

## Lecture 14(iii)

### Announcements

Be sure to vote on the 6 policy platforms!

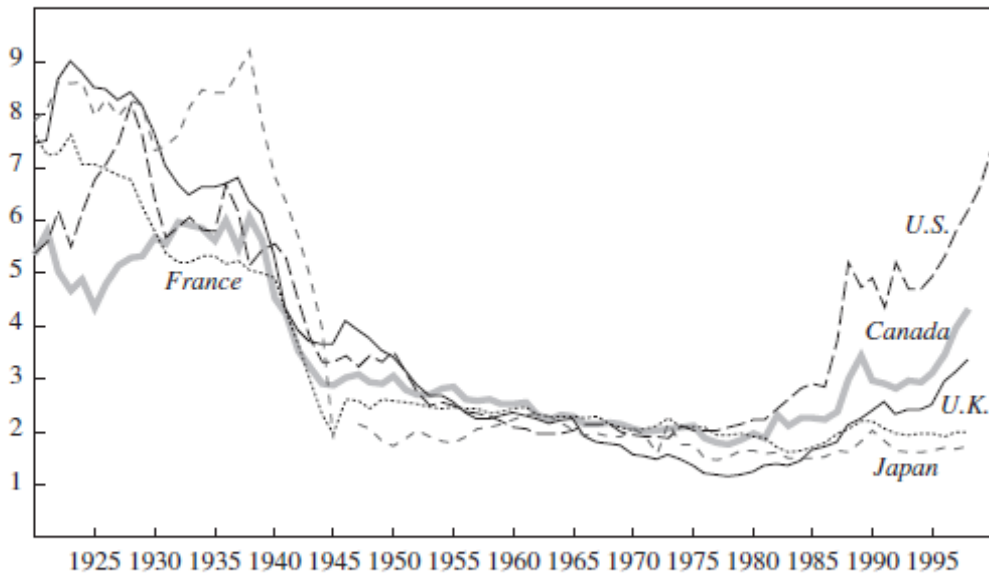
- At Moodle, Week 15
- That's where the HW 11 bonus points come from.

### Lecture

1. More on inequality in the U.S. and a comparison with other countries
2. More on Unions  
Decline in the U.S.  
Ascent in China?
3. The Economics of Labor Market Discrimination

Figure 3. Share of the Top 1 Percent in Total Income in Selected Industrial Countries, 1920–2000<sup>a</sup>

Percent of total income



Source: Piketty and Saez (2006b).

a. Total income includes labor, business, and capital income but excludes capital gains.

As cited in Gordon and Dew-Becker, “Selected Issues in the Rise of Income Inequality

We see hear a similar picture as in Lec14(ii) for U.S. only, only now additional countries are added.

This is a very interesting graph.

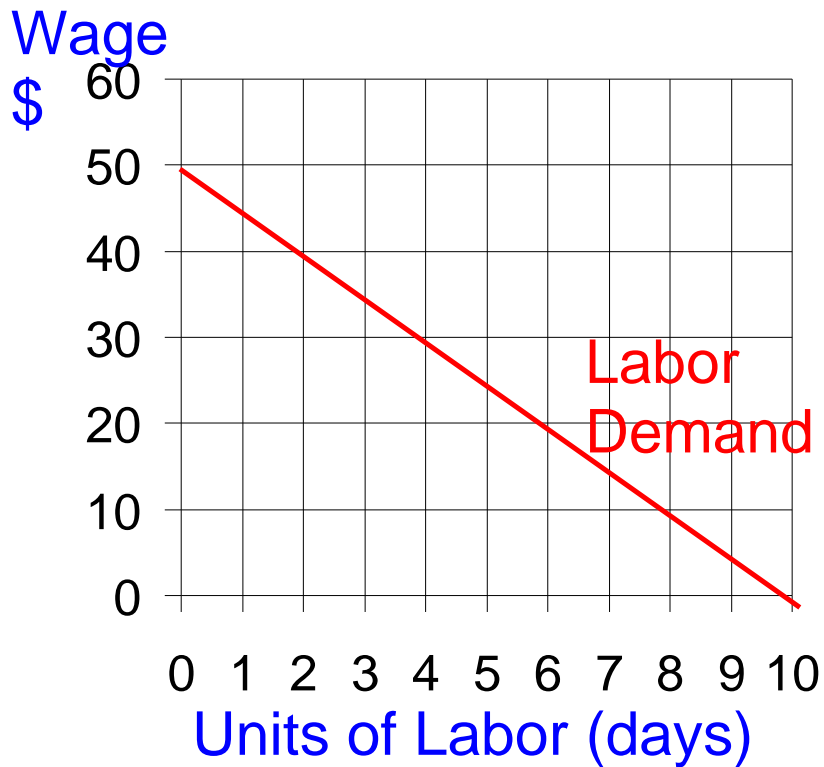
In terms of past several decades

“Anglo countries”  
Canada is “US light”  
UK is “US lighter”

Japan and France completely different.

If this is all **Skill-Biased Technical Change**, why are the Anglo countries different?

Union in Econland:  
Remember S1's derived demand for Labor from Lec 14(i), when the price of a widget was \$2?



Suppose the units of labor are “Day”

Suppose the competitive price of labor is \$10 a day. The S1 will demand 8 days of labor.

Now suppose the plant is organized by “WWI” (Widget Workers International)

Suppose union negotiates a wage hike to \$20 a day but firm still in charge of running the plant (and picking employment size)

The firm will respond by having \_\_\_\_\_workers in the plant each day.

Suppose the 8 workers initially in the plant share the reduced work.

If they workers take off every one day out of every four days, there will be 6 workers in the plant every day, which is what the firm demands at a wage of \$20.

$$\begin{aligned}\text{Average take-home pay:} &= (3/4)*\$20 \\ &= \$15\end{aligned}$$

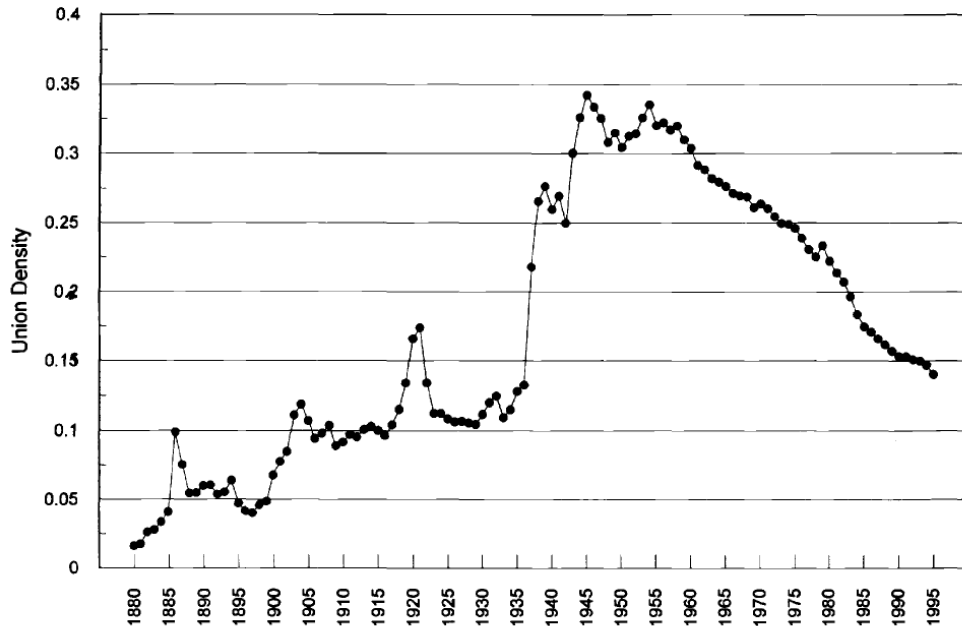
And one day off out of four!.  
Of course the widget workers love this!

Now let's leave Econland and talk about the U.S. The benefits to workers of a union not that quite extreme: textbook cites a statistic of 10% to 20% pay differential.

A bit of history: There were violent early strikes (1892 Homestead Strike in the steel industry), but unions didn't make a lot headway until the law changed (1935 Wagner Act) making it easier for unions to achieve formal recognition and forcing firms to bargain with them.

Let's look at a graph of the fraction workers in the U.S. represented by Unions

Figure 1: Changing Percentage of Non-Agricultural Workers Who Are Members of Unions, 1880-1995



Source: Freeman, Richard, "Spurts in Union Growth: Defining Moments and Social Processesm: NBER Working Paper No. 6012, April 1997

Observe the steady decline since the maximum point of 35% in 1950.

Lots of factors underlying decline, including shift of industry composition from manufacturing to services (and within industries from blue collar to white collar).

Unions don't have much bargaining power left.

- In 1960s, GM and Ford tried to open plants in the South of the U.S where unions are weak. The United Auto Workers (UAW) forced GM and Ford to accept unions in the southern plants.
- By 2010, Boeing had a nonunion plant in South Carolina (has reputation for most hostile state for unions). Boeing still has huge operations in Washington State represented by the Machinists. But if the Machinists make trouble, they have to worry about even further shutdowns in Washington. Don't have the kind of leverage the UAW had over GM and Ford in the 1960s. (No way were GM and Ford going to move out of Michigan.)

We can use game theory to understand the interactions between a firm and a union.

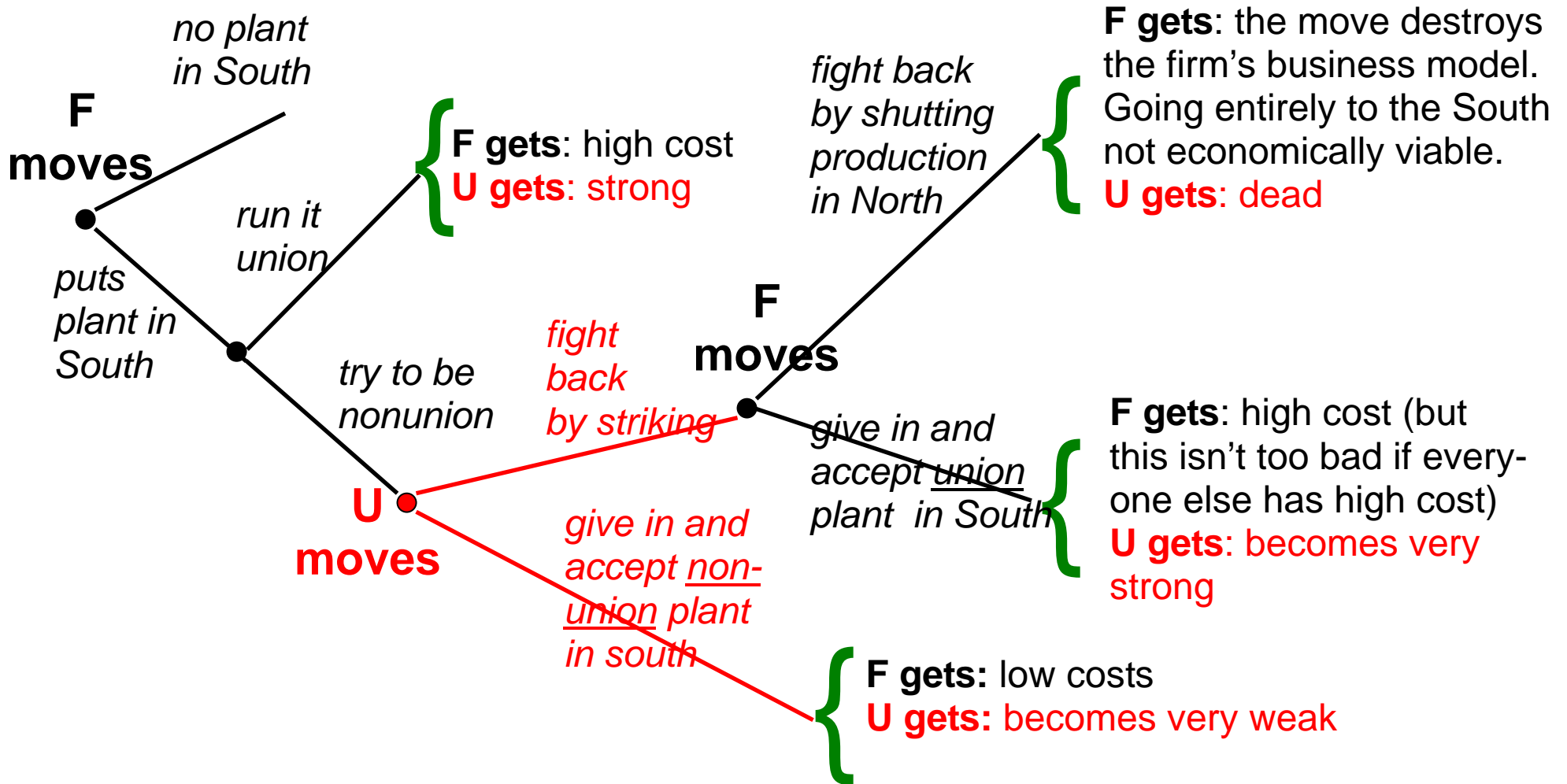
Let's set up a **Game Tree** to specify the moves of the players and the order that the moves take place. The game tree also specifies how the payoffs depend on what takes place. (For simplicity we use words rather than converting the payoffs to numbers.)

We look at the game tree for GM in the 1960s and for Boeing in 2010. We assume each player is forward-looking and assume the other player will play rationally, given previously made.

What is the equilibrium sequence of outcomes for GM in the 1960s?

What about for Boeing in 2010?

# Game Tree for Auto Companies in 1960s

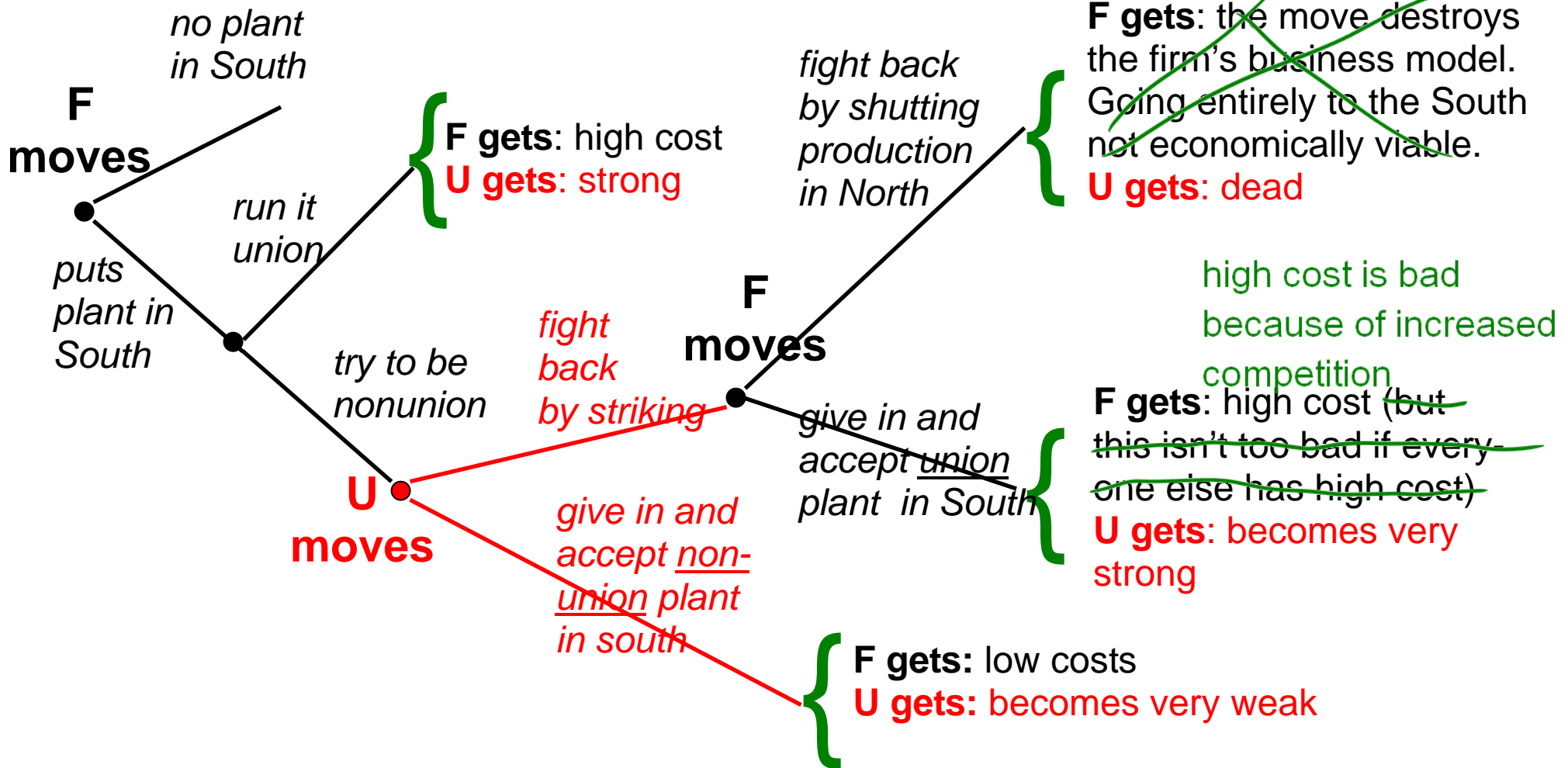


**F** is firm (initially with all production in North)  
**U** is union (initially representing plants in North)



# Changes in Game Tree for Boeing in 2010

Not great, but firm will make out OK



**F** is firm  
**U** is union





Let's now turn to China where there have been some interesting developments.

- There are unions in China but they are fake, they don't act like unions. Just something that the government can point to. ("Worker, you have a union, be happy.")
- Last spring there were some strikes.
  - Strike at Honda factory with 2000 workers
  - Got 10% pay increase, to \$152 a month.
  - But not everyone got their jobs back. (Some replacement workers got them instead)

Is what is happening in China something like 1935 in the U.S.?

Probably not. (Note in particular that that Chinese government permitted strikes against a Japanese-owned companies, but we didn't hear anything about strikes against Chinese owned companies.)

Example of Foxconn plant

- Final assembly of iPads (and other things)
- Over **300,000** workers at one business campus in Shenzhen!
- Workers are young, live in dormitories, make about an \$1 hour doing very tedious work, long hours.
- No strikes, but 14 suicides by young people this year.
- Firm raised wages

Here are some women hard at work at the Foxconn factory:



Can't find any pictures of the dorms....Interesting question as to what these workers will be doing when they turn 40.

Back to the issue of workers in the same country getting different wages.

1. In competitive labor markets, people with the same skills will receive different wages if working conditions vary. ([Compensating Differentials](#))

2. In competitive labor markets, people with different skills and ability will get different wages (as wage includes a return to [human capital](#))

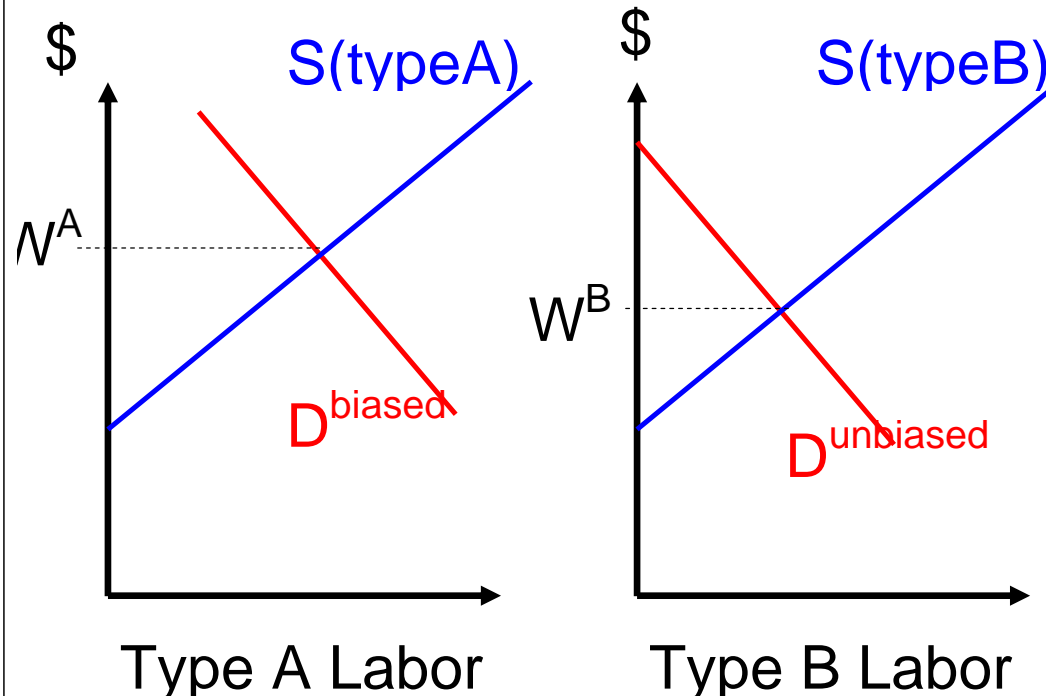
3. If labor markets are not competitive, workers of equal ability might receive different pay. For example, a union worker might receive 20% more than someone doing the same job with same skill.

#### 4. Labor Market Discrimination

Suppose there are two kinds of workers, type A and type B, and they have equal ability.

- Suppose there are two kinds of firms, biased and unbiased.
  - Biased firms refuse to hire type B
  - Unbiased firms don't care, will hire whichever type is cheapest.

So equilibrium in the labor market might look like this



We see that in equilibrium  $W^B < W^A$ .

How can this be? Biased firms know they can pay less for type B workers, but they refuse to hire them. The wage  $W^A$  is where the demand for type A workers by biased firm equals all of the supply.

Since  $W^B < W^A$ , unbiased firms won't hire any type A workers, since they are too expensive. (Or rather then say they won't hire type A workers, they will offer  $W^B$  to both kinds of workers. But only type B workers will accept these wages. So  $W^B$  is where the supply of type B workers equals the demand from unbiased firms.

Could we draw things differently and have an equilibrium where  $W^B > W^A$ ?

Because.....

Bottom line: If some firms are biased, we can have an equilibrium where  $W^B < W^A$ .

But now think about the long run. Since biased firms pay higher wages for the same quality labor, biased firms will have higher average cost than unbiased firms. In the long run, low cost firms will tend to drive high cost firms out of the market.

**We conclude:** If discrimination is due to preferences by firms, we expect market forces to work towards driving the discrimination out of the market.

But what if firms don't care about the type of workers, but the firms' customers do? Suppose customers are biased and they don't like buying

from a firm that employs type B workers. Then these firms will be able to charge higher prices, and so they won't go out of business.

**We conclude:** If discrimination is due to preferences by consumers about the kind of workers that get hired, we **do not** expect market forces to work towards driving the discrimination out of the market.

## Recent Evidence on Labor Market Discrimination

A recent survey methodology has become popular, we will discuss an application of the methodology to study Swedish labor markets.

Magnus Carlsson and Dan-Olof Rooth,  
“Evidence of ethnic discrimination in the Swedish labor market using experimental data,”  
Labour Economics Volume 14, Issue 4,  
August 2007, Pages 716-729

Study sent applications to 1552 job advertisements in Sweden.

- One set of applications used Swedish sounding names.
  - Another set used Middle Eastern names
  - The rest of the resume was the same.
- 
- The callback rate for the Swedish sounding names was 50% higher than for the Middle Eastern names.
  - The effect was biggest for the lowest level occupations (that actually have the largest share of immigrant employees.)