Written Exam at the Department of Economics summer 2021

International Economics

Final Exam

August 12, 2021

(3-hour closed book exam)

Answers only in English.

This exam question consists of 2 pages in total

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- submit a blank exam paper.
- leave the examination.
- contact your GP and submit a medical report to the Faculty of Social Sciences no later than five (5) days from the date of the exam.

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You cheat at an exam, if during the exam, you:
- Make use of exam aids that are not allowed
- Communicate with or otherwise receive help from other people
- Copy other people's texts without making use of quotation marks and source referencing, so that it may appear to be your own text
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- Or if you otherwise violate the rules that apply to the exam

Problem 1 (50 points)

True, false or unclear. Explain your answers. You can at most get half point for a correct answer without explanations.

1. The monopolistic competition model with the addition of CES utility has implications that fit the empirical evidence on the Canada-U.S. Free Trade Agreement rather well.

2. Consider the Dornbusch/Fisher/Samuelson model of continuous goods and two countries. Suppose there is an increase in productivity abroad. This will benefit home.

3. As the optimal percentage tariff equals the inverse of the elasticity of foreign export supply, the optimal tariff under perfect competition is zero. The optimal tariff under imperfect competition is also zero.

4. Imposing an import quota or imposing an import tariff are equiva-lent when markets are competitive and the home government sells the quota (and gets the revenue).

5. Suppose Denmark and Greece are modeled according to the Heckscher-Ohlin model. Both countires are in the cone of diversification (they produce both goods). Trade is costless. Denmark is capital abundant. Then wages will be higher in Denmark.

6. To obtain a theoretical model explaining "intra-industry trade" it is crucial to resort to assumptions of monopolistic competition, love of variety, and increasing returns.

7. The European Economic Community (EEC) is one example of a free trade area.

Problem 2 – Reciprocal Dumping (50 points)

Suppose there are two identical countries, Home and Foreign (*). Each country has a single firm producing identical product using identical production technologies: The marginal cost of production is c and there are fixed costs of F.

The two markets are segmented, such that each firm regards each country as a separate market, and the firms engage in Cournot competition.

Trade is costly as it involves an iceberg transportation cost, $\tau \geq 1$ when shipping internationally.

The prices in Home and Foreign are:

$$p(x+y) \quad \text{and} \quad p(x^* + y^*)$$

where the firm in Home sells x units in Home and x^* units in Foreign, and the firm in Foreign sells y units in Home and y^* units in Foreign.

Question 1. Find the first-order conditions from profit maximization for the two firms from operating in the Home country.

Question 2. Let λ be Foreign's share of Home's market, $y/(x+y)$ and the elasticity of demand is $\sigma = -(p'(x+y)(x+y)/p(x+y))^{-1}$. Show that the best response functions can then be written as:

$$p = \frac{c\sigma}{\sigma + \lambda - 1} \tag{1}$$

$$p = \frac{\tau c\sigma}{\sigma - \lambda} \tag{2}$$

Question 3. The best response functions in equations (1) and (2) are two equations in the two unknowns λ and p. Solve for these.

Question 4. Dumping is defined as one firm exporting its good at a lower price than it is charging domestically. In what sense does (reciprocal) dumping occur in this model?