A Welfare Analysis of Occupational Licensing in US States

Morris M. Kleiner & Evan J. Soltas (2019)

Presenter: Christopher Saw

UCLA

October 2022

What are the welfare consequences of occupational licensing?

- Total welfare effect of occupational licensing is ambiguous because
  - $\downarrow$ supply of licensed labor $\Longrightarrow$ $\downarrow$ emp. $\Longrightarrow$ $\uparrow$ higher wages and hours worked
  - $\downarrow$ asymmetric information $\Longrightarrow$ $\uparrow$ product quality $\Longrightarrow$ higher consumer WTP
- Approach:
  - Labor market model with occupational licensing (skip)
  - Estimate effects from reduced-form moments (focus for today)
- Key Contribution:
  - Licensing policies hard to measure in the data: use variation in the share of licensed labor by state $\times$ occ. as proxy for policy
  - Estimates reflect ATE of licensing occupations in the US, identified from interstate differences in policy

What is occupational licensing?

"...a form of government regulation requiring a license to pursue a particular profession or vocation for compensation" (Wikipedia)

Why do we want to regulate occupations to require a license?

- Workers (in some jobs): cannot credibly signal their human capital investments and/or quality
- Consumers (in some markets): unable to contract on the ex-post quality of labor services

However...doing so creates barriers to entry into jobs, which may lead to higher prices that exceed consumers' WTP for higher quality

Which occupations require a license?

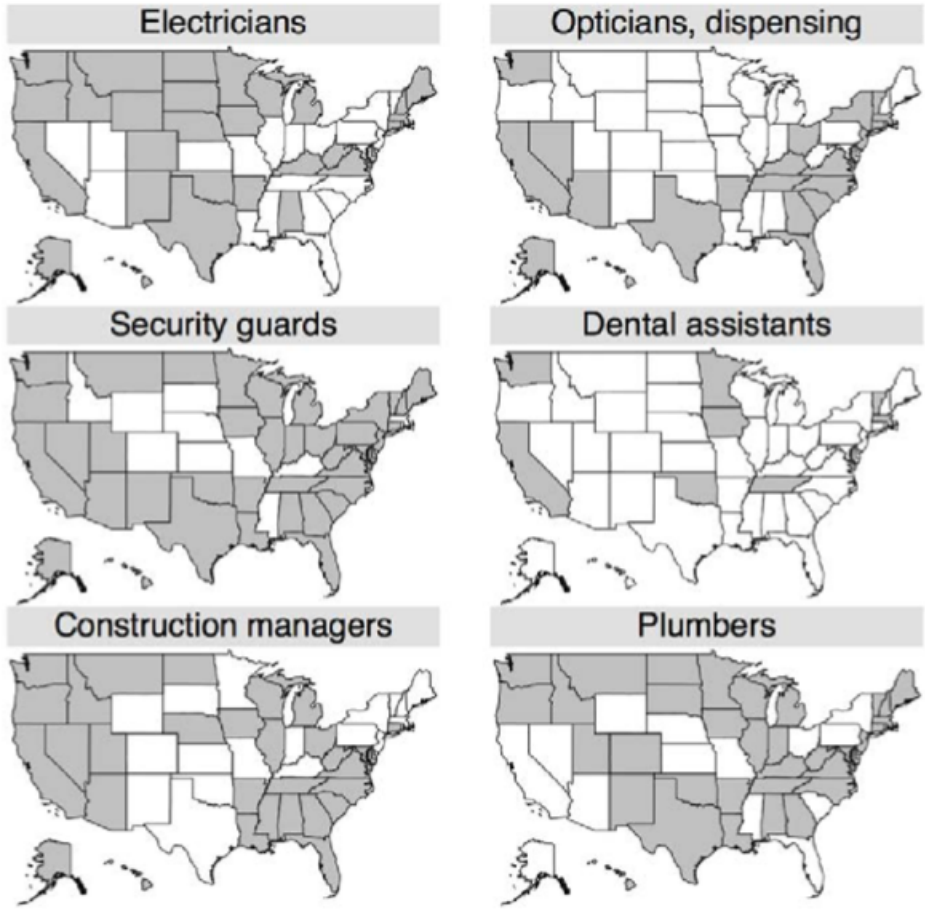

Figure 1: Examples of Interstate Variation in Occupational Licensing

How to measure occupational licensing?

- Leverage new survey questions from the US CPS from Jan 2015 to Dec 2018:
  1. "Do you have a currently active professional certification or a state or industry license?"
  2. "Were any of your certifications or licenses issued by the federal, state, or local government?"
  3. "Is your certification or license required for your job?"
- Count a worker as licensed if answer is yes to both Q1 and Q2
- Form estimates of state-occupation licensed shares
- Authors' sample contains 624,697 unique workers in 483 occupations [1]; 22.6% licensed

[1] According to 2010 Census categories

How do they measure the effects?

$$y_i = \alpha_0 + \alpha_s + \beta \cdot \%Licensed_{i(o,s)} + X_i'\theta + \varepsilon_i$$

- y_i outcomes of interest: e.g. wages, hours worked, employment
- β: ATE of occupational licensing
- α_o and α_s are occ. and state FEs
- X_i is a vector of demographic controls
- ε_i: mean-zero measurement error

Empirical strategy: two-way fixed-effects research design

Identification assumption: relative to the occ. and the state, highly licensed state-occupation cells are otherwise comparable to cells with lower licensed rates

Does occupational licensing increase and reallocate human capital investments?

	Licensed = 1	% Licensed in Cell	
	(1)	(2)	(3)
Panel A: Years of Education			
	0.383***	0.418***	0.371***
	(0.011)	(0.057)	(0.055)
Observations	1,865,209	1,865,209	1,865,209
Clusters	20,321	20,321	20,321
Panel B: Years of Age			
	1.282***	1.135***	1.112***
	(0.039)	(0.243)	(0.241)
Observations	722,168	722,168	722,168
Clusters	17,842	17,842	17,842
Panel C: Log Hourly Wage			
	0.159***	0.201***	0.155***
	(0.005)	(0.025)	(0.023)
Observations	317,142	317,142	317,142
Clusters	18,753	18,753	18,753
Panel D: Log Weekly Hours Per Worker			
	0.039***	0.044***	0.032***
	(0.002)	(0.010)	(0.010)
Observations	1,865,209	1,865,209	1,865,209
Clusters	20,321	20,321	20,321

Figure 2: Reduced-Form Worker Effects of Occupational Licensing

Key takeaways in 5 minutes

- Difficult to study licensing because: (i) many regulators license occupations across states; (ii) regulatory and statistical definitions of occ. do not always line up
  - Empirical strategy and research design to overcome these challenges
- Further welfare analysis by authors: Occupational licensing reduces total surplus from trade in labor services by approx. 12%
  - Total welfare cost is shared between workers (70%) and consumers (30%)
  - Workers: wage increases compensate approx. 60% of the opp. cost of human capital investments required due to licensing
- But bear in mind that
  - Unable to evaluate licensing consequences for individual occ.
  - Nothing to say about occupations that are licensed everywhere in the US (e.g. doctors, lawyers)