

## Exam :: International Trade

### Exam instructions:

- Closed-book exam: supporting materials are not allowed.
- Total time: 2 hours.
- When answering the questions below, please try to focus on the topic being asked.
- Choose and answer 4 questions only. Answering *more than four* questions implies getting zero points in the exam.

### Question 1, Standard Trade Model (5 points)

Explain the idea of biased technological growth (you can use a diagram to illustrate it).

Next, for each of the following situations, indicate whether they represent import-biased or export-biased growth and the possible effects on welfare through the terms of trade. Please indicate clearly to which country you refer to.

1. The US economy exports nuclear generators. However, because of security concerns, many countries are developing wind turbines to produce electricity.
2. European countries import microchips from south-east Asia. COVID-19 greatly affected supply chains and, as a result, there was a chip shortage. As a response, the European Union decided to heavily invest in the production of European microchips.
3. France exports wheat. The use of fertilizers doubles the amount of wheat produced in France.

### Question 2, Standard Trade Model (5 points)

Explain the idea of “impoverishing growth” and relate it to the concept of biased technological growth.

### Question 3, Trade Policy (5 points)

Demand at Home for good X is given by;

$$Q_h^d = 50 - 10p.$$

The supply curve is

$$Q_h^s = 10 + 10p.$$

1. Compute the autarky equilibrium (price and quantity).
2. Derive the demand for imports.

Foreign is characterized by the following curve indicating its supply of exports:

$$Q^e = 20 + 20p.$$

- Under the assumption of free trade, determine the world equilibrium price and the quantity traded.

Suppose that Home is a **small open economy**, and it imposes a **specific** tariff  $\tau = 0.5$  on imports.

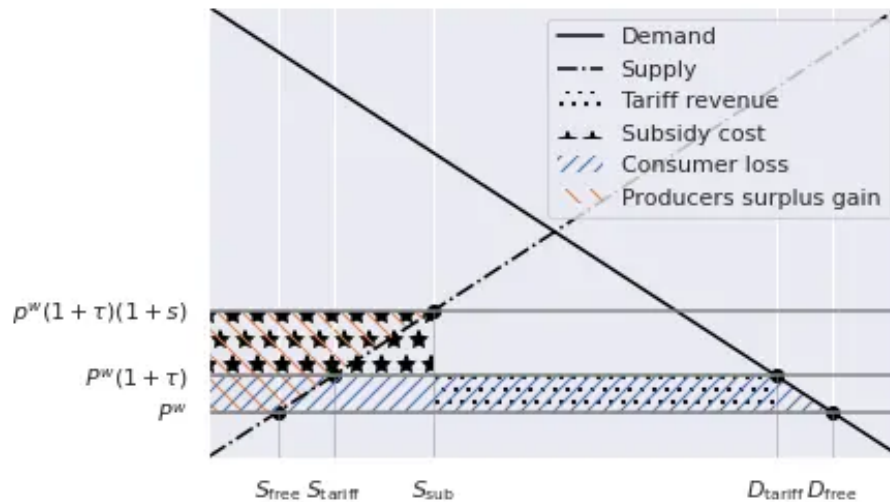
- Compute the amount of imports and discuss how this tariff affects home producers, consumers and the government. Illustrate your discussion with a diagram.

Now, Home is a **large** economy that introduces the same tariff  $\tau = 0.5$  on imports.

- Compute the amount of imports and discuss how this tariff affects home producers, consumers and the government. Illustrate your discussion with a diagram.
- Can a tariff on imports increase welfare at home? Discuss this possibility.

#### Question 4, Trade Policy (5 points)

Explain how a liaison mechanism operates and why it increases local production more than just a tariff. You can refer to the graph below.



#### Question 5, Trade Policy (5 points)

Home is a **small autarkic** economy where a **monopoly** produces good  $X$ . Suppose that Home opens up to international trade and, because the international price  $p^w$  is lower than the autarky price, consumers import the good.

1. At what price will the monopoly sell its production at Home? Explain in detail why this is the case and how international trade limits monopoly power.
2. What happens if a tariff  $\tau$  is imposed on imports?
3. Suppose that, instead of a tariff, the government decides to limit imports using a quota. Use the concept of residual demand to explain how the introduction of the quota allows the monopoly to regain its power.

**Question 6, Trade Policy (5 points)**

In general, distortions to free trade in the form of tariffs and subsidies reduce total welfare for a country (there are exceptions). Yet, many countries implement some sort of protectionism. For instance, it can be argued that infant industries require some protection. Explain how a tariff can provide protection to an infant industry. In your opinion, what would contribute more to boosting its growth: a tariff or a liaison mechanism? Argue your answer.