Summer 2014 examination

EC426
Public Economics

2013/2014 Syllabus only – not for resit candidates

Instructions to candidates

Time allowed: 3 hours

This paper contains **Twelve** questions and is divided into **two** sections.

ALL candidates should answer **two** short questions and **one** long question from **each** section.

Each short question has a weight of 10% (of the overall mark) and each long question a weight of 30% (of the overall mark). In multipart questions, answer all parts.

Calculators are **not** allowed in this examination.

Section A

Short questions: Answer TWO questions (each question carries 10 marks)

1   If social values are determined by individual preferences behind a veil of ignorance, will equality of outcome always be considered as socially desirable?

2   Could the inefficiencies of voluntary schemes for providing public goods be overcome by the use of lotteries?

3   The young unemployed have to put in more effort than average to find jobs due to their lack of experience. At the same time, they have limited access to savings and credit. Use the Baily formula to argue whether these two observations suggest that unemployment benefits should be more or less generous for the young.

4   Discuss some empirical evidence for the existence of 'passive' savers and argue how this affects the desirability of saving mandates vs. subsidies.

Section A

Long questions: Answer ONE question (each question carries 30 marks)

5   In the context of tax design:

(a)   Explain the role of the participation constraint and the incentive-compatibility constraint. [8 marks]

(b)   Explain why the incentive-compatibility constraint is usually satisfied by income-tax schedules that have a constant marginal tax rate and by commodity taxes. [13 marks]

(c)   Why might the incentive-compatibility constraint be violated by income taxes in practice? [9 marks]

6   Consider the following stylized market for health insurance. A uniform health plan is offered by competing insurance companies. The share of individuals buying the plan at price p equals $D(p) = 1 - 0.001 \times p$. The (marginal) cost of providing the plan to individuals with willingness-to-pay p equals $MC(p) = 400 + 0.2 \times p$.

(a)   Explain why the cost of providing insurance can be higher when insurance companies charge a higher price. [8 marks]

(b)   Explain why the efficient price in this market equals 500. Illustrate this graphically. [7 marks]

(c)   Do you expect the equilibrium price to be higher or lower? Discuss and illustrate this graphically. (Hint for the graphical illustration: the average cost of providing insurance for the total population equals 500) [8 marks]

(d)   Would a universal mandate increase the total surplus (i.e., consumer plus producer surplus)? Discuss and illustrate graphically the benefit and cost from imposing a universal mandate. [7 marks]

Section B

Short questions: Answer TWO questions (each question carries 10 marks)

7   Claim: the government revenue effect from behavioural responses to taxes is sufficient to calculate deadweight loss. True or False? Explain.

8   Claim: discrete jumps in marginal tax rates in piecewise linear income tax schedules produce holes in the income distribution. True or False? Explain.

9   '[...]after remaining constant during the 1970s, [global] inequality declined substantially during the last two decades [...] we find that individual incomes have followed a process of "convergence, period!" ' (Sala-i-Martin 2006) Explain why this conclusion may be sensitive to the specific assumptions made about the measurement of inequality.

10   Can the income-tax compliance problem for firms be modelled in a way similar to that for individuals?

Section B

Long questions: Answer ONE question (each question carries 30 marks)

11 Consider the Saez (2002) extensive margin optimal tax model. The optimal tax rule in this model can be represented as

$$\frac{a\left(n\right)}{1-a\left(n\right)} = \frac{1-g\left(n,1\right)}{\eta\left(n\right)},$$

where $a(n)$ is the participation tax rate at earnings level n, $g(n,1)$ is the social marginal welfare weight on participants at n, and $\eta(n)$ is the participation elasticity at n.

   (a) Derive this tax rule using a tax perturbation approach. [12 marks]

   (b) Provide an interpretation of the tax rule. Is an EITC optimal? Discuss. [12 marks]

   (c) Claim: public provision or subsidization of child care has no implications for the optimality of an EITC, because such programs are universal and therefore do not distort participation. True or False? Discuss. [6 marks]

12

   (a) Explain the theoretical and practical role of bequests in modelling the wealth distribution and its evolution [8 marks]

   (b) In a simple multi-generational model explain how inheritance taxation can restrain the level of wealth inequality in the long run. How is this conclusion affected by assumptions concerning within-generation wealth accumulation? [12 marks]

   (c) How does the pattern of family formation affect the long-run impact of inheritance taxation? [10 marks]