



Summer 2017 examination

EC426

Public Economics

2016/7 syllabus only – not for resit candidates

Instructions to candidates

This paper contains **EIGHT** questions. ALL candidates should answer **FOUR** short questions and **ONE** long question.

Each short question has a weight of 15% of the overall mark and the long question a weight of 40% of the overall mark. In multipart questions, answer all parts.

Time Allowed **Reading Time:** *None*
 Writing Time: *2 hours*

You are supplied with: *No additional materials*

You may also use: *No additional materials*

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

Short questions: Answer any **FOUR** questions (each question carries 15 marks)

1. What are the key assumptions under which an Earned Income Tax Credit (EITC) is socially optimal? Explain.
2. In tax evasion models with endogenous audit probability, it is possible to have an equilibrium with low evasion, low audit probability and low penalties. Provide the reasoning behind this result, and describe how it fits with real-world tax enforcement systems.
3. Outline briefly the empirical approach developed by Best, Brockmeyer, Kleven, Spinnewijn & Waseem (2015, Journal of Political Economy) to estimating corporate tax evasion. How does the approach separate evasion from real production responses? Explain.
4. Discuss the following statement: "The wedge between the costs of providing insurance to the average consumer and to the marginal consumer is sufficient to estimate the welfare cost of adverse selection."
5. Does the "overconsumption" of cigarettes justify taxing cigarettes? Explain.
6. Explain why the response in the average retirement age to an increase in pension benefits is a key statistic for optimal pension design.

Long questions: Answer any **ONE** question (each question carries 40 marks)

- 7 Consider a version of the stylized Baily model that includes disutility from labor:
- There is a single period, in which agents exert search effort $s \in [0, 1]$ to find employment.
 - Agents find themselves employed with probability s and unemployed with probability $1-s$.
 - Employed workers supply n hours of labor and earn $y=n-\tau$ (the hourly wage is normalized to 1, and τ is a tax).
 - Workers who do not find a job are paid an unemployment insurance benefit, $y=b$.
 - Workers choose n and s according to the preferences $U(y;n;s)=u(y)-v(n)-\psi(s)$
- a. **[5 marks]** Suppose the social planner can control workers' choices of n and s . What is the optimal insurance policy $(b;\tau)$, subject to a break-even budget constraint?
- b. **[5 marks]** Does your answer change if the social planner can't actually control workers' choices of n ? Explain.
- c. **[20 marks]** Now consider the case where the social planner can't control either n or s . What is the second-best insurance policy $(b;\tau)$ in this case? Set up the social planner's problem and show how to derive a Baily-type formula. [Hint: use $\varepsilon_{\frac{1-s}{s},b} = \frac{d(\frac{1-s}{s})}{db} \frac{b}{\frac{1-s}{s}}$]
- d. **[10 marks]** Does the irrelevance of the intensive labor supply response in your formula imply that the disutility from labor does not affect the optimal insurance policy? Explain.
8. This question asks you about the government's role in the provision of education. Please be brief in your responses.
- a. **[10 marks]** Following Spence's model, argue why a positive correlation between school quality and earnings may not imply that school quality increases human capital. Be precise on the assumptions you need in this context.
- b. **[5 marks]** Provide empirical evidence that does support the hypothesis that schooling increases earnings through human capital. Explain why.

Assume that students can choose to attend any school at a price $p.e$ that is linear in the school's quality e . All students, however, underestimate the return per unit of quality and thus under-invest in education.

- c. **[5 marks]** Argue why providing free public schooling may be an ineffective policy in this context.
- d. **[5 marks]** Argue why the use of school vouchers seems preferable compared to free public schooling.
- e. **[5 marks]** Argue why a price subsidy (per unit of quality) seems preferable compared to school vouchers.
- f. **[10 marks]** Argue why in Spence's world a given student is worse off by underestimating the returns to education, but all students could be better off when they all underestimate the returns?