

International Economics

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Filippo Santi and Julian Hinz

Problem Set 4 - Monopolistic Competition (2) and Trade Policy

References: Feenstra Taylor "International Economics", Chapter 8

Exercise 1: Monopolistic competition

- In a basic model of monopolistic competition, what is the source for increasing returns to scale? Show that in equilibrium the price a firm offers is equal to its average cost.
- What happens to firms and consumers, when an economy goes from autarky to trade?
- What is the "love for variety"? Give an example.

Exercise 2: Trade Policy - Tariffs

Suppose Home is a *small country*. Consider Figure 1 to answer all questions.

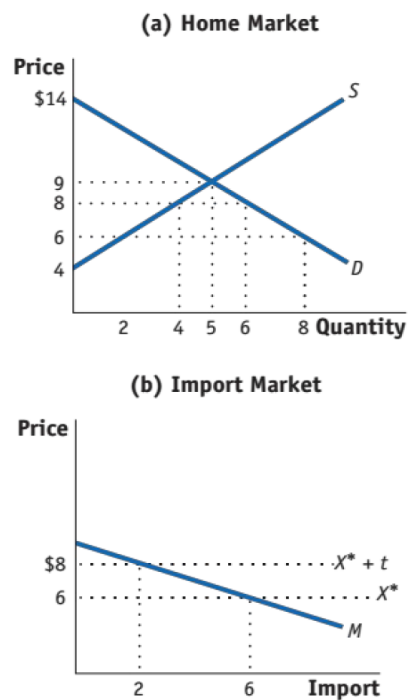


Figure 1: Home market and Demand for Imports

- a. Calculate the surplus for both Home's consumers and producers *in absence of trade*.
- b. Now, suppose that Home engages in trade, facing $P_w = 6$ US\$. Determine the surplus of both consumers and producers under free trade. Does Home benefit from trade? Explain.
- c. Concerned about welfare of local producers/facing political pressure, the government in Home imposes a *tariff* $t = 2$ US\$. Determine the net effect of the tariff on the economy.

Exercise 3: Trade Policy - Import Quotas

Refer once more to Figure 1. Suppose that, instead of a tariff, Home applies an *import quota*. The quota is set to limit the imports to maximum 2 units.

- a. Determine the net effect of the import quota on Home's economy **if** the quota licenses are allocated to local producers
- b. Calculate the net effect of the import quota on Home's welfare **if** the rents are earned by Foreign exporters (Voluntary Export Restraints)
- c. Compare your answers to points (a) and (b) with point (c) of the previous exercise.

Exercise 4: Trade Policy - Wrapping up

Suppose the following demand and supply curves for wheat at Home and in Foreign:

$$\begin{aligned} D^h &= 100 - 20p \\ S^h &= 20 + 20p \end{aligned}$$

$$\begin{aligned} D^f &= 80 - 20p \\ S^f &= -40 + 40p \end{aligned}$$

- a. Derive and Plot Home's import demand schedule.
- b. Derive and Plot Foreign's export supply curve. What price would prevail in Foreign in autarky?
- c. Find and Plot the equilibrium under free trade. What's the World Price of wheat? What's the volume of world trade?
- d. Determine and Plot the effects of a specific tariff $t = 0.5$, applied by Home on wheat imports on:
 - The Price of Wheat in Both Countries
 - The Quantity of Wheat supplied and demanded in each country.
 - The Volume of Trade.
- e. Determine the effect of the tariff on the welfare of Home's consumers, producers, and government (compare with a free trade scenario, where $P^w = 1.5$).

- f. Plot and compute the Terms-of-Trade gain, the efficiency loss, and the total effect on welfare of the tariff.