Midterm Exam

EC 391: International Economics I

Wednesday July 18, 2018

Instructions: You have 70 minutes to complete this exam. The exam consists of two parts. For the first part, please indicate whether the statement is true, false, or if the assertion is indeterminate. In all cases, defend your answer with a concise explanation. To earn full credit, you must include an explanation with your answer. The second part consists of longer questions. To earn full credit in this part, you must answer every component to the question.

NOTE: You DO NOT need to answer all of the questions. Read the instructions carefully as you have the option to select which questions to answer. Do not attempt to answer more than the required number of questions. This will neither earn you extra credit, nor provide you with any insurance against an otherwise incorrect response. If you answer all questions, I will simply grade the first five and the first three in each section, respectively.

True/False/Uncertain (25 points)

PLEASE SELECT 5 OF THE FOLLOWING 7 QUESTIONS TO ANSWER

1. Assume that country X produces two goods: cloth and steel. Country X has an absolute advantage in the production of both goods, but only has a comparative advantage in producing steel. Assume that the free trade price is somewhere in between the two country autarky prices (i.e. inside the interval of possible world relative prices). With trade, the Ricardian model predicts that consumers in Country X will have to pay a higher relative price for steel.

2. "If U.S. productivity growth does not keep up with that of its trading partners, the United States will quickly lose its international competitiveness and not be able to export any products, and its standard of living will fall."

3. In the Specific Factors model, a country can be made worse off by opening up to trade (i.e. gains from trade can be negative.)

4. Taken together, the Heckscher-Ohlin theorem along with the Stopler-Samuelson theorem imply that all parties gain from trade.

5. A country will tend to export the good that uses its abundant factor as an input.

6. In the monopolistic competition model, we expect average costs to be higher as the number of firms increases.

7. Intra-industry trade between two countries is a sign of comparative advantage.

Longer Questions (45 Points)

PLEASE SELECT 3 OF THE FOLLOWING 4 QUESTIONS TO ANSWER

1. (**Ricardian Model**) Refer to the following table for this question. Assume that each country has 100 laborers.

Table 1: Hourly Production in Australia and the United States

	Australia	United States
Pounds of beef	17	35
Bushels of wheat	51	105

   (a) Which country has an absolute advantage in the production of wheat? In beef?
   (b) Show that based on the Ricardian model, trade between Australia and the US would not be mutually beneficial.
   (c) Suppose now that the US became more productive and could produce 70 pounds of beef or 140 bushels of wheat per hour.
      (i) How would your answer to (a) change if at all?
      (ii) Is it still the case that trade between the two countries is not mutually beneficial? If so, explain why. If not, identify which good each country exports, and the range of possible equilibrium free trade relative prices of wheat.

2. (**Specific Factors Model**) According to an article that appeared in the New York Times, China has encouraged the growth of tea exports as one way to help the rural poor and decrease inequality. We can describe what is happening in China using the Specific Factors Model. Assume that there are two goods: tea and computers. Assume that there are two specific factors in China: unskilled labor (specific to tea production) and skilled labor (specific to computer production). Suppose that capital is the mobile factor.

   (a) Show what happens to skilled and unskilled nominal and real wages if the price of tea rises. Assume that there has been no change in the price of computers.
   (b) If the price of tea rises, show what happens to the real return to capital in China.
      (i) If you are told that owners of capital use computers but refuse to drink tea, how does this affect your answer?

3. (**H-O Model**) Consider the Heckscher-Ohlin model with two countries: Germany and Turkey, and two goods: computers and shoes. Suppose that Germany is capital-abundant relative to Turkey, and that computers are the capital-intensive good.

   (a) According to the Heckscher-Ohlin model, which good does each country export?
   (b) Which factor of production gains from trade in Germany?
   (c) For the remainder of the problem, we will consider only Germany in autarky. Suppose that we observe an influx of migrants from Turkey to Germany. Describe and justify what you expect to happen to the following:

(i) The relative price of computers in Germany when Germany is at its autarky equilibrium

(ii) The wage-rental ratio in Germany

(d) Given your answer to (c), is it possible for migration to alter the pattern of trade between two countries in the Heckscher-Ohlin model?

4. (**Monopolistic Competition Model**) In the monopolistic competition model considered in class, suppose that the fixed cost, FC, of all active and potential entrant firms in both countries were cut in half. Determine what would happen to the following, providing a brief explanation for each of your conclusions:

(a) The number of firms in the world

(b) World price with trade

(c) Total output in the world economy