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Examination: International Trade

Examinar:
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Semester: winter term 2001/02

The following aids may be used: dictionary, calculator

This examination comprises three questions. The available amount of time is two hours.

Question 1:

We consider the simple Ricardian model of international trade. The country *Home* has L units of the factor of production *labor*. Two different commodities can be produced, *food* (F) and *housing* (H). The unit labor requirements are a_{LF} for food and a_{LH} for housing.

a) (*6 points*) Derive algebraically Home's production possibility frontier. Which slope does this frontier have? Give a graphical representation of Home's production possibility frontier.

b) (*4 points*) In autarky, the prices for food and housing in Home are P_F and P_H. What is the meaning of the terms P_F/a_{LF} and P_H/a_{LH}? Explain verbally, why in equilibrium the condition $P_F/a_{LF} = P_H/a_{LH}$ must be satisfied.

c) (*6 points*) The country *Foreign* has exactly the same units of labor as Home ($L^* = L$). Suppose the labor unit requirements in Foreign are such that $a^*_{LF} < a_{LF}$ and $a^*_{LH} > a_{LH}$. Does any country have a comparative advantage? Add to your diagram of question a) the production possibility frontier of Foreign, such that this frontier is consistent with the previously specified parameter structure ($a^*_{LF} < a_{LF}$, $a^*_{LH} > a_{LH}$ and $L^* = L$).

d) (*12 points*) Suppose Home and Foreign switch to free trade. Give a graphical representation of the associated relative supply curve. Under which conditions will we observe a full specialization in the two countries?

e) (*4 points*) Illustrate in your diagram of question c) that with full specialization, both countries benefit from free trade.

f) (*4 points*) Comment on the following statement: "If a free trade equilibrium is such that after trade only one country fully specializes, then only the other country benefits from free trade."

g) (*4 points*) Suppose that in autarky the production possibility curves of two countries run parallel. What are the consequences for the gains from free trade?

Question 2:

Suppose you live in a *small* country which imports a considerable amount of fish from the world's other country called „*Fishland*". Your government plans to introduce a quantity restriction on these imports. Answer the following questions in the context of partial equilibrium analysis.

a) (*12 points*) In a suitable diagram, illustrate your country's welfare effects arising from an import quota which restricts the imports of fish. Who acquires the licenses and how large will the license fee per unit of fish be?

b) (*4 points*) Suppose your government, instead of introducing an import quota, convinces Fishland to impose a voluntary export restraint. Give a graphical account of the welfare effects of this policy measure, arising for your country. Compare your results to those obtained in question a).

c) (*14 points*) Now suppose that your country is a *large* country. There is free trade on the fish market. Your country is an importer and Fishland is an exporter of fish. In a suitable diagram, derive from your country's and Fishland's domestic supply and demand functions, the *MD*-curve and *XS*-curve of the world fish market, and indicate P_W, the world equilibrium fish price.

d) (*6 points*) An *MD*-curve indicates for each given domestic fish price P_T, the quantity of fish which is imported into your large country. Suppose that the government imposes an import quota which restricts the imports of fish. Indicate in your diagram of question c), how the *MD*-curve looks like after this policy measure is enacted. As compared to the free trade situation, what is the effect on P_T and P_T^* (Fishland's domestic fish price)?

e) (*4 points*) Indicate in your diagram of questions c) and d), how expensive an import license (per unit of fish) associated with the import quota will be. Briefly explain your answer.

Question 3: Shorties

a) (*4 points*) "For countries with identical technologies and resources, there is no economic reason for international trade." Is this a valid statement? Explain your answer.

b) (*10 points*) Consider the Heckscher-Ohlin-model with two countries (A and B), two goods (*textiles* and *bikes*), and two factors of production (*labor* L and *capital* C) with factor prices w and r. Suppose that country A is capital abundant and the bike production capital intensive. Suppose also that in autarky in country A the price of textiles (P_T) is identical to the price of bikes (P_B). Under the usual assumptions on production technologies, draw for country A a pair of unit isoquants that correspond to the previously given information. Indicate the associated equilibrium factor price ratio $(w/r)^*$ that will emerge in autarky. After opening up to free trade, which trade pattern will emerge between the two countries.

c) (*8 points*) China primarily exports low-tech products whereas it imports high-tech products. In the context of the standard-trade-model, illustrate graphically the impact on China's terms of trade of the following events:
A) South Korea and some other Asian countries shift their production away from low-tech products to high-tech products.
B) China reduces its tariffs on high-tech products.

d) (*6 points*) The international equilibrium of the standard-trade-model can be represented by offer curves. Draw a pair of such offer curves and explain which information is embodied in such a curve.

e) (*6 points*) Using a numerical example, explain why labor market pooling can be beneficial for both workers and employers.

f) (*6 points*) What are the characteristics of a dual economy? Using the specific factors model, illustrate graphically, why in a dual economy a trade policy which stimulates the output of the manufacturing industry, could be a beneficial policy measure.