University of Oregon
Department of Economics

HOMEWORK 1

ECN 481/581
Prof. Bruce Blonigen **Due Date: Thurs., January 24**

1) Assume we are in a Ricardian trade model world. There are two countries, the U.S. and Thailand, and two goods, fruit (F) and cookies (C). In the United States, it takes 20 units of labor to make 1 unit of C (a_{LC} = 20) and 5 units of labor to make 1 unit of F (a_{LF} = 5). In Thailand, it takes 50 units of labor for each C (a^*_{LC} = 50) and 20 units of labor to make 1 unit of F (a^*_{LF} = 20). The U.S. has 200 units of labor total (L=200}), and Thailand has 500 units of labor (L*=500}). **(15 total points for question 1, all parts)**

a) Who has comparative advantage in fruit and why? Who has the comparative advantage in cookies and why? Who will export what?

b) On separate diagrams, draw the production possibilities frontier (PPF) for the U.S. and for Thailand. Put cookies (C) on the horizontal axis for both countries! Calculate and label the horizontal and vertical axis for both PPFdiagrams, as well as calculating and labeling the slope of each PPF.

c) Suppose the countries decide on an international trading price where the relative price of cookies to fruit is 3 (i.e., each cookie costs 3 fruit). Remembering Thailand's comparative advantage and assuming it specializes completely in its comparative advantage, draw the new consumption possibilities frontier (CPF) for Thailand with trade. If Thailand produced only cookies and sold all of it at the new world trading price, how much fruit could it get?

d) Suppose Thailand wanted to consume 15 fruit units and 5 cookie units at the world trade price of 3. In a new diagram, draw Thailand's original PPF, it's CPF with trade, and its trade triangle and state exactly how much Thailand wants to export and import.

What would be the U.S.'s imports and exports?

Assume the U.S. is specialized in its comparative advantage and diagram its original PPF, trade CPF, and trade triangle.

e) Now suppose the wage per unit of labor is 3 dollars in the U.S. and 1 baht in Thailand (A baht is Thailand's unit of currency). The exchange rate is 1 baht per U.S. dollar. Explain why there is or is not a trade equilibrium for these wages and exchange rate. What happens to trade if the government of Thailand decides to devalue the baht so the exchange rate is now 2 bahts for each dollar?

Turn over for more questions

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f) Now, think more generally of a world with many commodities and a trade equilibrium for any exchange rate you consider. Remembering results in e) above, explain how the following groups would react to a decision by their government of Thailand to devalue the currency?

1) Firms that export
2) Firms that primarily face competition from imported products
3) Consumers

2) In light of the Ricardian model and comparative advantage, explain in 150 words or less how you would evaluate the claim by developing countries that they are at a disadvantage in trade with powerful industrialized countries because they lack the technology to compete?
(5 POINTS)