

International Economics - Intermediate Learning Assessment no. 1

Last name (in capital letters):

First name (in capital letters):

Student registration number:

Signature:

General instructions:

1. Papers that are missing either name, student number, or signature are not valid;
2. Write your name, student number, and signature also on the other sheets employed to answer the questions; these sheets, together with scratch paper, have to be handed back;
3. Questions are to be answered with a pen; pencil is allowed only for graphs;
4. Available time: 60 minutes.

SECTION A (10 minutes)

Multiple choice questions (1 points for correct answer, 0 for blank answer, -1 for wrong answer)

1. In the context of the Heckscher-Ohlin model of trade, the opening up to free trade by a country
 - a) hurts the factor of production which is used intensively in the good being imported
 - b) hurts the factor of production which is used intensively in the good being exported
 - c) hurts the factor of production whose marginal product goes up
2. Consider the following curve SS , which displays the relationship between the relative price of cigars over food, P_C/P_F , and the relative price of the wage rate over the rental rate of capital, w/r .



From the slope of the curve it can be deduced that:

- a) cigars are labor-intensive, while food is capital-intensive
- b) cigars are capital-intensive, while food is labor-intensive
- c) both goods are labor-intensive

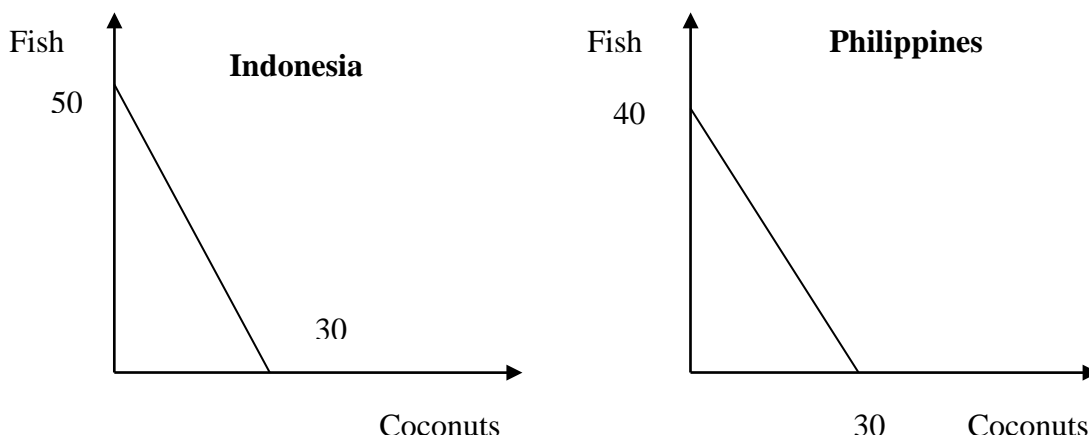
3. Consider the general traditional framework. Assume that trade is allowed in a country, and that the relative price the country faces after trade, p^T_X/p^T_Y , is smaller than relative price it faced under autarchy, p^A_X/p^A_Y . In this framework, **gains from exchange** occur because:

- a) the country exports X and imports Y
- b) given the same production pattern of autarchy, the country is able to sell abroad the good whose relative price is higher than in autarchy and buy from abroad the good whose price is lower
- c) the country is able to increase the production of the good relatively more expensive on international markets and to decrease the production of the good relatively cheaper

SECTION B (30 minutes)

Exercise: Ricardian model of trade (4 points)

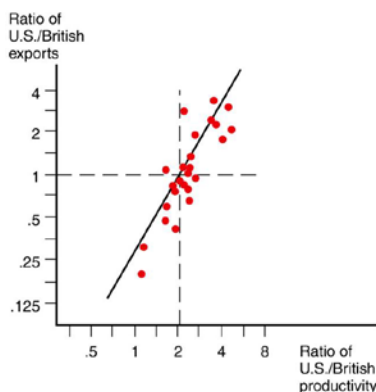
Let us consider the following Production Possibility Frontier for two countries, Indonesia and Philippines, that produce only two goods, fish and coconuts.



- i) What is the opportunity cost of one coconut in terms of fish for Indonesia? And for the Philippines?
- ii) If the two countries are allowed to trade, in which good will Indonesia and Philippines specialize, respectively?
- iii) Given the numerical values of the problem, draw in the same graph the **excess demand curves for fish for the two countries**, stating what is a plausible relative price of coconuts in terms of fish for which balanced trade will occur among the two countries.

Question about the empirical evidence of the model

- iv) Given the following picture taken from the seminal paper by Balassa (1963)



explain why it can be taken as evidence of a Ricardian pattern of trade by U.S. and Britain.

SECTION C (20 minutes)

Exercise: Heckscher-Ohlin model of trade (3 points)

Consider two big countries, 1 and 2 , that are trading with each other cloth, C , and food, F . The two factors of production are labor, L , and capital, K . The unit input requirements of labor and capital for the two goods in each country are a_{LC} , a_{LF} , a_{KC} , a_{KF} . Assume the same technology and the same preferences in the two countries for the goods.

- i) Write the condition that has to be satisfied by a_{LC} , a_{LF} , a_{KC} , a_{KF} when **cloth is intensive in the use of labor** and assume that this condition holds in what follows. Provide a numerical example of your choice for this situation.
- ii) The production possibility frontier in each country is the result of two distinct resource constraints, one on labor, the other on capital. Write the analytic expression for the two resource constraints in terms of the quantity of cloth produced, Q_C , and the quantity of food produced, Q_F . Draw the two resources constraints in a graph where on the horizontal axis we have Q_C , while on the vertical axis we have Q_F .
- iii) Show the effect of an increase in capital on the production possibility frontier and explain what it is the Rybczynski effect.

Now allow the unit input requirements to be variable, with cloth still intensive in labor. Moreover, assume that **country 1 is relatively abundant in capital**. Define p_A^1 as the autarchy relative price in country 1 of the price of cloth over the price of food, $p_C^{A,1} / p_F^{A,1}$, and p_A^2 is similarly defined in country 2 .

- iv) Draw in the same graph the production possibility frontiers for country 1 and country 2 and show the autarchy equilibrium in each country. What is the highest relative autarchy price, p_A^1 or p_A^2 ?

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