

Midterm Exam - *Answers*
October 29, 2014

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. Note that the last page of the exam (page 8) is intentionally left blank for you to use if you run out of space to answer any of the questions, although I do not intend that you should need it.

The exam has a total of 60 points.

1. (10 pts.) Define any five (5) of the following seven terms. (If you answer more than 5, I will grade only the first 5, so be sure to cross out any answers you don't want me to grade.)

a. Vertical FDI: *Investment in another country to produce inputs to a process at home, or to process inputs produced at home.*

b. Balance on Financial Account: *Capital inflows minus capital outflows.*

c. Purchasing Power Parity: *A value of the nominal exchange rate that equates the price of a basket of goods in one currency to its price in the other.*

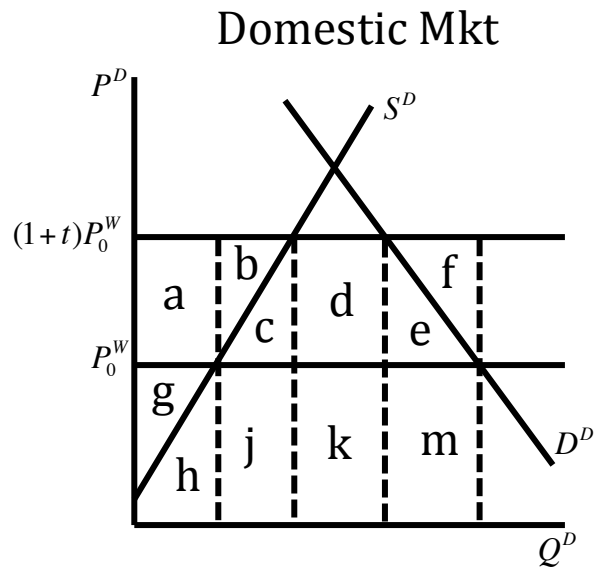
d. Specific tariff: *A tax on imports specified as units of currency per unit of the imported good.*

e. Effective rate of protection: *A measure of protection that takes into account not only the positive protective effect of that tariffs on an industry's output but also the negative effect of any tariffs on its inputs.*

f. National treatment: *Taxation, regulation, or other policies as applied to imported goods, once they have entered the country, that is the same as apply to domestically produced goods.*

g. Terms of trade: *The ratio of the price a country's exports to the price of its imports.*

2. (14 pts) The figure at the right shows the domestic market for a good in a small country, facing a world price of P_0^W and levying a tariff, t . Using the labeled areas in the figure, identify the following effects of the tariff compared to free trade always using a plus (+) or minus (-) sign to indicate the direction of the change):



- a. The change in revenue of suppliers:

$$+(a+b+c+j)$$
- b. The change in total cost of suppliers:

$$+(c+j)$$
- c. The change in producer surplus of suppliers:

$$+(a+b)$$
- d. The change in expenditure by demanders:

$$+(a+b+c+d)-m$$
- e. The change in consumer surplus of demanders:

$$-(a+b+c+d+e)$$
- f. The change in tariff revenue:

$$+d$$
- g. The change in welfare of the country as whole:

$$-(c+e)$$

3. (10 pts) Write a short essay explaining the Prisoners' Dilemma and its relevance for understanding the need for, and then the functioning of, the World Trade Organization.

Ans: The Prisoners' Dilemma is a game in which both players can benefit themselves by some behavior (call it "defect") given the behavior of other player, but both are worse off if both defect. Thus the equilibrium in the game is for both to defect.

In the context of international trade policy, with countries choosing between free trade and protection, each is better off for any given choice of the other by opting for protection, even though protection by both makes both worse off than of both opted for free trade. The game is illustrated below. Japan and the U.S. can each choose Free Trade or Protection. If both choose Free Trade, they both net a positive 10. But if one chooses Free Trade and the other chooses Protection, the protecting country does better, 20, while the free trader, does worse, -10. And if the other country protects, each can do better itself, -5, by also protecting.

		Japan	
		Free Trade	Protection
U.S.	Free Trade	10 10	-10 20
	Protection	20 -10	-5 -5

The (Nash) equilibrium in the game is that both countries choose protection, leaving both worse off than if both had chosen free trade. And this is characteristic of the world trading system, in that countries all perceive a benefit to themselves from protection, but all lose as a result.

The World Trade Organization is intended to fix this by, first, allowing countries to communicate their intent and commitment to refrain from increasing tariffs except in particular circumstances, and second, but imposing costs (via retaliation) on countries that break this agreement.

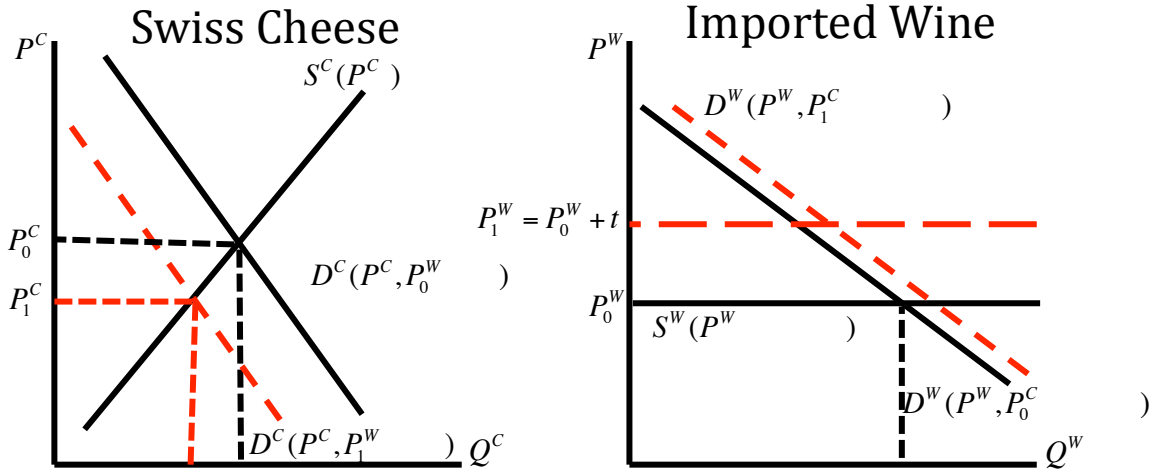
4. (10 pts) Write a short essay on Trade Promotion Authority and its relevance for trade policy in the world today. Include answers to the following questions:
- a. What is TPA?
 - b. Why is it needed?
 - c. Does it currently exist?
 - d. How does it matter for current policies and/or negotiations?

Ans: Trade Promotion Authority, also called Fast Track, is a feature of US trade law under which Congress grants to the President the authority to negotiate trade agreements that Congress then promises to vote on up or down without amendments, subject also to specified deadlines.

It is needed so that the US can negotiate in good faith with other countries, who will know that any agreement reached with the US, while it may be rejected outright, will not be changed. Without that, it is argued that countries would be unwilling to negotiate.

In fact, however, TPA has not currently been granted by Congress, and therefore the US is engaged in negotiations of more than one agreement (TPP, TTIP) without TPA in place. The expectation apparently is that President Obama will ask for and receive TPA from Congress once these agreements have been negotiated, although it is uncertain whether that will happen. Without it, it seems unlikely that the current negotiations, even if successfully concluded, will result in trade agreements that will go into effect.

5. (11 pts) Switzerland produces no wine but it produces a lot of cheese, which for the purpose of this question it neither imports nor exports. Wine and cheese are complements. The graphs below show the Swiss domestic markets for (non-traded) cheese and for imported wine, with wine infinitely elastically available for the world price P_0^W .



- Supply and demand curves are labeled in the figure, but their arguments have been omitted. Fill those in. That is, on what do each of these supplies and demands depend?
- Show in the figure the effects of a tariff on imports of wine and on the quantity and price of cheese. Who gains and who loses (no need to say how much) from the tariff?

Ans: See above for quantities and prices. In the home country, suppliers of cheese lose (due to the fall in price). Those demanders who consume both wine and cheese, as suggested by their being complements, also lose from the rise in price of wine. Their loss is offset, but only partially, by the fall in price of cheese. If there are consumers who demand wine but not cheese, they too are worse off. Only consumers who buy only cheese, and no wine, benefit from the tariff, due to its effect on the price of cheese. Finally, the government and thus the tax payers benefit from the tariff revenue, so one could argue that people who consume no wine are better off, whether they consume cheese or not.

- Is there anyone in this scenario who would be expected to lobby for this tariff?

Ans: My answer would be no, since those who are most affected by the tariff (wine drinkers and cheese producers) lose. It's hard for me to imagine that either tax payers or those who consume cheese but not wine would be motivated to lobby for this tariff, but I can't say that you're wrong if you suggest that.

6. (5 pts) A basic result of simple models of microeconomics is that a monopoly produces a smaller output than would be optimal. A basic result of second-best trade theory is that a tariff or other trade restriction may be beneficial when it acts in the direction of correcting a market distortion. Is it therefore the case that, when an import-competing industry has only a single firm, a tariff – by expanding that firm's output – may improve the country's welfare? Why or why not?

Ans: It is true that a tariff will expand the output of the domestic industry, even if that industry consists of only a single firm. The firm takes the price-with-tariff as given, and operates where its marginal cost equals that price. A rise in the tariff increases that price and causes the firm to move up its marginal cost curve to a higher output.

It is not the case, however, that this improves welfare. The reason is that, even though there is only a single firm in the industry, it is not able to operate as a monopolist since it has to take as given the price determined by the world price and the tariff. Thus, prior to the tariff it was not producing too little, and the fact that the tariff increases its output is not correcting any distortion.

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