**Motivation**

- Theory of regulatory arbitrage
  - extensively discussed
- regulatory policies → converge over time
- Empirical evidence → inconclusive
  - race to the bottom?
  - race to the top?
- neither? → not imitating policies of neighboring government
  - retaining “distinctive attractiveness” (Carruthers and Lamoreaux, 2016)
- In the context of U.S.
  - “The existing literature tends to investigate regulatory races in a balkanized fashion, one issue area at a time, but a more synthetic perspective could well uncover influences and connections that such narrowly focused research overlooks.” (Carruthers and Lamoreaux, 2016)
- Empirical studies ⇒ regulatory burden in a specific context
  1. Labor
  2. Environmental
  3. Corporate Governance
  4. Banking and Finance
- These studies ⇒ valuable but limits the scope of an analysis

**Federal Law and Strategic Interaction**

- Lemos (2011):
  - role of states in enforcing federal law ⇒ vital
  - can be conflicting with the federal enforcement strategy ⇒ hard to be prevented
  - can influence policy ⇒ both state and national level
  - adjusting enforcement level, novel interpretations
  - divergence widens ⇒ federal laws are vague, broadly defined

**Methodology**

- Baseline model:
  \[ R_{it} = \alpha + \gamma_i + \delta \sum_j \omega_{ij} R_{jt} + X_i \beta + \epsilon_{it} \]
  - \( \delta \) parameter of interest
  - \( \omega_{ij} \) weight attached by state \( s \) to state \( j \)
    - i. equal weight for all contiguous states; zero otherwise
    - ii. equal weight for all states in the same group according to BEA regional classification; zero otherwise
    - iii. equal weight for all states in the same group according to Crane regional classification
  - \( R_{jt} \) ⇒ potentially endogenous
    - reverse causality
    - omitted variables ⇒ business environment, discretionary power of bureaucrats, quality of politicians
  - measurement error ⇒ de-jure versus de-facto regulation
  - official regulatory laws ⇒ observed
  - actual implementation ⇒ unobserved
  - \( \sum_i \omega_{ij} X_{it} \) ⇒ valid instruments (Fredriksson and Millimet, 2002)

**Data**

- RegData ⇒ industry-specific federal regulations
  - disaggregated at four-digit level ⇒ 2007 North American Industrial Classification System (NAICS)
  - rigorous text analysis approach
  - sample period: 1990 - 2013
  - generate state-level measure (Autor et al. 2013)
  - \( R_{it} = \sum \left( \frac{\text{Emp}}{\text{Emp}_{1990}} \right) R_{jt} \)
- State RegData ⇒ total regulatory restrictions in each state
  - similar text analysis approach
  - data reported ⇒ 2017/2018

**Preliminary Results**

- Elasticity between Neighboring and Own Regulatory Burden of Overall Federal Regulations

<table>
<thead>
<tr>
<th></th>
<th>Contiguous</th>
<th>BEA Region</th>
<th>Crane Region</th>
</tr>
</thead>
<tbody>
<tr>
<td>ln(Neighboring Burden)</td>
<td>0.893*</td>
<td>1.188*</td>
<td>1.263*</td>
</tr>
<tr>
<td></td>
<td>(0.148)</td>
<td>(0.300)</td>
<td>(0.284)</td>
</tr>
<tr>
<td>F-stat</td>
<td>7.143</td>
<td>16.307</td>
<td>3.341</td>
</tr>
<tr>
<td>Overid Test</td>
<td>0.656</td>
<td>0.719</td>
<td>0.841</td>
</tr>
<tr>
<td>Endogeneity</td>
<td>0.235</td>
<td>0.315</td>
<td>0.509</td>
</tr>
<tr>
<td>N</td>
<td>1200</td>
<td>1200</td>
<td>1200</td>
</tr>
</tbody>
</table>

* p<0.01. Robust standard errors in parentheses. Neighboring regulatory burden is instrumented for using log (neighboring per capita income), log (neighboring population), neighboring urbanization, and neighboring unemployment rate. Underid Test reports the p-value of the Kleibergen-Paap (2006) rk statistic with rejection implying identification. F-stat reports the Kleibergen-Paap F-statistic for weak identification. Overid Test displays the p-value of Hansen J statistic with rejection implying invalid instruments. Endogeneity reports the p-value of endogeneity test of the endogenous regressors. Other covariates include: log (per capita income), log (population), urbanization, and unemployment rate, and state- and year-specific dummies.

**Discussion**

- For federal regulations:
  - instruments perform reasonably well for BEA region
  - elasticity between the regulatory burden of a state and its neighbors is positive
  - caveaet ⇒ strategic interaction between states or response to federal laws ⇒ work in progress...
- For state regulations (current analysis ⇒ only contiguous neighbors ⇒ \( \omega_{ij} \) of (i)
  - instruments are weak ⇒ work in progress...

**References**


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