Chapter 4, part 2

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Outline

1. Policy application: immigration

2. Market power in the labor market

1. Policy application: immigration

First some data

- Immigration to US in a historical perspective
  - http://www.migrationpolicy.org/programs/data-hub/us-immigration-trends#history

- Refugee admissions
  - http://www.migrationpolicy.org/programs/data-hub/us-immigration-trends#history

- Where immigrants come from
  - http://www.migrationpolicy.org/programs/data-hub/us-immigration-trends#source

- US in an international perspective
  - http://www.migrationpolicy.org/programs/data-hub/us-immigration-trends#source

More background

■ The numbers from our text

|	Percent foreign born in 2010
United States	13.5
Germany	13.1
France	10.7
Canada	21.3
Switzerland	23.2

My quick take on the debate

- Most people seem to want immigration reform
  - The issues where people agree
    - We should minimize illegal immigration
    - The process of legal immigration is too time consuming and difficult
  - The issues where people disagree
    - How do we minimize illegal immigration?
    - How do we handle the existing stock of illegal immigrants?
    - How many legal immigrants should we let in?
    - What type of legal immigrants should we let in?

- The driving factors
  - The effects of immigration on labor markets
  - The effects of immigration on fiscal budgets
  - Crime/safety/terrorism

The SR effects of immigration

- Case 1: immigrants and natives are perfect substitutes in production
  - Suppose we have the same skills and compete for the same jobs
  - The implication: LS for combined group shifts out
 - The outcome: E and w for natives decline
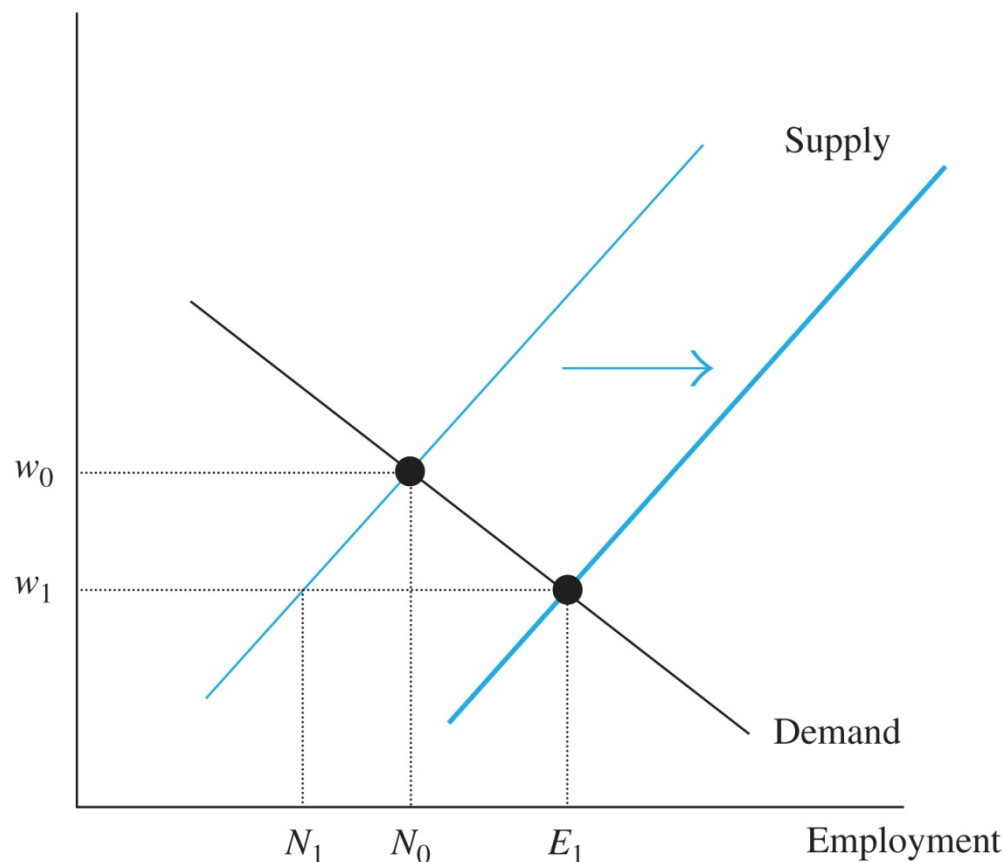
The SR effects of immigration

- Case 2: immigrants and natives are complements in production
  - Suppose immigrants are complements in production with natives, with perhaps natives being higher-skilled
  - The implication: LD for natives shifts out
  - The outcome: E and w for natives increases

Dollars

w_1

w_0

Supply

Demand

N_0 N_1 Employment
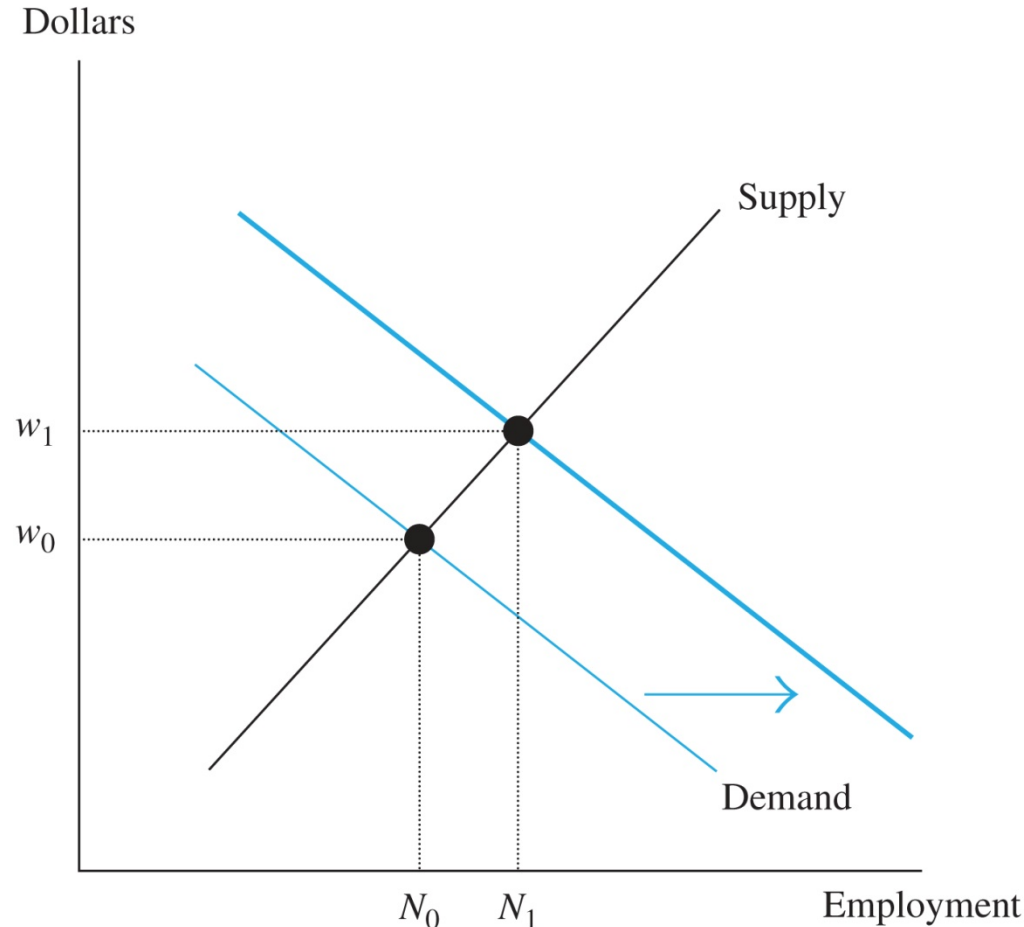
A few things to note

- In both of these examples, we assume that there is no increases in product demand with immigration
  - Why? The models have in mind a product that is tradable—immigrants would be buying the product whether they are in the home country or new country

- Some products are not tradable, such as services

- Such "general equilibrium" concerns—the increases in local demand due to immigration for non-tradable goods—would tend to cause an increase in LD in both models

LR effects of immigration

- Suppose natives and immigrants are perfect substitutes
  - Case 1—immigraiton harmed natives in SR

- In LR, capital can be changed as well
  - SRLD was driven by fixed capital
  - What does the LRLD look like?

- General result: the LRLD will be determined by the <u>returns to scale</u> inherent in the production function
  - Returns to scale: What happens when labor and capital are both increased?
  - <u>Constant Returns to Scale:</u> Doubling inputs results in the doubling of outputs
  - Research suggests that this is roughly true

LRLD and immigration

- Step 1 (SR): immigration increases S, causing w and E to decline for natives
- Step 2: Returns to capital is now higher given the additional labor, so capital increases
- Step 3: increases in capital makes labor more productive, causing LRLD to shift out
- Step 4: how much does SRLD shift out? If CRtS, until w is constant
- Result: LRLD is constant at w

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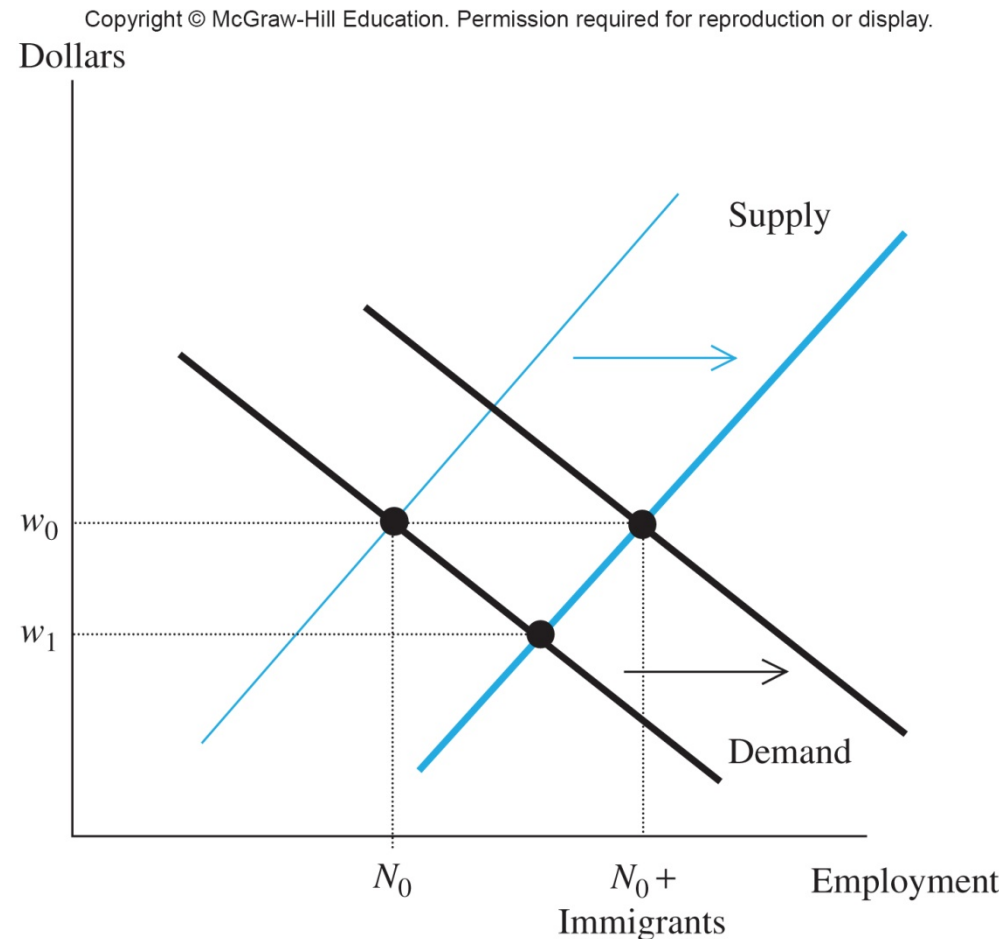
LRLD and immigrants

- Bottom line: in the long run, immigrants will have no effect on native wages in perfect competition with CRtS production function

- Why? The production function implies the efficient way to combine capital and labor. The increase in labor will be offset by firms having an incentive to use more capital
  - This works as long as (a) r is set, (b) capital is available, and (c) the firm can maintain output levels as it scales up its production (i.e., CRtS)

- Thus, in the long run, immigration doesn't affect natives
  - The usual caveat: the long run can be long, and there are lots of ifs…
  - So, we should still carefully examine the short run

The empirical evidence

- **Spatial correlation studies**
  - Simple version: do natives in local areas with more immigrants have better or worse labor market outcomes?
    - Causal? Not if immigrants are living in areas that are systematically nicer
  - Advanced version: do natives in local areas with more immigrant GROWTH have better or worse labor CHANGES in labor market outcomes?
    - Technically, this is usually implemented through a "fixed effects" regression because it allows there to be fixed differences across local areas—and instead only focused on changes
    - Causal? Not if immigrants move into areas with booming economies
  - Findings: immigrants tend to have little effect on natives

The empirical evidence

- A "Natural Experiment": The Mariel Boatlift
  - The nature of a D-D study, for example, is that we try to find a "natural experiment"—an evident that we can treat as if it were an RCT
  - April 20, 1980, Fidel Castro declared that Cuban nationals who wished to go to US could leave from the port of Mariel
  - By September 1980, 125,000 Cubans, mostly low-skilled, left
  - Over these few short months, Miami's labor force had unexpectedly grown by 7 percent
  - A well-known study by David Card used the Mariel Boatlift as a "natural experiment" to examine the effects of immigrant
  - Treatment labor market: Miami
  - Control labor market: cities such as Atlanta, Houston, and Los Angeles that did not receive a large influx of "Marielitos"

The results

- **Left panel: The Mariel Flow in 1980**
    - Result: Unemployment rate of another traditionally low-skilled group <u>declines</u>
    - Implication: Large inflows of immigration do not hurt natives
    - Caveat 1: While the Mariel Flow is easy to study, is it really an experiment of "standard" immigration policy?
    - Caveat 2: Case 1 vs. 2 was about skilled and unskilled…

TABLE 4-2 **Immigration and the Miami Labor Market**

Sources: The Mariel flow data are drawn from David Card, "The Impact of the Mariel Boatlift on the Miami Labor Market," *Industrial and Labor Relations Review* 43 (January 1990), p. 251. The data for the Mariel flow that did not happen are drawn from Joshua D. Angrist and Alan B. Krueger, "Empirical Strategies in Labor Economics," in Orley C. Ashenfelter and David Card, editors, *Handbook of Labor Economics,* vol. 3A, Amsterdam: Elsevier, 1999, Table 7. The comparison cities are Atlanta, Houston, Los Angeles, and Tampa–St. Petersburg.

	The Mariel Flow		The Mariel Flow That Did Not Happen	
	Before	After	Before	After
Unemployment rate of blacks in				
Miami	8.3	9.6	10.1	13.7
Comparison cities	10.3	12.6	11.5	8.8
Difference-in-differences	**−1.0**		**+6.3**	

Do natural experiments work?

- Natural experiments hinge on the validity of a key assumption
    - Are the "control cities" really a good set of control cities?
    - If not, the DD results are flawed
    - One common method to assess the validity of the control group: Can we find a "placebo test"?
        - In a blinded RCTs, the control group is given a "placebo" drug (maybe a sugar pill), so they don't know if they are the treatment or control
        - The hope: the control group doesn't change their behavior, and the placebo will demonstrate the effectiveness of "any treatment"
            - Common finding: Individuals given the placebo drug often do a little better
            - Without the control group, we couldn't separate the "placebo effect" from the real effect of the drug

Do natural experiments work?

- **Extending this idea to our experiment….**
  - In 1994, conditions in Cuba were ripe for another boatlift of refugees to Miami, and thousands began the hazardous journey
  - The US Navy intercepted the boatlift, and returned them to Guantanamo Bay, Cuba
  - If we applied our D-D strategy to this "Phantom Boatlift" as a placebo test, using the same control group….

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Do natural experiments work?

- Where does this leave us?
  - The real Mariel Boatlift had no effect on Miami
  - The phantom boatlift had a large positive effect
  - Precise conclusion: assuming that the phantom boatlift should have no effect if the control group were appropriate, the control group wasn't appropriate in 1994
  - That doesn't imply that the control group wasn't appropriate in 1980, but it does raise serious doubts
  - More generally, placebo tests can be used to shed light on the appropriateness of identifying assumptions, but those tests too require assumptions (should 1980 and 1994 control cities be the same).
  - _Identifying assumptions are inherently untestable, but they certainly can be probed…._
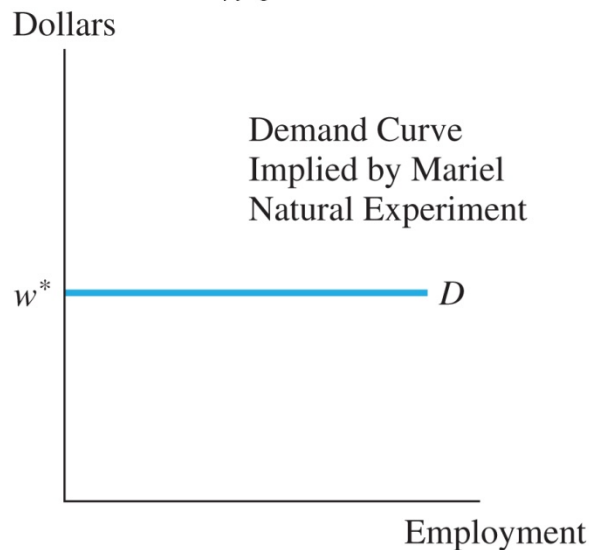
Theory can help too!

- **DD on minimum wage**
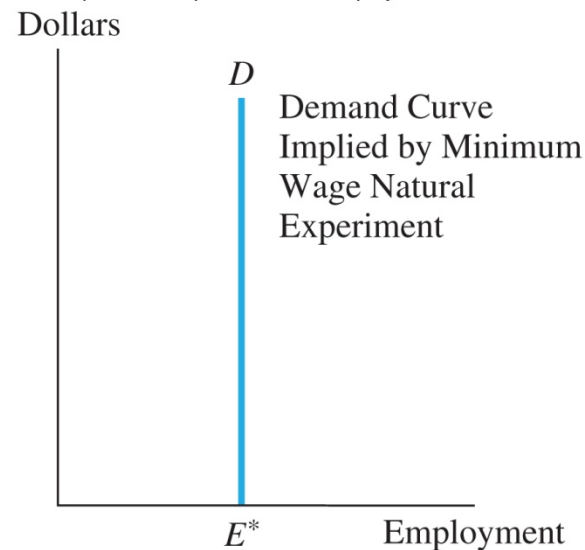 - No (or little) employment effect
  - Implication: vertical LD curve
- **DD on immigration**
  - No (or little) employment effect on natives
  - Implication: horizontal LD curve assuming immigrants are fully employed?

Dollars

Demand Curve Implied by Mariel Natural Experiment

w^* ——————— D

Employment

(a) Mariel

Dollars

D

Demand Curve Implied by Minimum Wage Natural Experiment

E^* Employment

(b) NJ-Pennsylvania Minimum Wage

Theory can help too!

- That shouldn't be treated as a firm contradiction because there are many issues at play
  - We should never take one study as THE study—it is the consensus of well-done studies
  - "No effect" may mean "An effect that is too small to characterize"
  - There are other modeling issues that could be at play—might there be fixed costs of firing that lead to downward rigidities

- But….
  - We should not treat these policies as being completely distinct—they are related to the workings of the underlying labor market
  - We should try to link back to theory to (a) try to get more evidence about the appropriate underlying model and (b) use the model to help with extrapolation/prediction
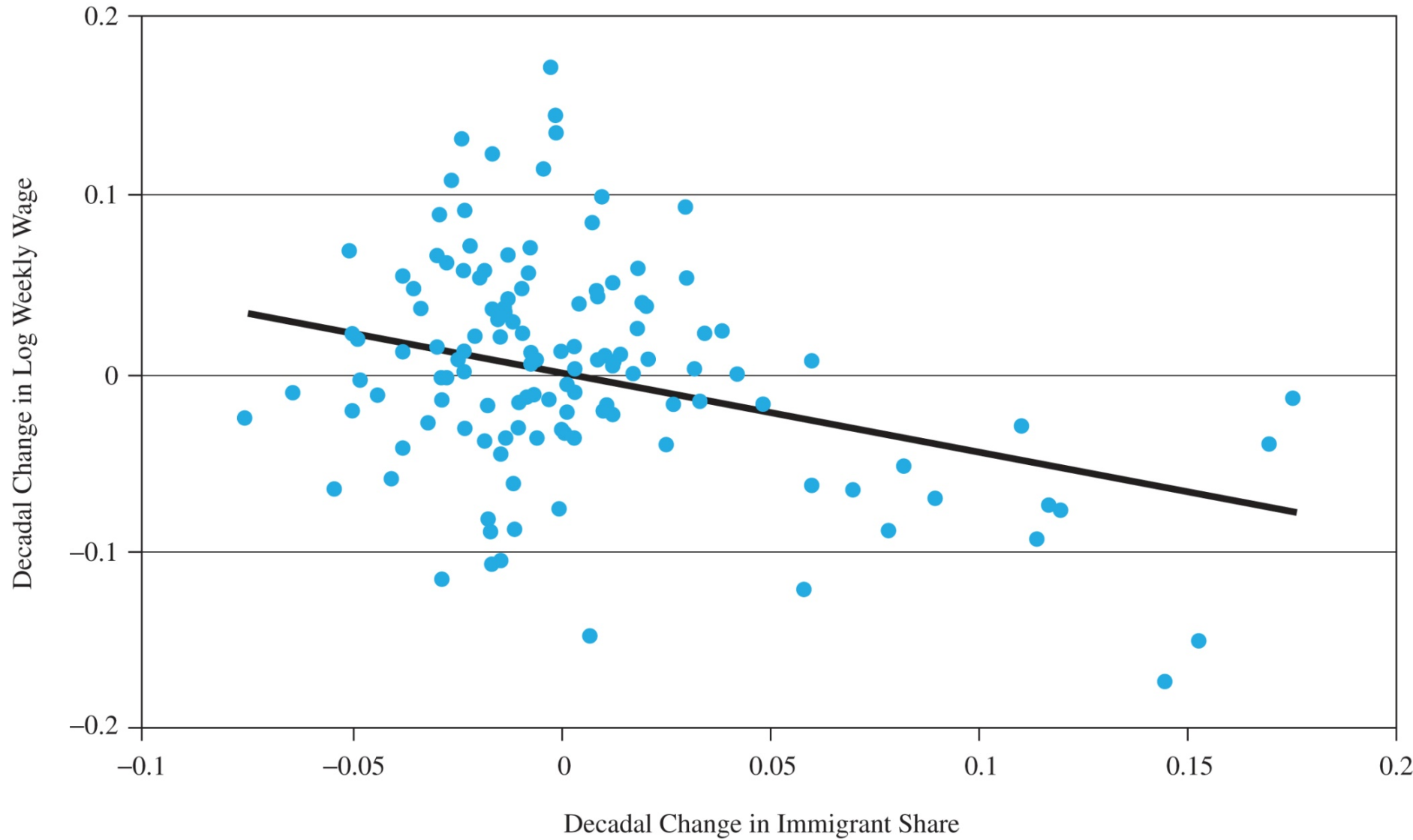
Returning to the evidence

- Spatially based evidence finds little effect of immigration on natives
  - Spatial correlation studies
  - Natural experiment studies (Mariel Boatlift is just one)

- But, remember where we started: we should expect wages to be equalized across areas when mobility is free
  - Immigrants will tend to go to good labor markets
  - If immigrants don't/can't (say, they go to join their family in a particular city), natives can to locate to good labor markets as well
  - Implication: perhaps there will tend to be little spatial correlation because immigrants and natives move

Nationally based studies

- Suppose we instead view the labor market as segmented by skill, as measured by education and work
  - We can make use of the fact that there was a lot of variability in national immigration over the last several decades
  - Do we see national movements in wages associated with immigration?
  - SR, yes: if immigration increased labor in a skill group by 10%, native wages falls by 3.4%
    - That's a HUGE level of immigration—even the Mariel Boatlift increased low-skilled labor by 7% in Miami, whereas the effect for FL would have been well under 2%
  - LR, no: capital did change

The picture

A scatter plot with "Decadal Change in Log Weekly Wage" on the vertical axis (ranging from −0.2 to 0.2) and "Decadal Change in Immigrant Share" on the horizontal axis (ranging from −0.1 to 0.2), with a downward-sloping regression line.
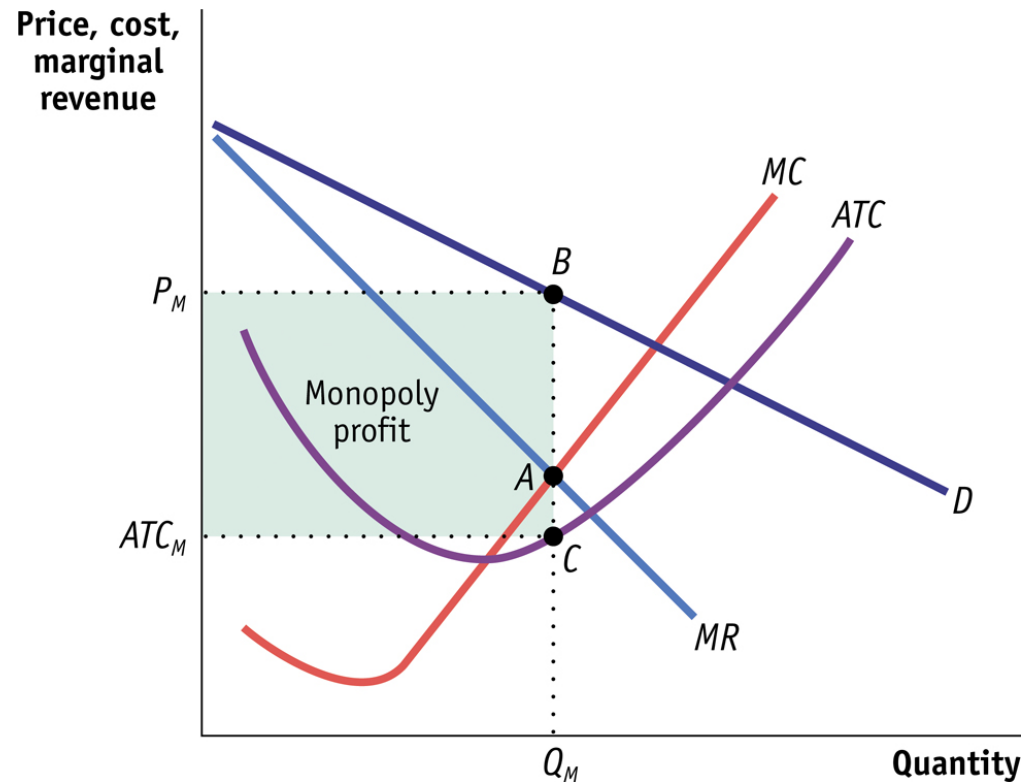
2. Market power in the labor market

Review for Monopoly

- We focused on output markets
- We start with perfect competition
- We then cover <u>monopoly</u>—the extreme case of market power in the output market, where there is just one seller of a good
  - The model: A monopolist faces a downward-sloping demand curve (restricting quantity increases price), rather than a horizontal demand curve (one firm can sell as much as it wants)
  - The intuition: <u>Compared to perfect competition, a monopolist restricts quantity produced to drive up the price</u>
  - We discuss a single-priced vs. a perfect price discriminating monopolist
- We then point out that this general intuition works in other models with market power, such as duopoly and monopolistic competition
  - Sellers wish to restrict quantity to drive up the price
  - This is possible whenever a firm faces a downward sloping demand curve

The pictures

- A monopolist is a single producer in an output market
- The firm sees a downward-sloping demand curve
- Perfect comp: where p (the demand curve) intersects MC
- MR < D because, as the firm sells more, the price must drop
- Monop: where MR=MC, then charge P
- The monop restricts quantity to drive up the price

Market Power

- We are studying an input market
- <u>Monopsony</u>
    - A market in which there is only one firm buying labor
    - It is the extreme version of market power in the labor market
    - A monopsonist sees the entire <u>labor supply</u> curve
    - A monopsonist reduces employment to drive <u>down</u> wages
    - Because the monopsonist sees the entire labor supply curve, MC is above the supply curve because the firm has to pay a higher wage to everyone to hire more workers
    - A monopsonist choose employment so that VMP_E (the marginal benefit of hiring a worker) to equal the MC cost of hiring a worker—which is now greater than the wage
- We can study a single-wage or a wage-discriminating monopsonist
- All of the intuition generally goes through for market power in the labor market: whenever a firm sees an upward sloping labor supply curve, they want to restrict employment to drive down the wage

Step 1: MC > W

- ## MC curve is greater than the S curve
    - ### The marginal cost of hiring a work is greater than the wage
    - ### This is true for a single price monopsonist because the monopsonist must pay all workers the higher wage
   - ### Monopoly equivalent: MR<D if the monopolist must drop the price to sell more goods

TABLE 4-6
Calculating the Marginal Cost of Hiring for a Non-discriminating Monopsonist

| Wage (w)	Number of Persons Willing to Work at That Wage (E)	w × E	Marginal Cost of Labor
$4	0	$0	—
5	1	5	$5
6	2	12	7
7	3	21	9
8	4	32	11

Step 2: Compare MC to VMP

■ **A monopsonist chooses E to equate MC and VMP**

- ■ Again, this is for a single-wage monopsonist
- ■ This is simply an application of the setting the MC to the MB—what is new is that the MC is no longer the wage
- ■ Always pay lowest wage possible
- ■ Monopoly equivalent: set Q so that MR=MC rather than P=MC, and then charge highest price possible
- ■ Result: reduce E to drive down wage

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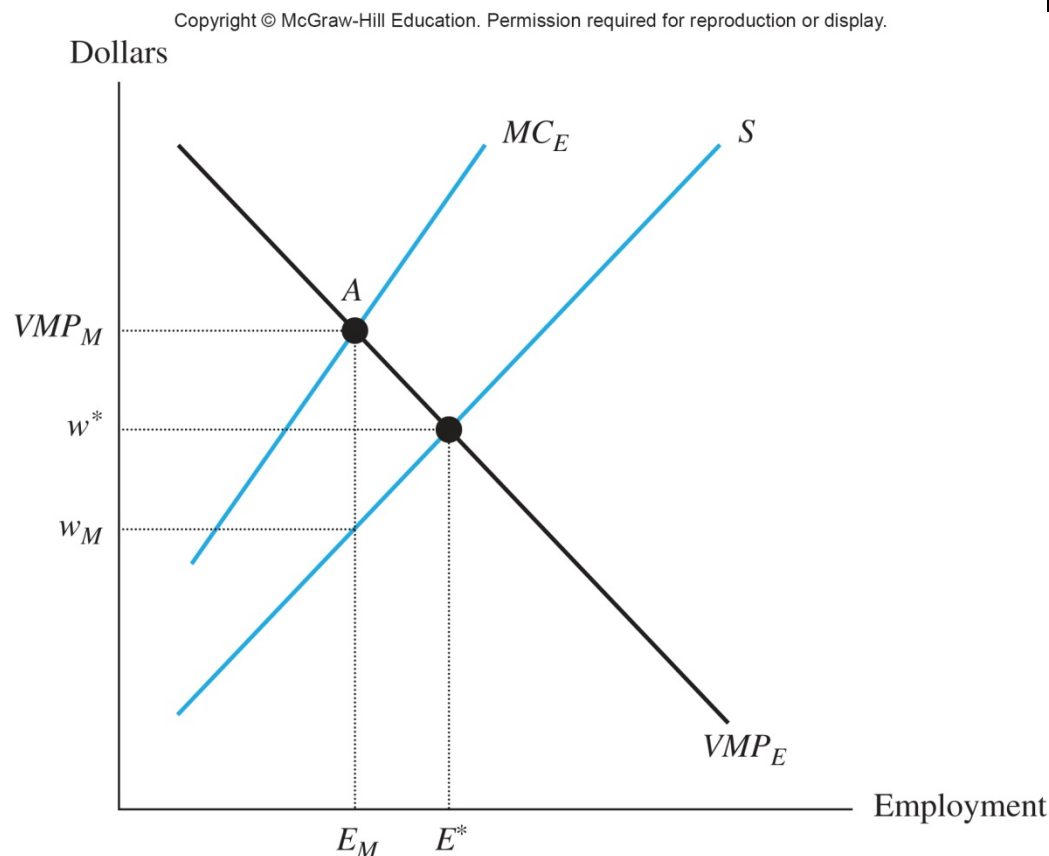
Monopsony and the min. wage

■ A monopsonist wants to reduce E to drive down w

■ A minimum wage law takes away that incentive
  ■ Reducing E cannot drive down w beyond the min. wage
  ■ Why? MC of hiring workers is back to just being the wage—because the wage isn't changing

■ Implication: placing a minimum wage on a monopsonist could INCREASE employment
  ■ Some argued this to be the case after the initial DD minimum wage studies came out—but the estimates have not proven to be robust

Dollars

MC_E

S

A

w^*

$\bar{w}$

w_M

VMP_E

E_M $\bar{E}$

Employment
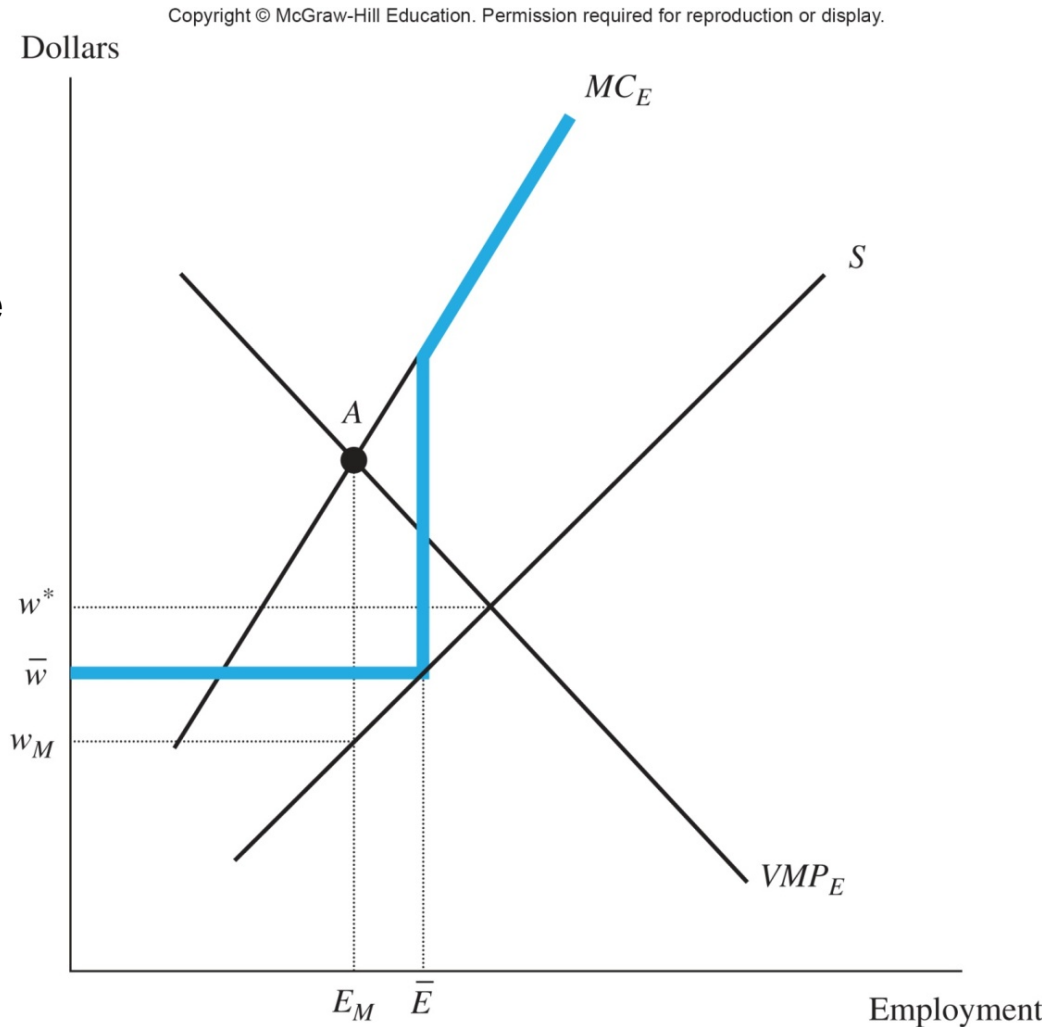
Wage-discriminating Monopsonist

- Go back to perfect competition E (w=VMP) because each individual is paid their own wage
- Such a monopsonist captures all of the surplus

- The same is true for a price-discriminating monopolist

Dollars

S

w^* ⋯⋯⋯⋯⋯⋯⋯⋯ A

w_{30}

VMP_E

w_{10}

10   30 E^* Employment
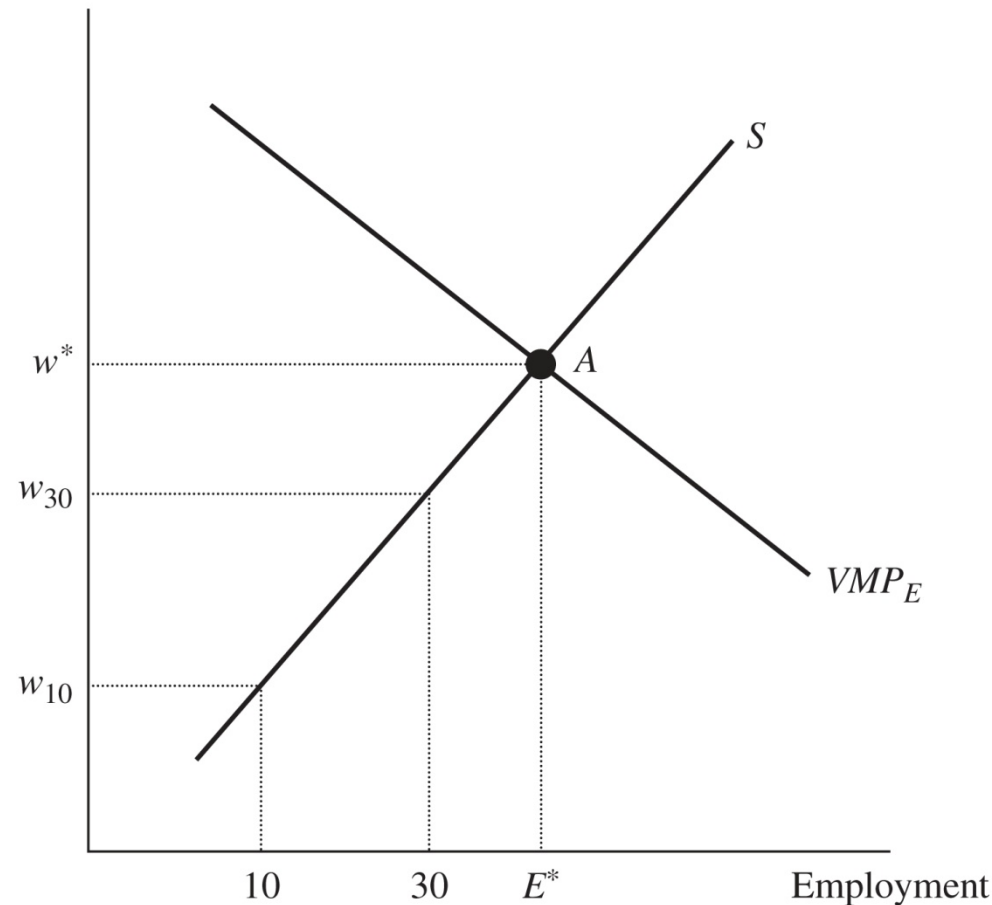
Monopsony to market power

- **The monopoly to market power link**
  - We showed the standard monopoly results—firms wanted to restrict quantity to increase price
  - We then pointed out the same basic incentives existed whenever a firm saw a downward sloping demand curve (restricting quantity only increases price if the demand curve is downward sloping)
  - We referred to the general ability to do so as "market power"

- **The monopsony side**
  - Whenever a firm faces an upward-sloping supply curve, it has an incentive to reduce employment to drive down wages
  - This would give a firm market power in the labor market
  - Do firms ever have market power in the labor market?

Monopsony in practice

- The classic example: the "one company town"
  - Might Jiffy have had market power to set wages in Chelsea, MI at one point?
  - If fast food were the prime employer of low-skilled workers, might they have had the ability to affect the wage (by restricting employment)?

- A current example
  - MLB hires all umpires, and major league umpires make about 10x what minor league umpires make. MLB probably has some market power over umpires
  - Aside: Is it surprising that umpires have a fairly strong labor union?
    - We tend to see labor unions in markets where there is a belief that market power exists
    - Perhaps some of the decline in unionization is due to changing market power