

Exercise session #5 - Labor market

Problem 1 - Natural rate of unemployment; Holman 171/1 Unemployment rate is 5%, job separation rate is 0.5% and job finding rate is 7%. Is the unemployment rate on its natural level?

Problem 2 - Equilibrium on labor market; Holman 171/2

Labor market was originally in the equilibrium with real wage of 16,000 CZK/month and natural rate of unemployment 7%. The government has decided to lower the unemployment benefits as well as toughen the eligibility conditions.

1. What impact does it have on the job separation rate, job finding rate and natural level of unemployment?
2. Draw a graph of changes on the labor market.

Problem 3 - Effect of minimum wage law on unemployment rate

Consider an economy with the following Cobb-Douglas production function

$$Y = K^{1/3}L^{2/3}$$

The economy has 1000 units of capital and labor force of 1000 workers.

- Derive the equation describing labor demand in this economy as a function of the real wage and the capital stock.
- If the real wage can adjust to equilibrate labor supply and labor demand, what is the real wage? In this equilibrium, what are employment, output and the total amount earned by workers?
- Now suppose that Parliament, concerned about the welfare of the working class, passes a law requiring firms to pay workers a real wage of 1 unit of output. How does this wage compare to the equilibrium wage?
- Parliament cannot dictate how many workers should hire at the mandated wage. Given this fact, what are the effects of this law? Specifically, what happens to employment, output and the total amount earned by workers?
- Did parliament succeed its goal of increasing the welfare of working class?
- Do you think that this analysis provides a good way of thinking about a minimum-wage law? Why?

Questions for review:

Lecture 5: Labor market

- Describe the structure of labor market in the classical competitive market. What determines labor demand? What determines labor supply? Is there any space for involuntary unemployment?
- Explain the model of natural level of unemployment. Explain the flow equation in the labor market $sE = fU$. How is the natural rate of unemployment determined?
- What is the main underlying cause of frictional unemployment? State three reasons for existence of search and matching frictions in the labor market. What are the main public policies targeting frictional unemployment? Give examples from your own country.
- What is the main underlying cause of structural unemployment? Give an example of sectoral shift that affected employment in your country.
- What is the main underlying cause of classical unemployment? Describe the effects of minimum wage law on the level of unemployment. What are the incentives for firm to pay higher than equilibrium wage - i.e. efficiency wage? What do you understand under adverse selection in the context of efficiency wages argument? What do you understand under moral hazard in the context of efficiency wages argument?
- What is the main underlying cause of seasonal unemployment? How can we affect it?
- What is the main underlying cause of cyclical unemployment?
- Compare the duration of unemployment spell in the Czech Republic (e.g. compared to USA)? What implications does it have on the government policies against unemployment?
- What can you say about the problem of youth unemployment in the European context?