

Labor Economics, Section 3

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Immigration

Big picture idea: Immigration is just an incidence that shifts out labor supply. It's effects depend on:

- How elastic is labor demand e_D
- How elastic is labor supply of natives e_n (why?)

The effect of immigration on native employment for perfect substitutes is:

$$\frac{dE_n}{dE_i} = \frac{e_n(1 - \mu)}{e_D - e_n(1 - \mu)}$$

where μ is immigrant employment shares. Additional points,

- Whether labor of natives and foreign are complements or substitutes
- Labor market segmentation

Figure 4: Effect of immigration on native workers

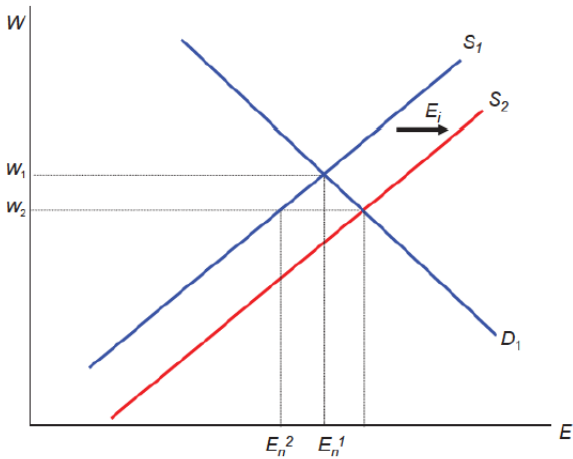


Figure 5: Effect of immigration on native workers when $\varepsilon_D = 0$

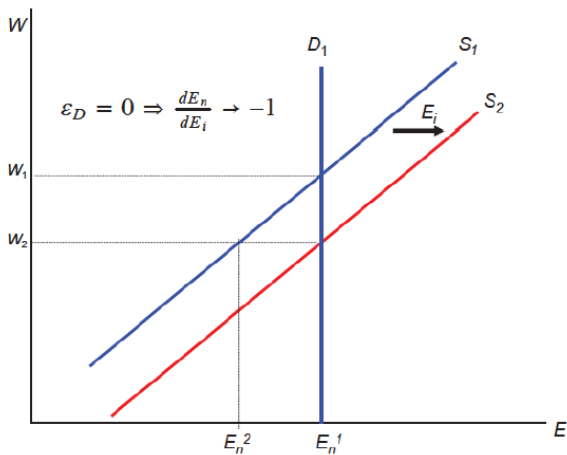


Figure 5: Effect of immigration on native workers when $\varepsilon_D = -\infty$

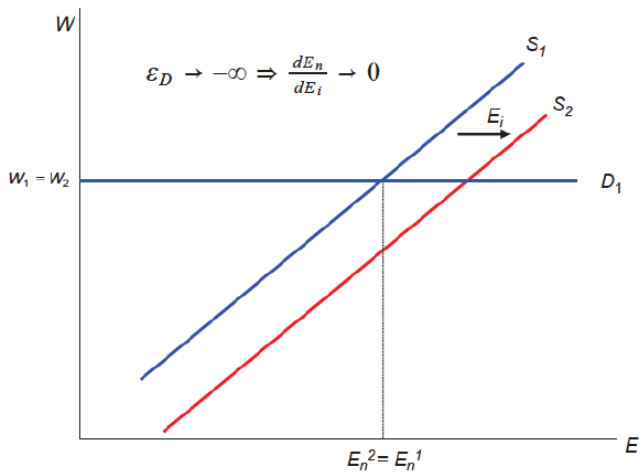
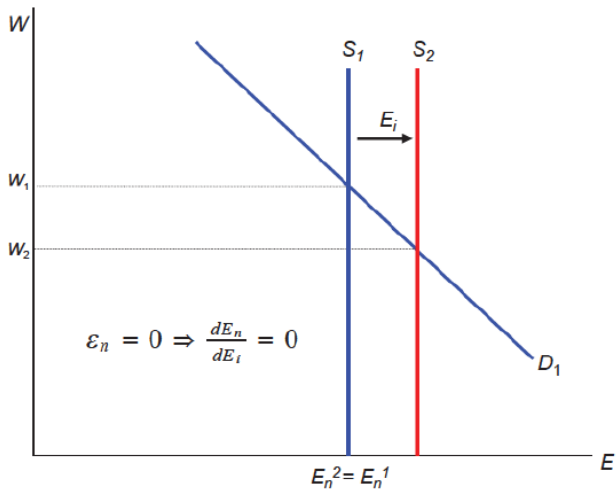


Figure 6: Effect of immigration on native workers when $\varepsilon_n = 0$



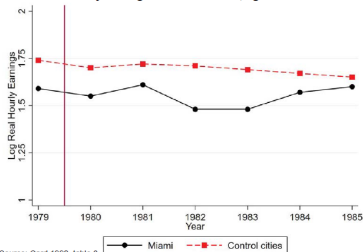
Marcel Boatlift

Set of studies done by Card '90; Borjas '17; Peri-Yasenov '17.

- Studies the influx of Cubans in 1980s to Miami as a natural experiment.
- Card - Atlanta, Houston, Tampa controls, men and women, aged 16-61, divide by skill levels.
- Borjas - Several placebo including Card's. Restrict sample to men, high school dropouts, aged 25-65, years '77 to '92, non-Cuban
- Peri-Yasenov - Several placebos, ages 19-65, high school dropouts, non-Cuban, men and woman. (Argues Borjas had census error)

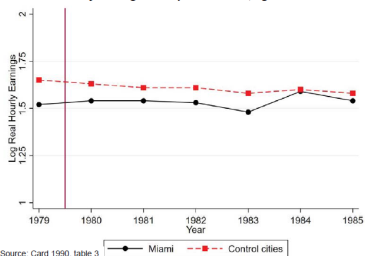
Card

Hourly Earnings for Black Workers, Age 16-61



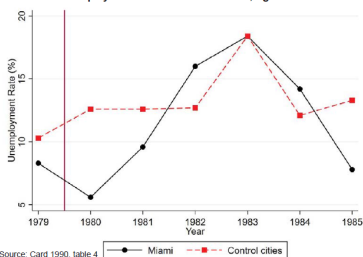
Source: Card 1990, table 3

Hourly Earnings for Hispanic Workers, Age 16-61



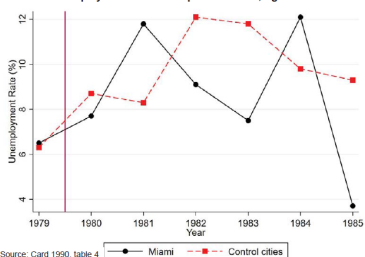
Source: Card 1990, table 3

Unemployment Rate for Black Workers, Age 16-61



Source: Card 1990, table 4

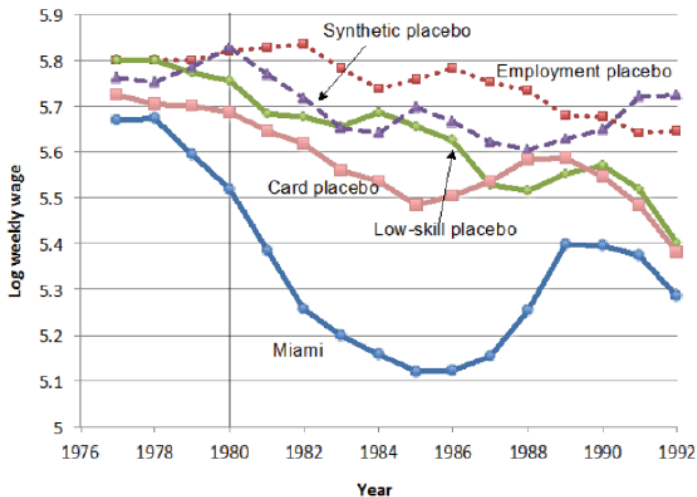
Unemployment Rate for Hispanic Workers, Age 16-61



Source: Card 1990, table 4

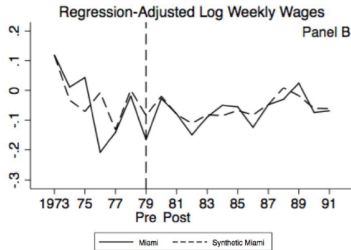
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Figure 3a: Log weekly wage of high school dropouts



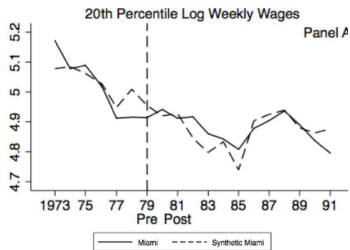
Peri-Yasenov

Figure 3: Miami and Synthetic Control, Additional Outcomes of High School Dropouts



Source: Peri and Yasenov (2017)

Figure 3: Miami and Synthetic Control, Additional Outcomes of High School Dropouts



Source: Peri and Yasenov (2017)

Figure 2: Miami and Synthetic Control, Wages and Unemployment of Low Skilled

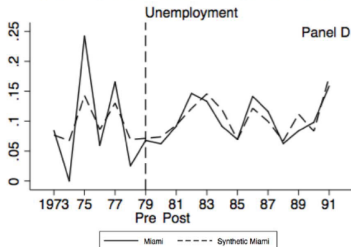
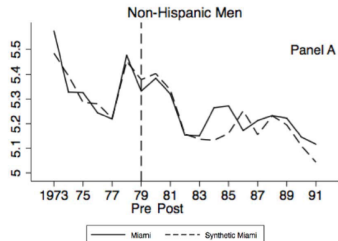


Figure 4: Miami and Synthetic Control, Sub-samples of High School Dropouts



Doran Gelber Isen 2016

- **Study:** H1B Visas are allocated by lottery, thus would give causal effect of firms having access to more H1B Visa workers.
- **Findings:** No findings of positive effects on employment/innovation (measured by patents); some evidence of lower firm payrolls.
- **Interpretation:** Firms are hiring immigrants at a cheaper price, suggests a crowd out of American high skill workers.

Monopsony Model

- Suppose there is only a single buyer of labor of amount E , paying a wage of $w(E)$. The profit function is then

$$\max pf(E) - w(E)E$$

- The first order condition is

$$pf'(E) = w(E) + w'(E)E$$

- **Intuition:** LHS is the marginal product of a unit of labor. RHS, first term is wages needed to pay the next worker, and the second term is now the firm needs to pay all hired workers more.

Monopsony Model

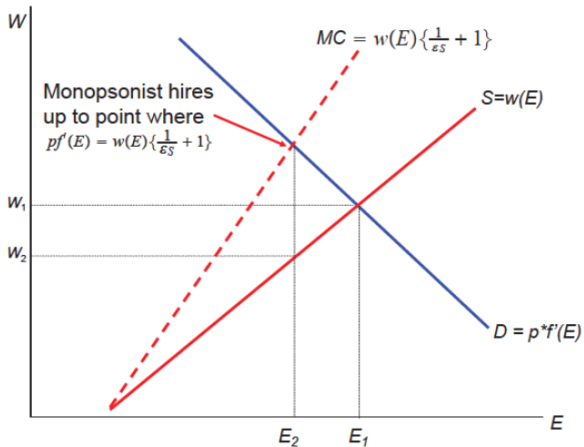
- The FOC can be manipulated to get the relationship of wages and employment

$$pf'(E) = w'(E)E + w(E)$$

$$pf'(E) = w(E)(1/\epsilon_S + 1)$$

- Monopsonist pays **less** than value of marginal product correlated to the labor supply elasticity.
- Therefore, not only are wage is lower than social optimal, but also employment is lower than social optimal due to low wages.

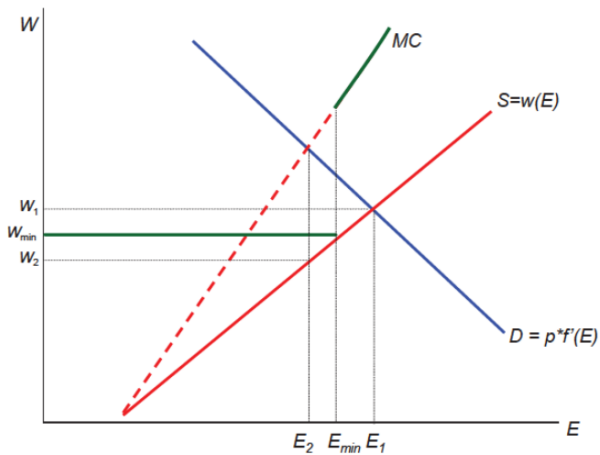
Figure 9: Equilibrium under monopsony



Monopsony and Minimum Wage

- Minimum wage would forcefully increase wages monopsony firm has to pay, and get back to the competitive equilibrium.
- Since now firm has to pay the higher wage anyways, the marginal pay for another worker now is just w_{\min} , so employment increases.
- Policy maker needs to pick a good minimum wage – if too low, will have no/small effect. If too high, may again reduce employment.
- Putting our economist hat away - do politicians think about monopsony when deciding on min wage laws or is it social ethics?

Figure 10: Minimum wage and monopsony



Card Krueger 1994, 2000

- **Study:** New Jersey raised state min wage in 1992. Use DD to see the effect of 410 fast food restaurant workers' employment vs that of Pennsylvania.
- **Findings:** Higher min wage increased employment in NJ relatively to PA.
- **Issues:** However, the parallel trend assumption might be violated: there is substantial variations between states so PA as counterfactual might be poor.

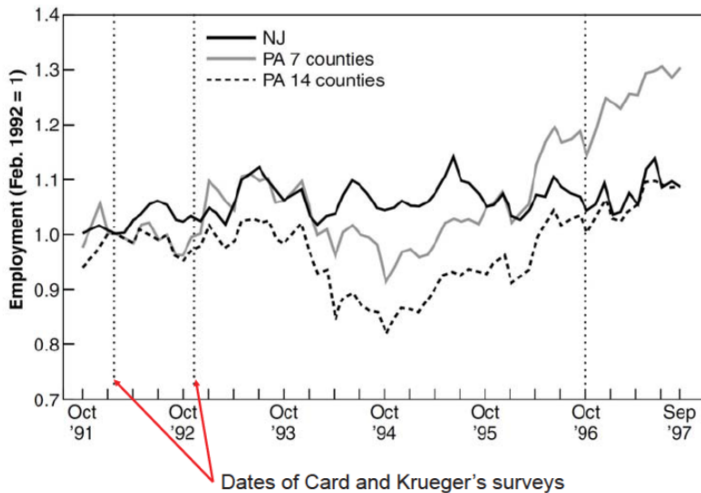
Important!

Average employment in fast food restaurants before and after the New Jersey minimum wage increase

Variable	PA (i)	NJ (ii)	Difference, NJ – PA (iii)
1. FTE employment before, all available observations	23.33 (1.35)	20.44 (.51)	–2.89 (1.44)
2. FTE employment after, all available observations	21.17 (.94)	21.03 (.52)	–.14 (1.07)
3. Change in mean FTE employment	–2.16 (1.25)	.59 (.54)	2.76 (1.36)

What if Minimum wage only affects Newark + surrounding (800k residents) in NJ (8 million)?

Employment in New Jersey and Pennsylvania Fast Food Restaurants



Jardim 2017 vs Reich et al (2017)

Method: Compare Seattle to weighted average of other countries using synthetic control.

Synthetic control Method

- A method for simulating a control group to compare treatment group with. Abadie (2010). Useful if one has lots of potential controls, but parallel trends are poor.
- **Setting:** Seattle increased min wage from 9.47 to 11 to 13, and again to 15 for large companies from Jan '15 to Jan '17.
- **Reich et al.** shows using ALL restaurants vs nearby states, that there is negligible effect on employment but positive effect on wages.
- **Jardim et al.** compares Seattle to nearby counties, studying single site businesses. Under a increase of min wage from 9.5 to 11 - small negative effect.
- Under another increase of min wage to 13, big drop in hours and jobs.