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

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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 $D(\text{patent}_i > 0)$, $D(\text{cites} > 10)$, $\ln(\text{cites})$, $\ln(\text{patents})$
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?
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...
#2: Macro patterns: steady growth and big tax changes?

Per capita GDP

Source: Chad Jones

Top marginal tax rate

Source: Urban-Brookings Tax Policy Center
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)
Economically (and empirically), which tax rates are relevant for innovation decisions and behavior?

Consider:

\[ y_{i,t} = \alpha + \beta_0 \tau_{i,t} + \beta_1 \tau_{i,t-1} + \beta_2 \tau_{i,t-2} + \beta_3 \tau_{i,t-3} + \ldots + \varepsilon_{i,t} \]  

(1)

- Does the analysis assume \( \beta_0 = \beta_2 = \beta_3 = \ldots = \beta_{t-h} = 0 \)?
- 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?