

Econ 355 - International Trade

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Problem Set 1

Due Friday, January 16, 2015

by 1pm in class or on Connect

1 True/False/Uncertain

For each of the following statements, say whether it is true, false or uncertain and explain why using a couple of sentences, graphs and/or equations.

1. Research on the Great Trade Collapse in 2008-2009 has established that the collapse in the demand for durable goods was the main reason why trade decreased much more than GDP during that period.
2. In the Ricardian model we only need to know the opportunity cost of a good for Home and Foreign in order to establish what the two countries export.
3. Although absolute advantage does not determine the pattern of trade, it does determine real wages and therefore consumption.

2 Data Exercise

Go to the WTO website <http://tao.wto.org/>

1. Find the tariff on imports of Cheddar for Canada (both within and over access commitment). It is expressed as a percentage.
2. Find the tariff on imports of Rice for Japan. It is expressed as yen/kg. This is what is called a specific tariff. To obtain the tariff in terms of percentage of the value of rice try to find an approximate price for rice traded in Asia (sold by Thailand or Vietnam for example). In percentage terms how large is approximately the tariff on rice?

3. Look through tariffs for the country you are from and indicate the largest tariff you can find (hint: most likely it will be on some agricultural product). Of course this is an open question with no correct answer, I just want you to spend some time browsing through tariff data and realize how large tariffs can be on goods that we consume every day.

3 Ricardian Model - Home Autarky

Consider a country, Home, populated by a labor force of 90 workers. The country can produce two goods, Apples and Bananas. Labor is the only factor of production and it can freely move across sectors. The marginal product of labor in Apples is 2, i.e. an extra unit of labor produces two extra Apples. An extra unit of labor produces 2 Bananas.

1. If the country does not produce any Bananas, how many Apples can it produce (by employing all its labor in the production of Apples)?
2. If the country does not produce any Apples, how many Bananas can it produce (by employing all its labor in the production of Bananas)?
3. What is the **opportunity cost** of producing an Apple in terms of Bananas? What is the opportunity cost of producing a Banana in terms of Apples?
4. Draw the Production Possibility Frontier of this economy, with Apples on the horizontal axis and Bananas on the vertical axis.
5. Given a certain wage w that a worker in either sector earns and given that producers of Apples and Bananas are perfectly competitive (i.e. they make no profits), what is the relationship between the wage and the price of apples p_A and between the wage and the price of Bananas p_B ? (You need to write an equation that describes the relationship).
6. What is the relative price $\frac{p_A}{p_B}$ when the Home country is not allowed to trade with other countries (Home country is in autarky)?

4 Ricardian Model - Foreign Autarky

Now consider another country, Foreign, characterized by the following technology and labor force: $MPL_A^* = 4$, $MPL_B^* = 6$. Labor force is 60 workers.

1. Which country has an absolute advantage in the production of Apples? Which country has an absolute advantage in the production of Bananas?
2. Which country has a comparative advantage in the production of Apples? Which country has a comparative advantage in the production of Bananas?
3. Answer sub-questions 1-6 from the previous problem for the Foreign country.

5 Ricardian Model - International Trade

1. When the two countries start trading what is the range of international relative prices that we can observe?
2. Assume that the international price in equilibrium is $\left(\frac{p_A}{p_B}\right)_T = 1.25$. At this relative price how many Apples and Bananas does Home produce? How many Apples and Bananas does Foreign produce? For both Home and Foreign indicate qualitatively where the consumption point lies under trade. Is the consumption point under trade on a higher indifference curve for both countries?
3. In a graph draw the qualitative shape of the export supply of Apples for Foreign and the import demand of Apples for Home as a function of the relative price of Apples and indicate (again qualitatively) where the international trade equilibrium lies.