

STOCKHOLM UNIVERSITY
Department of Economics

Course name: Labour market economics
Course code: EC2102
Examiners: Ann-Sofie Kolm and David Seim
Number of credits: 7,5 credits
Date of exam: Thursday, January 7, 2016
Examination time: 3 hours

Write your identification number on each paper and cover sheet (the number stated in the upper right hand corner on your exam cover).

Use one cover sheet per question. Explain notions/concepts and symbols. If you think that a question is vaguely formulated, specify the conditions used for solving it. Only legible exams will be marked. No aids are allowed.

The exam consists of 6 questions. One can get 100 points in total. For the grade E 40 points are required, for D 50 points, C 60 points, B 75 points and A 90 points.

If you think that a question is vaguely formulated: specify the conditions used for solving it.

Results will be posted on your “My Studies” account (www.mitt.su.se) on January 28 at the latest.

Good luck!

Q1. (20 points) Depart from the basic static model of individual labour supply and discuss how labour supply on the intensive margin (hour decision) and the extensive margin (participation decision) is affected by an increase in the wage. Show how the budget line looks prior to the increase in the wage, as well as how it looks ex post. Also, define the reservation wage and show how you graphically can derive it.

Q2. (20 points) Sometimes matching models are used to explain the existence of involuntary unemployment in the labour market. Provide a short description of a matching model. Why does not the wage fall so to clear the market? Other types of models that explain the existence of involuntary unemployment are the efficiency wage models. Provide a short description of an efficiency wage model. Why does not the wage fall so to clear the market?

Q3. (10 points) Discuss labour supply over the business cycle. Describe the hypotheses of the *added worker effect* and the *discouraged worker effect*.

Q4. (10 points) Choose an academic paper discussed in class that employs a so-called Difference-in-differences (DD) strategy to estimate causal effects, e.g. the paper by Meghir and Palme (2005).

- a) Explain the main findings in the paper. (3)
- b) Explain the DD-method including the identification assumption that enables causal inference. (7)

Q5. (20 points) Suppose that you are deciding whether to move to the United States or to stay in Sweden. Assume that (i) your decision is based only on wage differences; (ii) there are some fixed costs of moving and (iii) you live forever. The interest rate is given by r and wages in the US and Sweden are constant over time.

- a) Derive the condition under which you will move. (10)
- b) Suppose now that you are making this decision together with your partner and you act as one unit. For simplicity, assume away moving costs. Show the condition under which you will move. (3)
- c) Using a graph, illustrate and explain the concepts of a *tied stayer* and a *tied mover*. (7)

Q6. (20 points) Consider a firm that makes its hiring decisions based on a discrimination factor, $d \geq 0$. It perceives the cost of a black worker at $w_B(1+d)$ and the cost of a white worker is w_W and $w_W > w_B$. Production is given by $Q = f(E_B + E_W)$ with $f' > 0$ and $f'' < 0$.

- a) Derive the profit-maximizing condition for a color-blind employer, i.e. when $d=0$? Characterize the employment decision of black and white workers of such a firm? (6)
- b) Show what happens to (i) composition of black and white workers and (ii) firm profits as d increases. (14)