Discussion of
Akcigit Grigsby Nicholas Stantcheva (2020)
"Taxation and Innovation in the 20th Century"

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Princeton and NBER

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Overview

Stellar paper!

1. **Central question:** What is the effect of taxation on innovative activity?

2. **Rich new data and descriptive work:** Major contribution
   - New historical panel data on state corp taxes and innovation outcomes
   - Rich historical panel on R&D lab activity, # inventors, location, etc; micro inventor-level panel data

3. **Interesting Results:**
   - Taxes **matter** for innovative activity
   - Macro: state taxes reduce # patents, # cites, # inventors
   - Micro: state taxes reduce $D(patent_i > 0), D(cites > 10), \ln(cites), \ln(patents)$

Comments

Overall, this is a very impressive paper/ agenda/ future book

Here are a couple suggestions going forward:

1. Clarify bottom-line and policy-relevant parameters

2. Reconcile macro patterns: steady growth and big tax changes

3. Integrate micro and macro in conceptual framework
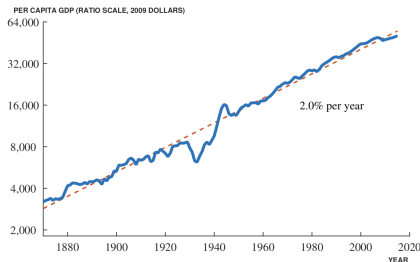
4. Clarify how much leads and lags of taxes matter

- Goal: Predicting behavior and policy impact
  - Clarify how parameter estimates can inform innovation & tax policy
  - **Big question**: how much lower would innovative activity or economic growth be in 2025 or 2030 if a state raised taxes in 2020?
  - Through which channels?

#1b Clarify bottom line and model-relevant parameters

- Goal: Inform and improve economic literature
  - What elasticities should we plug into models?
  - For example, Jones finds much lower top tax rates after accounting for innovation and Akcigit Grigsby Nicholas Stantcheva seem to find big responses
  - Seems like big elasticities: big numerators, small denominators?

- I'm not sure how to reconcile big responses and potentially big policy implications with macro patterns...
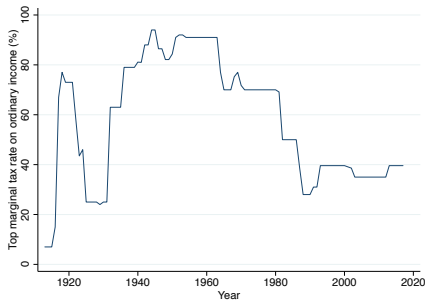
Per capita GDP

Source: Chad Jones

Top marginal tax rate

Source: Urban-Brookings Tax Policy Center

#3 Integrate micro and macro in conceptual framework

- Can the conceptual framework help us link the micro behavior to these macro estimates and patterns?

- Could provide lens for comparing estimates to prior "macro-level" work of fiscal policy on state-level outcomes (e.g., Chodorow-Reich 2019, Nakamura-Steinsson 2014, Zidar 2019, Hurst's recent work)

- Could quantify importance of different channels (e.g., contributions from migration, business stealing, intensive margin responses, etc)

#4 How much do leads and lags of taxes matter?

Economically (and empirically), which tax rates are relevant for innovation decisions and behavior?

Consider:

$$y_{i,t} = \alpha + \beta_0\tau_{i,t} + \beta_1\tau_{i,t-1} + \beta_2\tau_{i,t-2} + \beta_3\tau_{i,t-3} + ... + \varepsilon_{i,t} \qquad (1)$$

- Does the analysis assume $\beta_0 = \beta_2 = \beta_3 = ... = \beta_{t-h} = 0$?

- Would be quite interesting to unpack when and how much leads and lags affect inventor behavior and macro innovation

- What are the cumulative effects a decade later?