Exercise Sheet 6: Commercial Policy. Short Solutions

Exercise 1

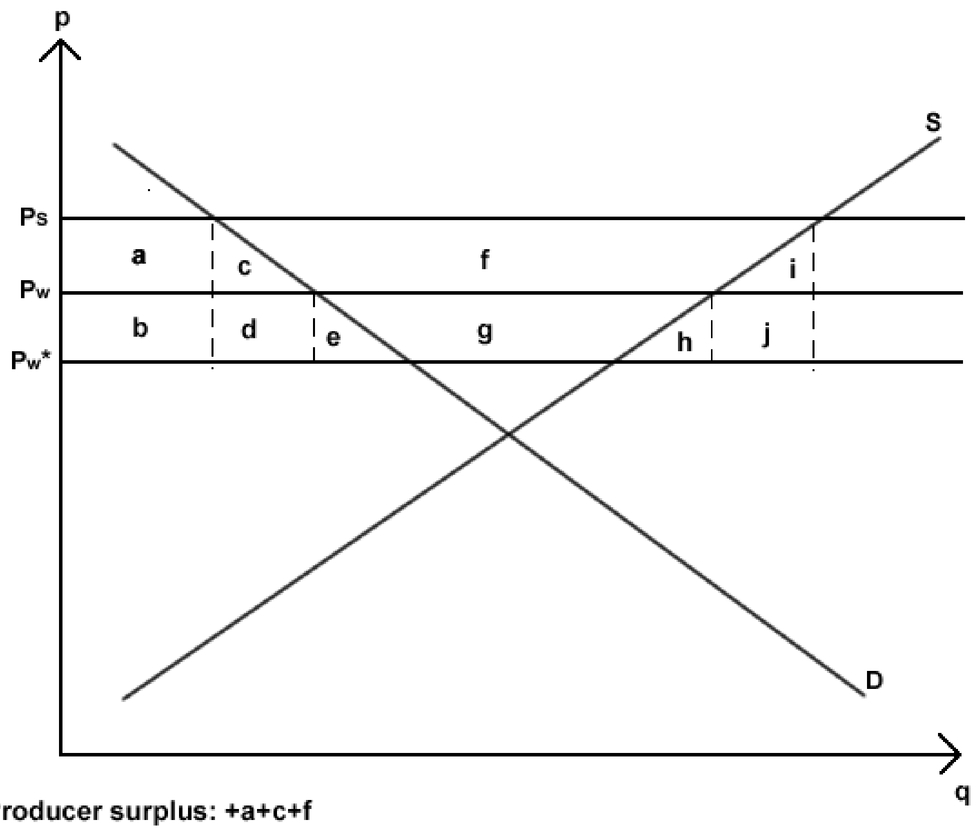
Consider the graph on slide 5 in the lecture notes about commercial and industrial policy. If the tariff increases, the world price of the good decreases. However, it is not clear whether this increases government revenue. Government income per imported good increases, but total imports decrease. Graphically, one can see that an increase in the tariff makes the rectangles c + e higher but also narrower. The net effect of an increase of the tariff on government revenue is unclear. Furthermore, the welfare losses represented by b+d increase with an increase in the tariff. If the tariff is prohibitive, i.e. no imports take place at all, then government revenue from the tariff is zero and the welfare losses b+d are maximized.

Exercise 2

a) If the country is a small player in the good concerned, the subsidy will not change the world price of the good. The graph showing the effect on consumer surplus, producer surplus, government revenue and total welfare is the one on slide 8 of the lecture slides on commercial and industrial policy.

b) If the country is a large player in the good concerned, the subsidy will lower the world price of the good. Hence the terms of trade of the country get *worse* as a result of the subsidy. The welfare loss is larger compared to a).

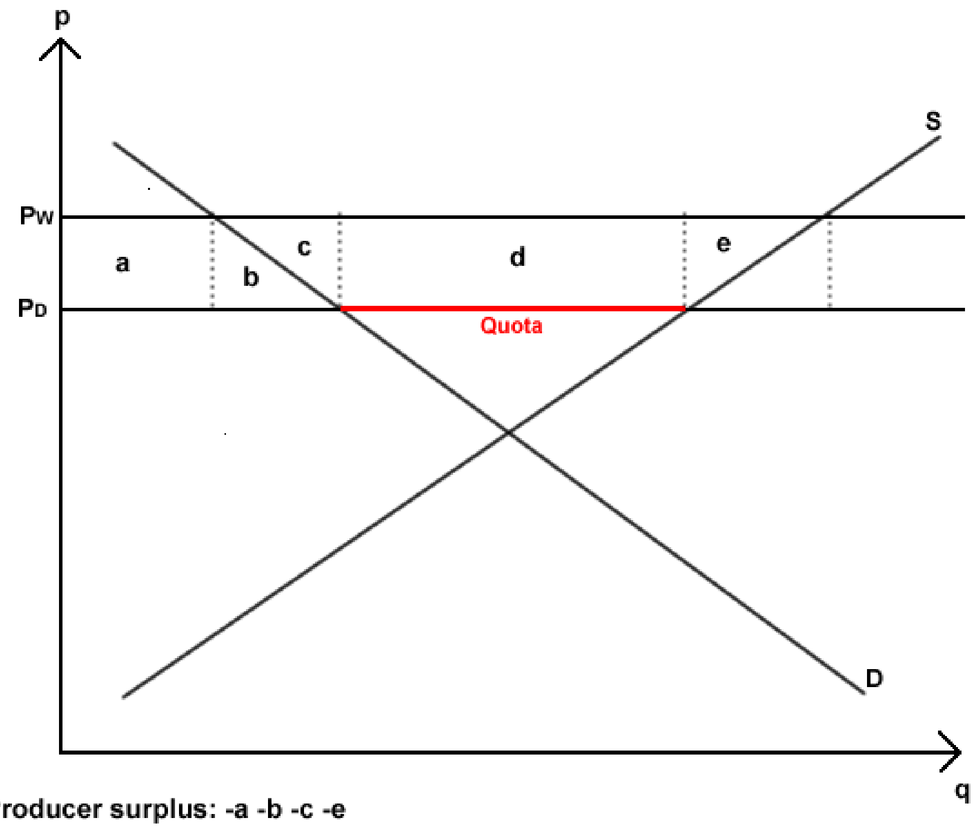
Denote the world price before the subsidy as P_w, the world price after the subsidy as P_w^* and the price with subsidy as P_s. The graph below shows the effect on consumer surplus, produces surplus, government revenue and total welfare.



Producer surplus: +a+c+f
Consumer surplus: -a-c
Government revenue: -c-d-e-f-g-h-i-j
Total welfare: -c-i-d-e-g-h-j

Exercise 3

The graph below shows how an export quota can implement a domestic price P_D which is below the world price P_W. Those export firms who are allowed to export get an additional rent of d. We see in the graph that consumers profit from the export quota but the effect on total welfare is negative since the gain of consumer rent does not fully compensate the loss of producer rent.



Producer surplus: -a -b -c -e
Consumer surplus: +a+b
Total welfare: -c-e