

May/June Examination Period 2024-25

ECN352 Public Economics

Duration: 2 hours

**YOU ARE NOT PERMITTED TO READ THE CONTENTS OF THIS QUESTION PAPER UNTIL
INSTRUCTED TO DO SO BY AN INVIGILATOR**

Answer ALL questions.

Provide an explanation for all your answers. Credit is given for the quality and clarity of your explanations and not just for having the correct answer (including for TRUE or FALSE questions). But be concise: there is no need for lengthy explanations.

Calculators are not permitted in this examination. Complete all rough workings in the answer book and cross through any work that is not to be assessed.

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EXAM PAPERS MUST NOT BE REMOVED FROM THE EXAM ROOM

Examiner: Felipe González

Question 1

Explain the difference between a Hicks-Kaldor improvement and a Pareto improvement in the context of government policies aimed at addressing market failures.

[5 marks]

Question 2

2a) Suppose that a first spending policy (Policy Y) generates a Marginal Value of Public Funds of $MVPF_Y = £2$. What does a Marginal Value of Public Funds of $MVPF_Y = £2$ mean for a spending policy? Does it imply that the policy generates a gain or a loss in social efficiency?

[5 marks]

2b) Suppose that the government decides to implement a reform that implies spending more on Policy Y by reducing spending on a second spending policy (Policy Z), which has a Marginal Value of Public Funds of $MVPF_Z = £1.50$. How high must the welfare weight for Policy-Y beneficiaries be, compared to the welfare weight for Policy-Z beneficiaries, for this reform to increase welfare?

[5 marks]

Question 3

Suppose that there is an excise tax in the perfectly competitive market for coffee.

Answer the following 2 questions:

- Would the incidence of the tax on consumers increase or decrease if the supply for coffee became more inelastic (keeping the market equilibrium without the tax unchanged)?
- Would the deadweight loss from the tax increase or decrease if the supply for coffee became more inelastic (keeping the market equilibrium without the tax unchanged)?

[5 marks]

Question 4

Let's assume that beef production creates a negative externality from the methane emitted by cows, with a constant external marginal damage MD_1 , and that the government decides to introduce a Pigouvian tax per unit of beef equal to that constant external marginal damage.

4a) In a standard Demand-Supply diagram for a perfectly competitive commodity market, display the impact of such a tax on the beef market. Your diagram should clearly identify:

- The change in the price actually paid by consumers;
- The change in the price actually received by producers;
- The change in the consumer surplus;
- The change in the producer surplus;
- The change in the government budget;
- The change in the total external damages (i.e., the total loss from the externality);
- The gain in social efficiency from addressing this externality.

You can draw more than one diagram in the interest of clarity if needed.

[20 marks]

4b) Suppose that beef producers buy soybeans to feed their cows, and that the production of soybeans for the purpose of feeding animals creates a negative production externality from deforestation, with a constant external marginal damage MD_2 .

[Is the following statement TRUE or FALSE?] The optimal policy to address this externality in the market for soybeans used as animal feed will imply increasing the optimal Pigouvian tax in the beef market above MD_1 .

[5 marks]

Turn Over

Question 5

In some cases, the private sector provides positive amounts of public goods, even in the absence of government intervention.

[Is the following statement TRUE or FALSE?] In those cases, the government should therefore not intervene in the provision of public goods; it will only crowd-out private contributions.

[10 marks]

Question 6

Private contracts for building insurance rarely cover damages caused by earthquakes. Explain the economic rationale behind this fact and why the government might be in a better place to compensate people for building damages following earthquakes.

[5 marks]

Question 7

Figure 1 (on the next page) presents the market equilibrium in the “textbook setting” for the first model of adverse selection discussed in lectures (from Einav, Finkelstein, and Cullen, 2020). Remember that in this version of the model, we assume that there is only heterogeneity in risk types among buyers. Explain why the shaded area in the diagram corresponds to a deadweight loss from under-insurance in that market.

[15 marks]

Adverse Selection in the Textbook Setting

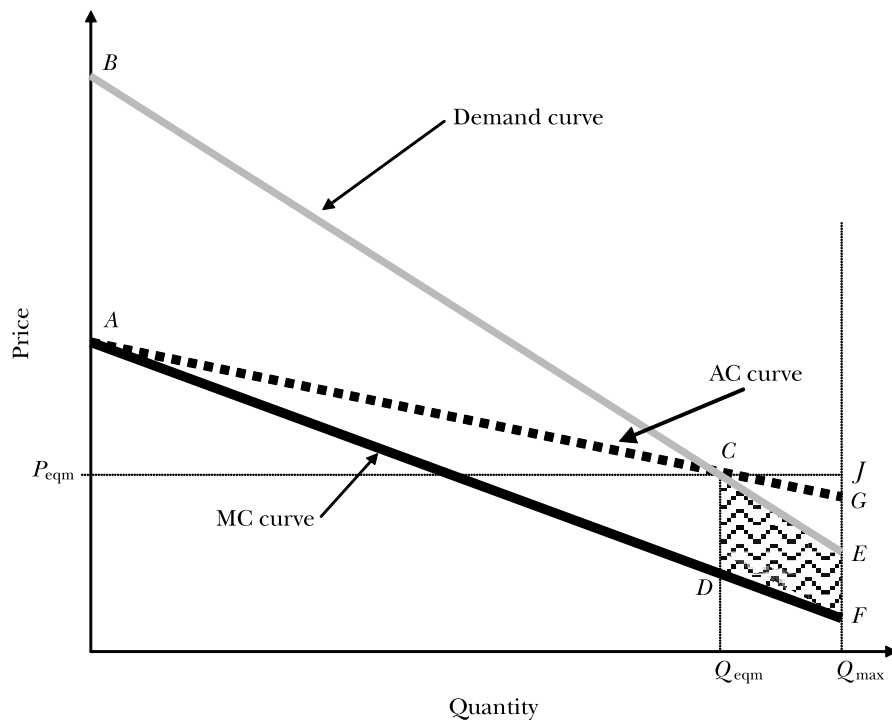


Figure 1

Question 8

A policymaker read the paper “The Welfare Effects of Social Media” by Allcott, Braghieri, Eichmeyer, and Gentzkow (2020) and concluded that the paper provides clear evidence that users under-estimate their gains from not using Facebook and that Facebook should therefore be banned.

Explain:

- The methodology adopted by that paper to study the causal effect of not using Facebook among Facebook users,
- Why results in the paper indeed suggest that users under-estimate their gains from not using Facebook,
- Why the results of the paper do not necessarily imply that Facebook should be banned.

[20 marks]

Turn Over

Question 9

Income inequality has increased substantially in the UK since the 1980s.

[Is the following statement TRUE or FALSE?] Therefore, the optimal linear income tax rate must also have increased since the 1980s.

[5 marks]