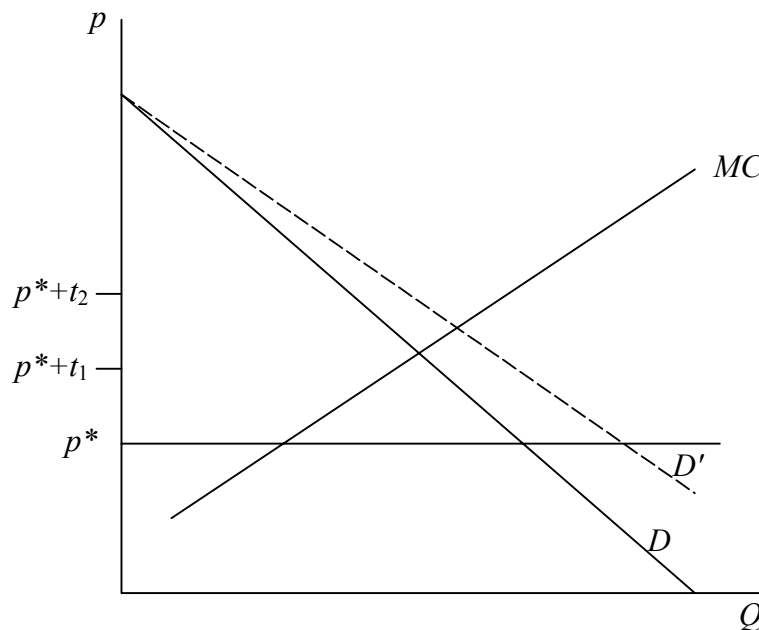


### Problem Set 7 Topics in Trade Policy

1. Compare, in a small open economy, the effects of an export subsidy with those of a subsidy of the same size to all production. That is, suppose that an amount  $s$  per unit of a good were paid as an export subsidy for every unit of the good exported, and contrast this with payment of the same amount  $s$  for every unit of the good produced. Which will cost the government more, and which will cause a greater gain or loss of welfare for the country as a whole?
2. The figure below shows domestic demand,  $D$ , for a good in a country where there is a single domestic producer with increasing marginal cost shown as  $MC$ . Imports of the good are available from abroad at a fixed price  $p^*$ , subject to a tariff of either  $t_1$  or  $t_2$ , which are indicated by the points  $p^*+t_1$  and  $p^*+t_2$  on the vertical axis. Suppose now that domestic demand for the good expands, for each price, to 25% more than it was before, so that the demand curve shifts out as shown, its vertical intercept remaining the same. Determine how profits of the firm, and tariff revenue of the government, will be affected by this change.



3. Consider the Cournot Export Duopoly Model – two identical firms from different countries producing and selling a homogeneous product into (only) a third country and engaged in Cournot competition – and suppose that the governments of both producing countries were to consider providing subsidies for their exports of the good. Using an analysis similar to what we did in class for optimal tariffs and retaliation in competitive markets, determine what you can about the Nash equilibrium export subsidies and the well being of the two exporting countries in that Nash equilibrium compared to free trade. Also, how does welfare in the third (importing) country compare at that equilibrium to what it would have been with free trade?
4. The “tariff equivalent” of an import quota is the tariff that would have led to the same quantity of imports as the quota. Assuming perfect competition, how does the tariff equivalent of a particular quota vary if there is an increase in (rightward shift of) the importing country’s demand for the good? How does it vary if there is an increase in the importing country’s supply of the good? Is it possible for either of these changes to cause the tariff equivalent of the quota to become negative?
5. Suppose that the purpose of President Bush, when he levied tariffs on steel last year, was to increase employment in the steel industry to a certain level in order to achieve the benefit of those additional workers voting for Republican candidates in the November election. Based on the small-open economy, partial equilibrium model of a tariff, is this the economically optimal way for him to accomplish this objective? If not, what policy or policies might have achieved it at lower cost to the American economy? Do you think these policies would have been politically acceptable?
6. Suppose that our country is importing (but also producing) a good whose production causes a negative externality to the world environment. Assuming that the foreign country that is exporting the good to us does not use any policy itself, might an import tariff be beneficial, for us and/or for the world as a whole? Is there any other policy that we could use that would be preferable? What, from the perspective of the world, is the optimal solution to the problem of this negative externality?
7. Suppose that, prior to entering a free trade agreement with the European Union, Macedonia imports 30 tons of steel a year from Russia, subject to a 100% tariff. After entering the free trade agreement, it imports 70 tons of steel from Europe and none from Russia. Based on this information alone, can you tell whether Macedonia has gained or lost by reducing its steel tariff to zero against imports from the EU? If so, show why; if not, show what the answer depends upon.