ECN 481/581, Winter 2006
Prof. Bruce Blonigen

NAME: ANSWER KEY
ID#: _____

FINAL – VERSION A

Friday, March 24, 2006

Multiple choice - each worth 5 points

1) Which of the following statements about a "safeguard" trade action is true?

a) A country does not need to show "unfair" trade practices to apply a safeguard action.
b) The trade remedies applied by safeguards are permanent.
c) Safeguard actions are not legal in the World Trade Organization.
d) Safeguards are applied to products that are being subsidized by foreign governments.

2) With flexible production, if the international terms of trade for a country's exports increases, the country will

a) produce more of the imported good.
b) produce less of the imported good.
c) not change production of the imported good.
d) produce a combination of goods outside of its production possibility frontier.

3) The empirical evidence for the effects of trade on sulfur dioxide pollution estimates that

a) the net effect of trade is to worsen world pollution levels.
b) the net effect of trade is to improve world pollution levels.
c) trade worsens pollution only for countries where GDP per capita is greater than $5000.
d) trade and pollution are unrelated.

4) According to the new trade theory model we discussed in class, countries trade because

a) they can get product varieties from other countries at lower prices than in their own country.
b) they can get product varieties from the other country that they do not produce in their own country.
c) Both a) and b).
d) None of the above.

5) In the large-country case, an export tax

a) leads to an increase in price in the importing country.
b) leads to no change in price in the importing country.
c) increases consumer welfare in both countries.
d) creates deadweight losses only in the exporting country.

6) An optimal tariff for a country is the one which, assuming no retaliation,

a) maximizes the country's terms of trade.
b) maximizes the country's quantity of imports.
c) maximizes the country's welfare.
d) minimizes the country's deadweight losses.

7) Which theorem from the Heckscher-Ohlin model suggests why an increase in labor to a country will increase production of the labor-intensive good.

a) Stolper-Samuelson theorem.
b) Rybczynski theorem.
c) Factor price equalization.
d) The Leontief paradox.

8) A domestic production subsidy is a better way to help employment in an import-competing sector than an import tariff because

a) it will increase consumer surplus leading to a welfare gain.
b) it will more likely lead to a terms of trade gain.
c) the production efficiency loss will be smaller for the same gain in producer surplus.
d) it will only cause efficiency losses in production, not in consumption.

9) In international trade theory, we define a "small" country as one whose market activities and trade policies

a) do not affect its own welfare.
b) affect only countries that share a border with it.
c) do not affect world prices (or terms of trade).
d) do not affect the other country's offer curve.

10) Most economists would not consider "dumping" to be an anticompetitive behavior unless

a) the foreign firm is charging different prices in different markets.
b) the intention of the foreign firm is to price below marginal cost to drive out the domestic industry – that is, predatory pricing.
c) the domestic industry is "injured" by the lower prices.
d) the foreign firm is a large multinational firm.

ECN 481/581 - Prof. Blonigen NAME: _____

EDUCATION IN THE RICARDIAN TRADE MODEL(8 points each for questions 11-14):
Assume that we have a Ricardian world with two countries, Paraguay and Canada, and two products, codfish (C)and beer (B). In Paraguay it takes 10 units of labor to make 1 unit of C (a_{LC} = 10) and 6 units of labor to make 1 unit of B (a_{LB} = 6). In Canada, it takes 4 units of labor to make 1 unit of C (a^*_{LC} = 4) and 2 units of labor to make 1 unit of B (a^*_{LB} = 2). Paraguay has 120 units of labor (L=120), and Canada has 36 units of labor (L*=36).

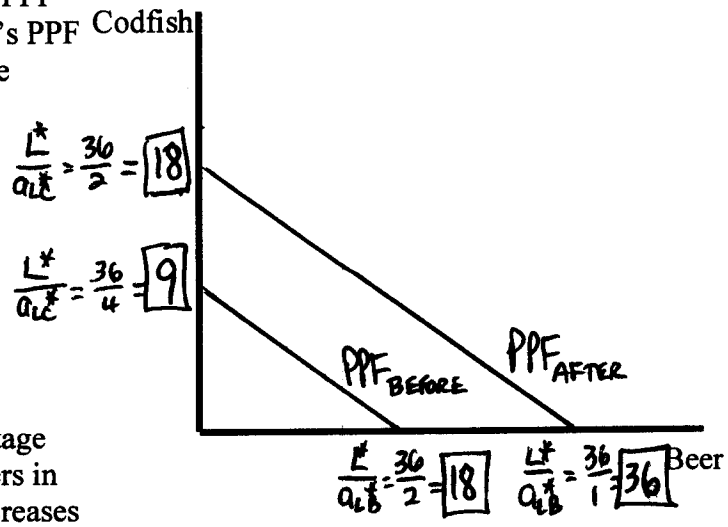
11) For which product(s) does Paraguay have an absolute advantage? None
For which product(s) does Paraguay have a comparative advantage? Codfish
For which product(s) does Canada have an absolute advantage? Codfish and Beer
For which product(s) does Canada have a comparative advantage? Beer

Suppose that Canada undertakes a program to further educate its workforce, so that the unit labor requirements for both products are reduced by 50%.

12) Explain how comparative advantage has changed between the two countries after Canada has undertaken its education program?

Comparative advantage does not change, only absolute advantage has changed.

13) On the axis to the right, draw A) Canada's PPF before their education program and B) Canada's PPF after their education program. Clearly label the intercepts and the PPF diagrams for each case.



14) What would happen to comparative advantage across countries if Canada had educated workers in the production of codfish only, so that a^*_{LC} decreases by 50% (from 4 to 2), and a^*_{LB} remains at 2? Explain.

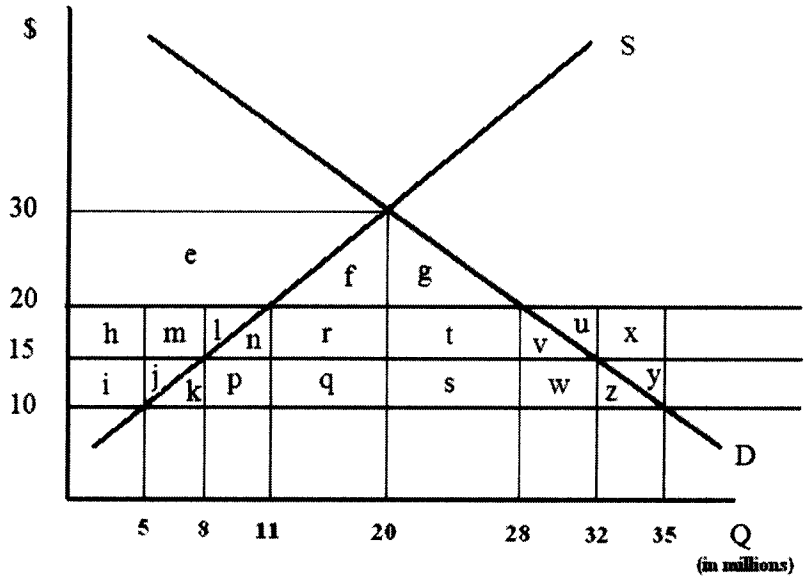
It switches. Now Canada has comparative advantage in Codfish because it only gives up 1 Beer for 1 Codfish, whereas Paraguay still gives up. 10/6 or 12/3 Beer for each Codfish they produce.

ECN 481/581 - Prof. Blonigen **NAME:** _____

Trade Policy - The Effects of an Import Subsidy - Questions 15-21 (7 points each)

The U.S. is an importer of cell phones and is considering subsidizing imports. Assume that the U.S. is a small country in the world markets for cell phones. Referring to figure 14 below, the world price of cell phones is currently $20.

Figure 14: U.S. Market for Cell Phones



15) Suppose that the U.S. subsidizes imports, so that the U.S. domestic price for cell phones falls to $15. Calculate the *ad valorem* subsidy in this case.

To solve: $\$20(1-s) = \$15$

$\Leftrightarrow \$20 - \$20s = \$15$

$\Leftrightarrow \$5 = \$20s$

$\therefore s = \frac{\$5}{\$20} = 0.25$ or 25%

16) Which lettered regions in figure 14 represent the change in consumer surplus from a subsidy that reduces the U.S. price to $15? h, m, l, n, r, t, v. Calculate this change and indicate whether it is a gain or loss:

h | m | l | n | r | t } $5 (28 million)

Area = $\$5 \cdot 28$ million = $\$140$ million

v } $5 (4 million)

Area = $\frac{1}{2} \cdot \$5 \cdot 4$ million = $\$10$ million

GAIN of $150 million

17) Which lettered regions in figure 14 represent the deadweight losses from a subsidy that reduces the U.S. price to $15? l, u. Calculate these deadweight losses:

l } $5 (3 million)

u } $5 (4 million)

Area = $\frac{1}{2} \cdot \$5 \cdot 3$ million = $\$7.5$ million

Area = $\frac{1}{2} \cdot \$5 \cdot 4$ million = $\$10$ million

$17.5 million

ECN 481/581 - Prof. Blonigen NAME: _____

Trade Policy - The Effects of an Import Subsidy continued. Keep referring to figure 14 on the prior page

18) Which lettered regions in figure 14 represent the deadweight losses from a subsidy that reduces the U.S. price ***even further to $10?*** j, m, l, u, v, y.

19) If the U.S. were a large country, what impact would its import subsidies have on world prices and why? Is this a terms of trade gain or loss for the U.S.?

It would increase world prices for this product since the subsidies would increase demand for the product. This would be a TOT loss for the U.S.

20) Suppose that the U.S. decided to reverse course and ban imports of cell phones (quota of zero) starting from having free trade at a world price of $20. Which lettered regions correspond to the deadweight losses from this ban of cellphones? f, g

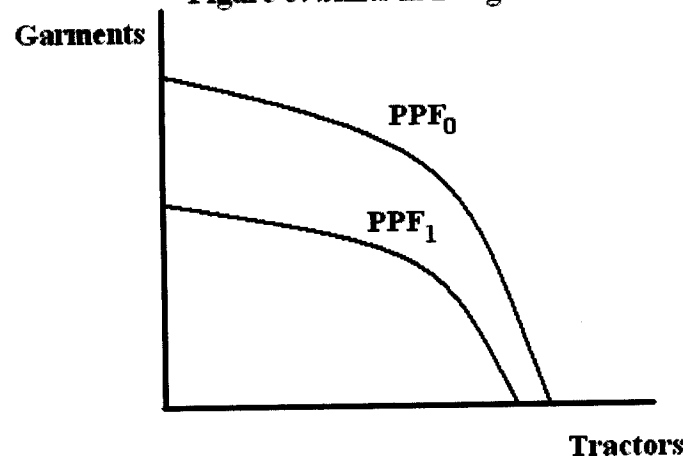
21) If imported cell phones helped domestic suppliers learn how to be more efficient so that the domestic supply curve shifted out until the autarky price was at the world price of $20, how would deadweight losses from an import subsidy change, if at all?

The deadweight losses would be the same assuming that the slopes (or more accurately, the elasticity of supply) would be the same for the range of prices.

ECN 481/581 - Prof. Blonigen NAME: _____

CHILD LABOR LAWS AND TRADE Suppose there are two countries, the U.S. and Bangladesh, and two goods, Garments and Tractors. Consider a Heckscher-Ohlin world where there are two factors of production, labor and capital. The U.S. is capital-abundant relative to Bangladesh, and Garments are relatively labor-intensive compared to Tractors. Now suppose that the U.S. puts pressure on Bangladesh to eliminate child labor. This leads to an effective ban on child labor in Bangladesh and substantially lowers the amount of labor available in Bangladesh. Use this information to answer questions 22 – 27. 7 points each.

Figure 3: Shifts in Bangladesh's PPF



22) Figure 3 depicts Bangladesh's production possibility frontier before the child labor ban (PPF_0) and the PPF after the ban (PPF_1). Explain how the relative factor intensities of the two products relates to how the ban on child labor affects the shift from PPF_0 to PPF_1.

The production of Garments is affected more significantly than Tractors because Garments is relatively labor-intensive.

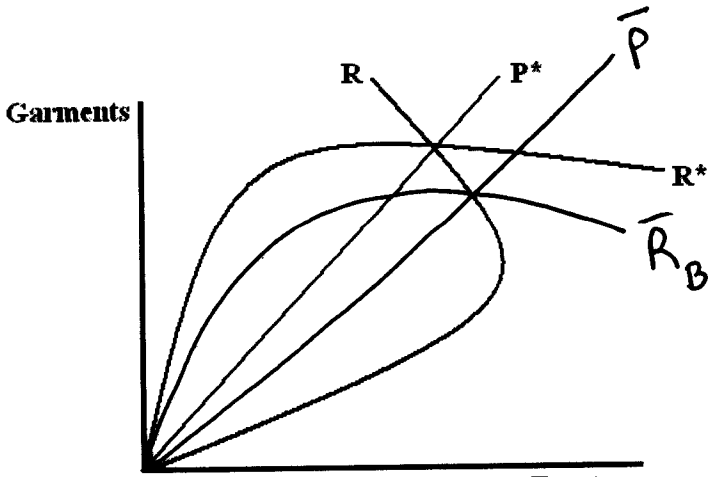


Figure 4: Offer Curves

23) The child labor ban reduces Bangladesh's ability to produce the good it has a comparative advantage in. This reduces its offers of imports and exports at every international price, P*. In Figure 4, draw Bangladesh's new offer curve and label it $\bar{R}_B$, as well as the new international price, which you label $\bar{P}$. (Note: Assume that Bangladesh still has the comparative advantage in Garments)

Does Bangladesh experience a terms of trade gain or terms of trade loss from the ban on child labor? TOT GAIN

ECN 481/581 - Prof. Blonigen NAME: _____

CHILD LABOR LAWS AND TRADE continued from previous page

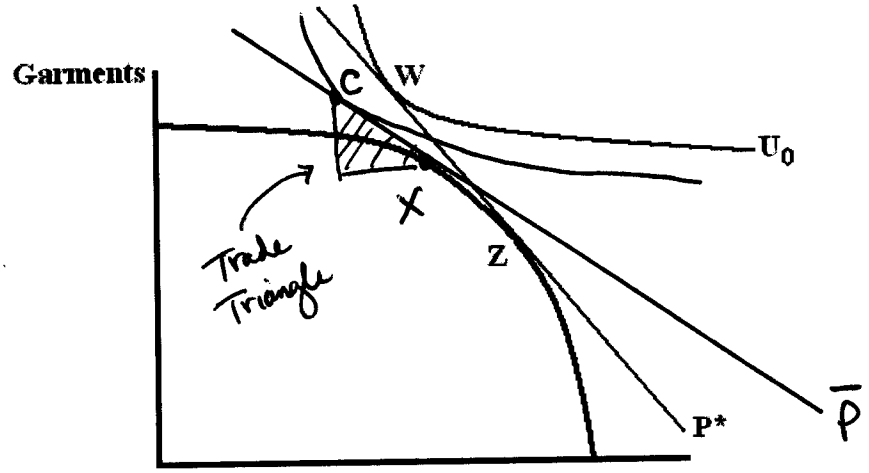


Figure 5: The U.S. Economy

24) Figure 5 shows the trade equilibrium for the United States before the child labor ban goes into effect in Bangladesh. In the figure, the U.S. faces world prices, P*, and attains utility of U_0. In figure 5, show the new international price (label it $\bar{P}$) and equilibrium for the United States after the child labor ban goes into effect.

25) In Figure 5, clearly label the new production point as "X", the new consumption point as "C", and draw and label the new trade triangle. Assume that the countries' comparative advantages have not changed and there are still some trade flows.

26) List the effect of the child labor ban on the following variables for the United States (increase or decrease):

A) Production of Garments: Increase
B) Production of Tractors: Decrease
C) Exports of Tractors: Decrease
D) Imports of Garments: Decrease

27) Write down the Stolper-Samuelson theorem, and then use it to explain what will happen to wages and the rate of return on capital in the United States as the child labor ban in Bangladesh comes into effect, given your answers above.

Stolper-Samuelson Theorem: A rise in the price of a product will raise the return to the factor that product uses intensively, and will lower the return to the other factor.

Explanation of effects in this example:

Wages will increase and returns to capital will decrease since the relative price of the labor-intensive good, Garments, increases