

Second Exam in the Course:

Labor Economics

19 October 2007

You have to provide answers to three of the following four problems. If you answer all problems only the answers to the first three problems 1, 2, and 3 will count.

Your answers have to be in English. If you are a Diploma student, your answers can be in English or in German. In case, please mark at the beginning of the exam, that you are a 'DIPLOMA' student.

The maximum number of credits is 90. To pass the exam you have to obtain 45 credits.

The exam lasts 90 minutes.

You may use a non-programmable calculator.

Please write your name and your immatriculation number (“Matrikelnummer”) on top of all answer sheets.

Use a new answer sheet for each problem.

The exam consists of **3** pages including the cover page. Please check the completeness.

This is a closed–book exam.

Good Luck!

Please provide answers to three of the following four problems. On the answer sheets, mark clearly which problems you solve.

1.) Consider an economy with a labor force comprising 40% females and 60% males. Assume that, on average, employees lose their jobs at an annual rate of 5%. Also, unemployed males find a new job with probability 75% per year and unemployed females with probability 60% per year. Furthermore, the unemployment rate among females is 2 percentage points higher than among males. Assume that all these rates are the same among all males and all females, respectively, in the labor force.

- a) Calculate the rate of job loss separately for males and females. Calculate the unemployment rates separately for males and females as well as for the entire labor force. Calculate the aggregate job finding rate for the unemployed. If necessary, make further reasonable assumptions. [14 credits]
- b) What is the relationship between the aggregate job loss rate, the aggregate job finding rate, and the aggregate unemployment rate? Is it the same relationship as for the rates among females and males, respectively? [8 credits]
- c) Describe roughly the trend and the cyclical movement of the aggregate unemployment rate as well as the size of inflows into unemployment and outflows from unemployment for West Germany since 1980. [8 credits]

[30 credits]

2.) Consider the static labor supply model with home production.

- a) Describe and illustrate graphically the model. Assume that the household always works positive hours in home production. Regarding the supply in the labor market (work for pay), distinguish between participation and hours worked. What is the reservation wage for work for pay? How does a household respond to an increase in the market wage? [20 credits]
- b) Now discuss the implications of the model for the labor supply behavior of married women with children. How does the labor supply behavior of this group change in response to a policy reform which reduces the cost of child care? [10 credits]

[30 credits]

3.) Consider a monopsonistic labor market. Describe and illustrate graphically the determination of the wage and employment in such a market. Derive and interpret the first order condition of the profit maximizing firm. How do employment and wage under monopsonistic competition compare to the situation in the market equilibrium? Furthermore, discuss the introduction of a minimum wage. How does that change the employment decision by the firm? Explain how an appropriate minimum wage can replicate the market equilibrium.

[30 credits]

4.) Consider a wage bargaining model with a Nash bargaining solution and right-to-manage.

a) Describe and illustrate the model. Use both graphs and formal derivations. Interpret the first order condition of the problem. Show that the solution of the model is not pareto-optimal. What does this mean economically? [20 credits]

b) Consider an increase in the value-added tax. How do employment and the wage respond according to the Nash bargaining model with right-to-manage? [10 credits]

[30 credits]

END OF EXAM