Uber Can Pay Off for Cities and States

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The Kennedy Expressway in Chicago, where officials have imposed fees on trips on ride-hailing apps like Uber and will use some of the money to improve its public transit system. Across the country many local governments are using similar surcharges to raise more revenue. Scott Olson/Getty Images

Jump-Starting America



How Breakthrough Science Can Revive
Economic Growth and the American Dream
By Jonathan Gruber and Simon Johnson

- Focus on “high-skilled” entrepreneurs: what is the definition, and do the well-performing firms locate in tech hubs listed in Gruber & Johnson’s book?

FINAL THOUGHTS

- **Paper provides much-improved measurements of gig work and entrepreneurship**
 - ▶ Curious to know how counts in tax data compare to those implied by state registrations (e.g. Andrews et al. 2022 Startup Cartography Project)
 - ▶ With tax data, seems further improvements can be made on proxies for financing constraints to pin down mechanisms
- **Big prize:** policy implications are very interesting, since results suggest platforming has potential to revitalize struggling local economies
 - ▶ If go this route, would need to extend set of local outcomes to check for spillovers
 - ▶ Good news is this would not involve confidential data or lags due to disclosure review!
- Early-stage paper with unprecedented data, so really looking forward to seeing updates!



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THANKS!
