

International Economics

November 24, 2016

Exercise on: import duty and quota with imperfect competition

Suppose that in the country A DVDs are produced by a monopolist facing the following demand function:

$$p = 14 - 0.3q$$

The country is open to free trade and the world price of DVDs is $p^* = 2$.

1. What is the quantity of DVDs produced by the monopolist in the open economy, if its total cost are $TC = 1350000 + \frac{1}{2}cq^2$, with $c = 0.12$? Draw demand function (D) and marginal cost function (MC).

2. Calculate the quantity offered by the monopolist at the world price (q_M^*) and the quantity demanded (q^*). How many DVDs are imported in country A?

3. Suppose now that there is an import duty $D = 1$. How many DVDs are now imported with the duty.

4. Instead of the import duty, the Government decides to impose a quota that have the same quantity effect of the duty. How much is the quota corresponding to an import duty of 1 euro?

5. Calculate and draw the demand function that has to be served by the monopolist.

6. How much is the price of DVDs in country A? Compare it to the price with the import duty.

