

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: Saturday, 10 January, 2015
Examination time: 3 hours

Write your identification number and the number of the question on every cover sheet. Do not write answers for more than one question in the same cover sheet. Explain notions/concepts and symbols. 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 January 30 at the latest.

Good luck!

Q1. (20 points) Use the static model of individual labour supply and discuss how labour supply on the intensive margin (hour decision) and the extensive margin (participation decision) is determined. Why do some workers choose to supply more work hours than others, and why do some workers choose to participate in the labour force whereas others don't? Then show how these margins can be affected by a proportional income tax. Also, provide a discussion of how other decisions, i.e., other margins, can be affected by a proportional income tax.

Q2. (20 points) Consider a labour market with a non-discriminating monopsonist. Illustrate the wage and employment decision graphically for the firm on this market. Then consider the impact of a minimum wage. Show that both the wage and employment can increase by introducing a minimum wage. Motivate your answers carefully.

Q3. (10 points) Provide a short description of the following three equilibrium rate of unemployment models: the Monopoly union model, the Search and matching model, and the Shirking model.

Q4. (20 points) Suppose you are choosing a career path with two options. Either you study before entering the labor market, or you enter the labor market directly. You only live in two periods. If you study, you incur tuition fees of \$10,000 in the first period, but earn \$100,000 in the second. If you enter the labor market directly, you earn \$10,000 in the first period and \$70,000 in the second.

- (i) Let the interest rate between these periods be given by r . State the condition under which you will study. (5)
- (ii) Derive the r -value that makes you monetarily indifferent between studying and entering the labor market directly. (5)
- (iii) Using this model, give examples of policies that the government can use to boost higher education. (5)
- (iv) Suppose you use data to regress earnings on years in school. Explain why it is difficult to interpret the coefficient on schooling causally? (5)

Q5. (20 points) Consider a researcher interested in the causal effect of class size in primary school on educational attainments. The research strategies he is contemplating are (i) regression-control; (ii) randomization; (iii) difference-in-differences and (iv) regression-discontinuity. Explain the workings of each method along with the identification assumptions that enable causal inference. Discuss advantages and problems with each method.

Q6. (10 points) Consider a firm's hiring decision. The employer prefers to hire men over women according to a discrimination coefficient d : a higher d , the stronger the preference for men. Men and women are equally productive. Use the Employer Discrimination model to show how firms hire depending on d . How do profits differ across the d -distribution?