Entrepreneurship and the Platform Economy: Evidence from U.S. Tax Returns

Matthew Denes, Spyridon Lagaras, Margarita Tsoutsoura

discussed by Johan Hombert (HEC Paris)

LBS Summer Finance Symposium

Platform economy ⇒ Entrepreneurship

- 1% of workforce work on online platforms in 2016 (Collins et al. 2019)
- This paper: Impact on entrepreneurship?
- Possible mechanisms: impact on gig workers
  - Pre-entry wealth accumulation
  - Pre-entry learning
  - Post-entry income complement or fallback option
- Possible mechanisms: impact of gig workers
  - Input for firms (contract labor, online services)
  - Demand spillovers

Platform economy $\Rightarrow$ Entrepreneurship

- Challenges: data and identification
- Data
  - U.S. tax returns: income for every individual by source of income, linked to universe of firms
- Identification
  - Staggered entry of platforms (across counties)
  - Previously gig workers vs not (across individuals)

Main results

- Entry of platform is followed by higher entrepreneurship rate

  +0.4 pp per year for non-gig workers (mean 0.3 pp)

  +1 pp per year for gig workers

- Gig founded firms perform better (survival, employment, profitability)
  - Effect on survival stronger for low income individuals
  - Effect on employment and profitability stronger for high income individuals

County-level variation

- $Entry_{i,t} = \alpha_i + \delta_t + \beta \cdot Platform_{j,t-1} + \epsilon_{i,t}$

  worker i, county j, year t

- $\beta = +0.42$ pp

- Usual concern: Entry of platforms is not random

  - Earlier in more dynamic areas?

  - Show pre trends

  NB: All counties are eventually treated (de Chaisemartin and D'Haultfoeuille 2020; Borusyak et al. 2022) $\Rightarrow$ Show dynamics of counties grouped by treatment date

Individual-level variation

- $Entry_{i,t} = \alpha_i + \delta_t + \beta \cdot Platform_{j,t-1} + \gamma \cdot Platform_{j,t-1} \times GigWorker_{i,t-1} + \epsilon_{i,t}$

  worker i, county j, year t

- $\beta = +0.42$ pp (mean entry $=0.3$ pp)

  $\Rightarrow$ Non-gig workers in counties with platforms are 140% more likely to become entrepreneur than workers in counties without platforms

- $\gamma = +0.54$ pp

  $\Rightarrow$ Gig workers in counties with platforms are 320% more likely to become entrepreneur than workers in counties without platforms

Contribution of non-gig workers

- Entry ↑ in treated counties is mostly due to non-gig workers
  - $\simeq$ 10% of workforce are gig workers
  - Entry by gig workers ↑ 0.96 pp
  - Entry by non-gig workers ↑ 0.42 pp

  $\Rightarrow$ Non-gig workers contribute $\frac{0.90 \times 0.42}{0.10 \times 0.96 + 0.90 \times 0.42} = 80\%$ of entry ↑

- Important for mechanism

Mechanism for non-gig workers

1. Gig work as input

2. Demand spillovers

(Other mechanisms?)

- Use cross-section of industries to test mechanism?

- Impact on incumbent firms?

Evidence on gig workers: Potential confounding

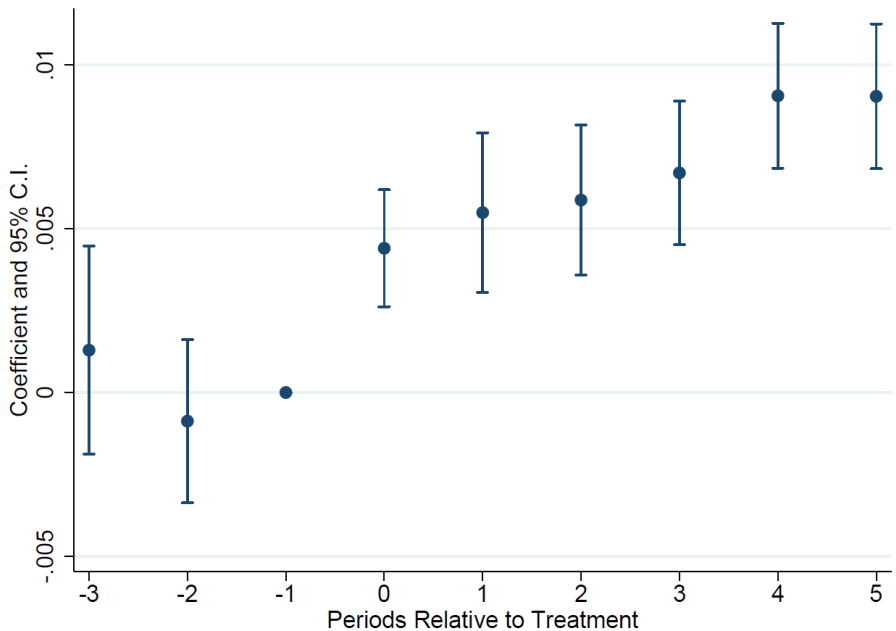
- Gig workers are more entrepreneurial $\Rightarrow$ self-select in entrepreneurship + gig work
  - Authors include individual FE
- Negative income shock $\Rightarrow$ subsistence entrepreneurship + gig work
  - Should use income panel data to test this

Dynamics of entry

- $Entry_{i,t} = \alpha_i + \delta_t + \beta \cdot Platform_{j,t-1} + \sum_{p=-3}^{+5} \gamma_p \cdot Platform_{j,t-1+p} \times GigWorker_{i,t-1+p} + \epsilon_{i,t}$

  [Shouldn't $\sum_{p=-3}^{+5} \beta_p \cdot Platform_{j,t-1+p}$ be included?]

- γ_p:



- Gig work takes place one year before ($p = 0$) and all the years <u>after</u> entry ($p > 0$). Important for mechanism

Mechanism for gig workers

1. Pre-entry wealth accumulation
   - Would expect gig work for several years prior to entry: No
2. Pre-entry learning
   - Self-employment skills, occupation-specific skills, demand
   - Challenging to test; perhaps using occupations or industries?
3. Post-entry income complement or fallback option
   - Consistent with gig work persisting after entry: Yes
   - = Story in Barrios, Hochberg and Yi (JFE 2022) but they don't have individual-level data
   - Should analyze the joint dynamics of business performance and gig work

Firm performance

- The average new firm is small (mean employment = 0.3)

  What is the effect on firms with 1+ (or more) employees?

- Does the employment variable exclude the entrepreneur?

Summary

- Interesting paper (preliminary)
- Rich data but still under-exploited
- To tighten identification and disentangle mechanisms:
  - Pre-entry income dynamics
  - Post-entry business/gig work joint dynamics
  - Industry and occupation heterogeneity