

LABOR MARKET EQUILIBRIUM

Competitive Equilibrium

- ▶ Equilibrium as the intersection of supply and demand curve

LABOR MARKET EQUILIBRIUM

Competitive Equilibrium

- ▶ Equilibrium as the intersection of supply and demand curve
- ▶ What does it look like to participants?

LABOR MARKET EQUILIBRIUM

Competitive Equilibrium

- ▶ Equilibrium as the intersection of supply and demand curve
- ▶ What does it look like to participants?
- ▶ Workers and firms take wages and output prices as given

Worked Example

Suppose the market for secretaries in the Capital Region is summarized as follows:

$$\text{Supply:} \quad w = 50 + 0.005E$$

$$\text{Demand:} \quad w = 200 - 0.01E$$

where w is the daily wage in dollars and E is the number of secretaries.

1. What are the equilibrium wage, w^* and employment level, E^* .

Worked Example

Suppose the market for secretaries in the Capital Region is summarized as follows:

$$\begin{array}{ll} \text{Supply:} & w = 50 + 0.005E \\ \text{Demand:} & w = 200 - 0.01E \end{array}$$

where w is the daily wage in dollars and E is the number of secretaries.

1. What are the equilibrium wage, w^* and employment level, E^* .
2. What are the elasticity of demand and the elasticity of supply at the equilibrium values?

Worked Example

Suppose the market for secretaries in the Capital Region is summarized as follows:

$$\begin{array}{ll} \text{Supply:} & w = 50 + 0.005E \\ \text{Demand:} & w = 200 - 0.01E \end{array}$$

where w is the daily wage in dollars and E is the number of secretaries.

1. What are the equilibrium wage, w^* and employment level, E^* .
2. What are the elasticity of demand and the elasticity of supply at the equilibrium values?
3. Suppose Rob Emmall's used-car dealership currently has 10 secretaries. If Rob were to pay \$1 per day more than w^* how many additional secretaries would show up to wanting to work for him? What does this mean for the elasticity of supply that he faces?

Segmented markets and the market mechanism:

- ▶ Markets can be segmented by, geography, industry, education level, skills

Segmented markets and the market mechanism:

- ▶ Markets can be segmented by, geography, industry, education level, skills
- ▶ Free movement of labor across markets leads to same equilibrium wage

Segmented markets and the market mechanism:

- ▶ Markets can be segmented by, geography, industry, education level, skills
- ▶ Free movement of labor across markets leads to same equilibrium wage
- ▶ Free movement of firms (jobs) across markets leads to same equilibrium wage

Segmented markets and the market mechanism:

- ▶ Markets can be segmented by, geography, industry, education level, skills
- ▶ Free movement of labor across markets leads to same equilibrium wage
- ▶ Free movement of firms (jobs) across markets leads to same equilibrium wage
- ▶ The market acts as a coordination mechanism leads to efficient allocation

Segmented markets and the market mechanism:

- ▶ Markets can be segmented by, geography, industry, education level, skills
- ▶ Free movement of labor across markets leads to same equilibrium wage
- ▶ Free movement of firms (jobs) across markets leads to same equilibrium wage
- ▶ The market acts as a coordination mechanism leads to efficient allocation
- ▶ Why do we see differences in wages across markets?

The convergence hypothesis

- ▶ Movement of firms and workers should mean that incomes in different regions is same

The convergence hypothesis

- ▶ Movement of firms and workers should mean that incomes in different regions is same
- ▶ If initially different, they should converge (test using US states)

The convergence hypothesis

- ▶ Movement of firms and workers should mean that incomes in different regions is same
- ▶ If initially different, they should converge (test using US states)
- ▶ How fast they do depends on how well the mechanism works

The convergence hypothesis

- ▶ Movement of firms and workers should mean that incomes in different regions is same
- ▶ If initially different, they should converge (test using US states)
- ▶ How fast they do depends on how well the mechanism works
- ▶ Implications of NAFTA for wages, total income, income distribution

Application: Payroll taxes

- ▶ Employment taxes assessed on firms: reduces labor demand at every wage

Application: Payroll taxes

- ▶ Employment taxes assessed on firms: reduces labor demand at every wage
- ▶ Wage taxes assessed on workers: reduces labor supply at every wage

Application: Payroll taxes

- ▶ Employment taxes assessed on firms: reduces labor demand at every wage
- ▶ Wage taxes assessed on workers: reduces labor supply at every wage
- ▶ Taxes are equivalent (called a neutrality result)

Application: Payroll taxes

- ▶ Employment taxes assessed on firms: reduces labor demand at every wage
- ▶ Wage taxes assessed on workers: reduces labor supply at every wage
- ▶ Taxes are equivalent (called a neutrality result)
- ▶ What determines who actually pays the tax: elasticity of response

Worked Example (continued)

4. The government has decided to introduce a pay-roll tax assessed (i.e. levied) on firms. Firms have to pay \$30 per day per secretary they employ. What is the new effective demand curve in the market for secretaries? What are the new equilibrium wage and employment level? Compared with the situation before the tax was put in place, how much of the tax is effectively paid by the workers and how much is paid by the firms?

Worked Example (continued)

4. The government has decided to introduce a pay-roll tax assessed (i.e. levied) on firms. Firms have to pay \$30 per day per secretary they employ. What is the new effective demand curve in the market for secretaries? What are the new equilibrium wage and employment level? Compared with the situation before the tax was put in place, how much of the tax is effectively paid by the workers and how much is paid by the firms?
5. Now suppose the government decides instead to make the workers pay the tax out of their wages. Each secretary gets \$30 deducted from his or her pay check each day. What is the new labor supply curve for secretaries in the capital region? What is the new equilibrium wage and employment level? Now who effectively pays what proportion of the tax?

NONCOMPETITIVE LABOR MARKETS

Monopsony

- ▶ Firm which faces an upward sloping labor supply curve

NONCOMPETITIVE LABOR MARKETS

Monopsony

- ▶ Firm which faces an upward sloping labor supply curve
- ▶ Typical example is one employer town (relies on immobility of workforce)

NONCOMPETITIVE LABOR MARKETS

Monopsony

- ▶ Firm which faces an upward sloping labor supply curve
- ▶ Typical example is one employer town (relies on immobility of workforce)
- ▶ Analysis applies whenever firm's supply of labor responds to the wage they offer.

Perfectly discriminating monopsonist

- ▶ Can pay different wages to everyone that shows up

Perfectly discriminating monopsonist

- ▶ Can pay different wages to everyone that shows up
- ▶ knows how much each individual will work for (their reservation wage)

Perfectly discriminating monopsonist

- ▶ Can pay different wages to everyone that shows up
- ▶ knows how much each individual will work for (their reservation wage)
- ▶ *Result*: hires same number of people as competitive market would

Perfectly discriminating monopsonist

- ▶ Can pay different wages to everyone that shows up
- ▶ knows how much each individual will work for (their reservation wage)
- ▶ *Result*: hires same number of people as competitive market would
- ▶ In general firms will hire up to the point at which the contribution to revenues of the last worker hired is equal to the cost of paying that worker, $VMP_E = MC_E$

Nondiscriminating monopsony

- ▶ Pays same wage to every one (why?)

Nondiscriminating monopsony

- ▶ Pays same wage to every one (why?)
- ▶ Hiring an extra worker requires raising everyone's wage

Nondiscriminating monopsony

- ▶ Pays same wage to every one (why?)
- ▶ Hiring an extra worker requires raising everyone's wage
- ▶ Marginal cost of hiring, MC_E , for this person is higher than wage paid to the marginal worker (*Example*)

Nondiscriminating monopsony

- ▶ Pays same wage to every one (why?)
- ▶ Hiring an extra worker requires raising everyone's wage
- ▶ Marginal cost of hiring, MC_E , for this person is higher than wage paid to the marginal worker (*Example*)
- ▶ Last worker hired is the one such that $MC_E = VMP_E$

Nondiscriminating monopsony

- ▶ Pays same wage to every one (why?)
- ▶ Hiring an extra worker requires raising everyone's wage
- ▶ Marginal cost of hiring, MC_E , for this person is higher than wage paid to the marginal worker (*Example*)
- ▶ Last worker hired is the one such that $MC_E = VMP_E$
- ▶ *Result:* employment and wage is less than competitive market

Socioeconomic implications of monopsony

- ▶ *Exploitation*: paying people less than their value marginal product

Socioeconomic implications of monopsony

- ▶ *Exploitation*: paying people less than their value marginal product
- ▶ Discriminating monopsony is more exploitative but hires “right” number of people

Socioeconomic implications of monopsony

- ▶ *Exploitation*: paying people less than their value marginal product
- ▶ Discriminating monopsony is more exploitative but hires “right” number of people
- ▶ Nondiscriminatory monopsony leads to underemployment

Socioeconomic implications of monopsony

- ▶ *Exploitation*: paying people less than their value marginal product
- ▶ Discriminating monopsony is more exploitative but hires “right” number of people
- ▶ Nondiscriminatory monopsony leads to underemployment
- ▶ *Issue*: How relevant is monopsony in cities?

Socioeconomic implications of monopsony

- ▶ *Exploitation*: paying people less than their value marginal product
- ▶ Discriminating monopsony is more exploitative but hires “right” number of people
- ▶ Nondiscriminatory monopsony leads to underemployment
- ▶ *Issue*: How relevant is monopsony in cities?
- ▶ *Issue*: What is the role of unions?