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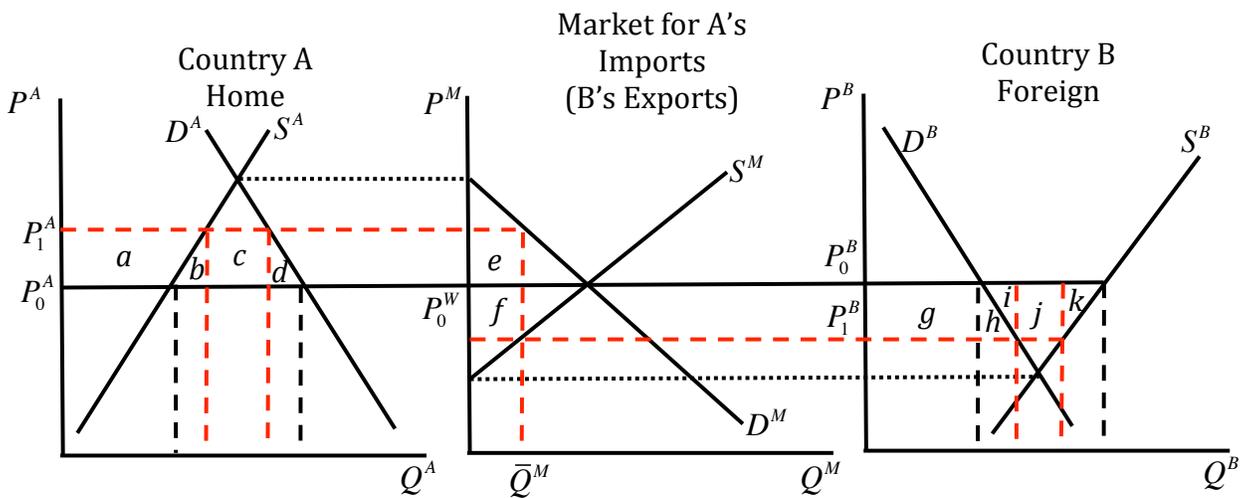
Final Exam
December 16, 2011
Answers

Answer on these sheets. Use the indicated point values as a guide to how extensively you should answer each question, and budget your time accordingly. The exam has a total of 75 points.

1. (15 points) State and explain, in the spaces below, three reasons why countries restrict imports. For each reason say also how, if at all, you would argue against these actions in these circumstances. Or if you would not argue against them, explain why you accept the reason as more valid than our conventional economist's argument in favor of free trade.
Ans: The following are a sample of the answers that you might give:
 - a. *Tariffs are used to raise revenue.*
 - i. *Argument against: Tariffs cause greater economic distortions than most other taxes, since they distort both supply and demand.*
 - ii. *Argument in favor: In poor countries with weak governments, taxes at the border may be the only ones they can successfully administer.*
 - b. *Infant-industry protection: A temporary tariff allows an inefficient industry to produce while it "learns by doing" and becomes more efficient over time.*
 - i. *Argument against: A subsidy paid directly for production would achieve the same benefit in terms of increased efficiency while causing no loss of consumer welfare by distorting demand.*
 - ii. *Argument in favor: A tariff raises revenue for the government, allowing it to reduce other distorting taxes, whereas a subsidy requires that the government raise revenue some other way, and other revenue sources will cause their own distortions and welfare losses.*
 - c. *Terms-of-trade argument (also called monopoly argument or optimal tariff): By reducing imports, a large country causes a fall in the price of the imported good on the world market, allowing it to purchase the good more cheaply (i.e., in exchange for a smaller quantity of exports).*
 - i. *Argument against: The country gains only at the expense of other countries' welfare, and those countries lose more than the tariff-levying country gains. It is therefore undesirable from a world welfare perspective. In addition, if other countries retaliate by levying tariffs themselves, the original country is likely to lose as well.*
 - ii. *Argument in favor: If retaliation is not likely – perhaps because other countries are many, small, and unorganized – then this is in fact the optimal tool for benefiting at their expense (aside from extortion).*

- d. *National defense argument: Protection is needed in order to support an industry that would otherwise disappear and whose products will be needed in time of war.*
- i. *Argument against: A subsidy to production would achieve the same result without the attendant distortion of demand. Even better, if feasible for the product at hand, might be simply to stockpile the product, importing it cheaply during peacetime in order to have it during war.*
 - ii. *Argument in favor: Both a subsidy and a stockpile require government to spend money it may not have, or policies to raise that money that would cause additional distortions.*
- e. *Externality argument: If an industry generates a positive externality (benefit) for other industries and/or consumers, then the benefits from that externality will, if protection is not too great, more than offset the deadweight loss from protection.*
- i. *Argument against: A subsidy to production would achieve the same result without the attendant distortion of demand.*
 - ii. *Argument in favor: A subsidy requires government to spend money, and policies to raise that money cause additional distortions.*
2. (15 points) Using appropriate partial-equilibrium (i.e., single industry) diagrams for a world of two countries (neither of them small), analyze the welfare effects (as compared to free trade) of an import quota for which the rights to import under the quota are distributed to foreign exporters. Make clear, in both the diagrams and in words, the gains and losses to domestic and foreign suppliers, demanders, and governments, as well as the net effects on each country and on the world as a whole.

Ans: The figure below shows markets in countries A and B on the left and right, and the market for A's imports of the good from B in the center. With free trade, the price is P_0^W in each. When country A implements a quota, limiting imports to the quantity \bar{Q}^M , price in A rises to P_1^A , price in B falls to P_1^B , and the foreign exporters earn quota rents of $P_1^A - P_1^B$ on each unit imported.



Welfare effects are as follows:

Country A

Suppliers gain area a

*Demanders lose area $-(a+b+c+d)$
Government is not affected
Country as a whole loses $-(b+c+d)$*

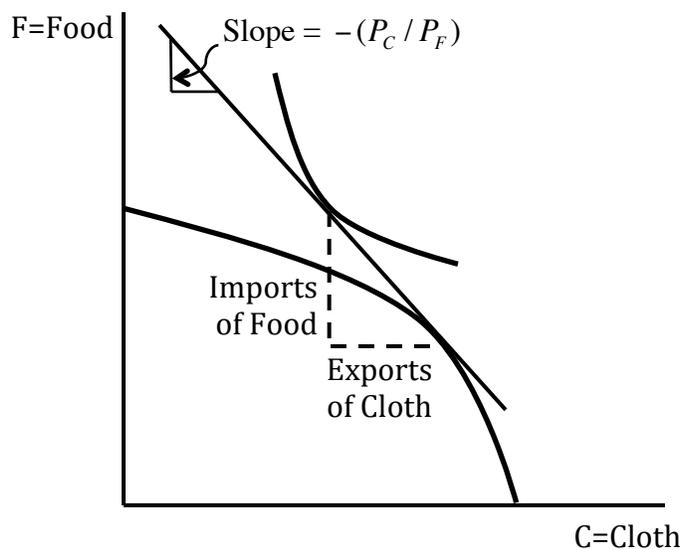
Country B

*Suppliers lose $-(g+h+i+j+k)$
Demanders gain $+(g+h)$
Government is not affected
Exporters gain $+(e+f)$ (in quota rents)
Country as a whole gains $+(e+f) - (i+j+k) = +e - (i+k)$ (since $f=j$)*

World as a whole loses $-(b+d+i+k)$ (since $c=e$)

3. (13 points) A small country produces (only) food and cloth and initially, under free trade, it exports cloth and imports food.

- a. Using the diagram of the Standard Model, illustrate this situation, indicating clearly in your diagram the quantities of exports and imports and how the prices of food and cloth enter the diagram.



- b. Suppose now that the country levies a tariff on imports of food. What, if anything, will that do to the following? Why?
- the domestic relative price of cloth
Ans: This will raise the domestic price of food above the fixed world price by the amount of the tariff, and therefore it will reduce the domestic relative price of cloth compared to food, P_C / P_F
 - the output of cloth
Ans: This fall in the domestic relative price of cloth will cause the output of cloth to fall. In the diagram, the economy moves up and to the left along the production possibility curve.
 - the exports of cloth

Ans: With less output of cloth, exports of cloth likely decline. (The fall in price of cloth will increase the relative demand for cloth as well, also reducing exports. However there is also a negative income effect that might offset this.)

- c. Suppose that this were the Heckscher-Ohlin trade model with factors of production land and labor, and that the food sector uses comparatively more land, relative to labor, than is used in the cloth sector. In this context...

- i. ...what would be the reason that the country exports cloth?

Ans: The country is relatively well endowed with labor compared to the rest of the world; that is, it possesses a higher ratio of labor to land than elsewhere.

- ii. ...how would the domestic price change that you found in part (b) be expected to affect the wage paid to labor and the rental paid to land in the two sectors?

Ans: The fall in the relative price of labor-intensive cloth (and the reduced production of it) will reduce the wage of labor throughout the economy (since both factors are perfectly mobile between sectors in the Heckscher-Ohlin Model). The same change is an increase in the relative price of land-intensive food, and that (together with the increased demand for land to produce food) will increase the rental price of land throughout the economy.

4. (16 points) In 2001, the US economy fell into recession, and demand for many products, including imported ones, was reduced. In response to that event, suppose that exporters of flat-screen TVs from Japan reduced their export prices in order to compete in the US market. As a result they were selling TVs below both average cost and below the price they were able to charge in their home market. At about the same time, suppose that sales of TVs by US producers fell substantially and US TV factories closed down.

Explain the options under US trade law that US producers of flat-screen TVs and the unions representing their workers had or didn't have for dealing with these events using the trade policy tools listed below. Be sure to explain, in cases where some action is possible, who in the US government makes the decision. Also in those cases, state briefly whether and why the action is justified economically (as opposed to legally).

- a. Safeguards tariffs

Ans: These are available if injury to the industry is substantial, if it is caused primarily by imports, and if the US President decides to levy the tariffs once they are recommended by the US ITC. Injury seems clearly to have happened here, since factories closed down. It may not be clear here that the injury is caused by imports, since the main cause seems to be the recession. And even if the US ITC recommends the tariffs, the President may decide not to levy them in order to maintain good relations with Japan. If safeguards tariffs are used, then yes, they may be justified by lessening the hardship to domestic workers, although other policies would serve that purpose better. Nor is it clear why only this presumably trade-impacted industry should be helped any more than others that are hurting during the recession.

- b. Anti-dumping duties

Ans: Here the definition of dumping is clearly satisfied, since price is below both the Japanese price and cost, so the US ITA (Commerce Department) will surely find dumping. And there is also clear injury, so that the US ITC will also find positively (they don't need to relate it to the imports in dumping cases). The President has no discretion, and the anti-dumping duty will be levied. Economically, there is no basis for viewing this dumping as unfair, since it is a normal response by producers in a depressed market, especially those like the Japanese firms that view labor as a fixed cost.

c. Countervailing duties

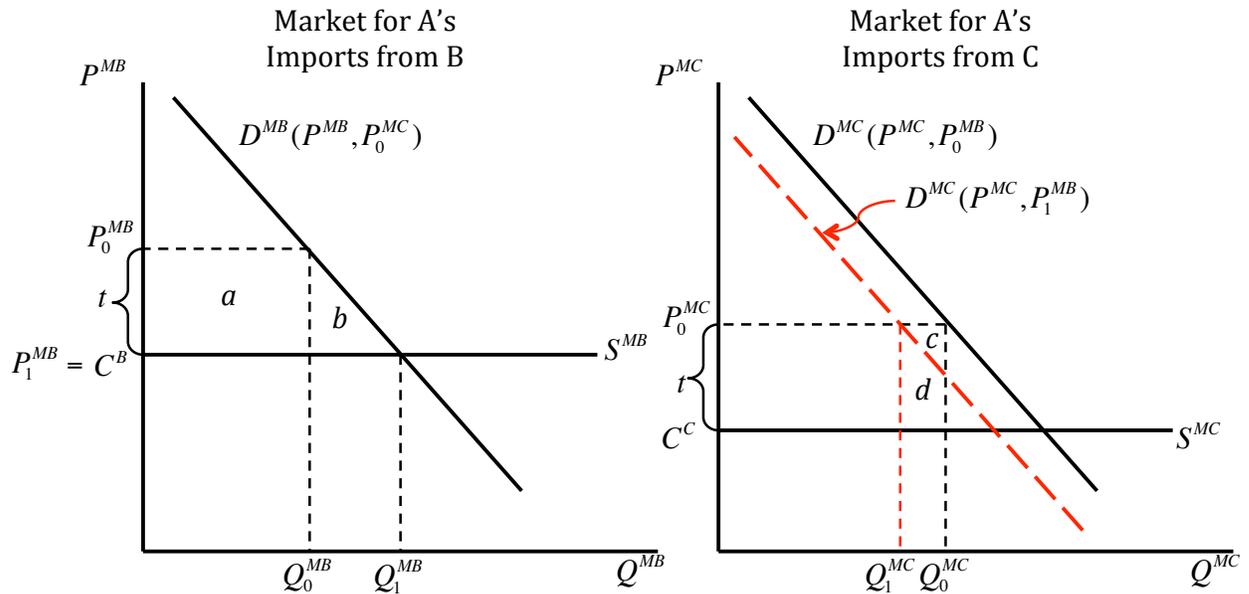
Ans: Countervailing duties can be applied only if there is a foreign government subsidy to the producers. That is not the case here, so presumably the US ITA will not find subsidy and no CVD will be levied.

d. Trade Adjustment Assistance (no need to say who decides in this case)

Ans: Trade adjustment assistance, like safeguards, only requires that there be injury caused by imports. There is clearly injury here, though the connection with imports is less clear, due to the recession. In class we never said who makes the decision on TAA, so you needn't answer that for this part. In fact, TAA funds seem to be distributed to states to allocate through separate offices of trade adjustment assistance. As for the economic justification of TAA, like safeguards it makes sense to help dislocated workers, and doing so with direct assistance instead of a tariff causes fewer economic distortions and should be preferred. Also like safeguards, the case for helping only those dislocated workers who were hurt by trade is less clear. And an argument can be made that an alternative policy, such as wage insurance, would be preferable.

5. (16 points) The diagram below shows the markets for imports of a good into Country A from two other countries, B and C. Country A does not produce the good itself. The imported good is a differentiated product, so that imports from the two countries are substitutes but not perfect substitutes. Supply of the good is infinitely elastic from each country, with constant costs C^B and C^C respectively, as shown. In the equilibrium shown initially, Country A levies a tariff t on imports from both B and C, resulting in the quantities of imports shown as Q_0^{MB} and Q_0^{MC} . Country A now forms a free trade agreement with Country B (but not with Country C).
- Show the effects of this FTA in both markets, clearly labeling any new curve or curves that you draw and identifying the resulting prices and quantities of the two goods inside country A: P_1^{MB} , P_1^{MC} , Q_1^{MB} and Q_1^{MC} .
 - Has this FTA caused trade creation, trade diversion, or both? Why?
 - Label areas in the diagram as needed and use those labels to quantify the welfare effects of the FTA on Country A.

Ans:
 a)



b) Imports from C fall by $Q_0^{MC} - Q_1^{MC}$ and imports from B rise by $Q_1^{MB} - Q_0^{MB}$. The former is clearly trade diversion. Since the latter appears to be larger than the former, there is also trade creation. (However, in class I defined trade creation as imports from the partner that replace domestic production. Since there was no domestic production here, you would be justified in saying that there is no trade creation.)

c) Consumers gain $+(a+b)$ while the government loses tariff revenue of $-(a+c+d)$. Thus the net welfare effect is $+b-(c+d)$, which could be positive or negative.