

### Topic 3. Demand and supply in the external trade.

1. Defining of the world price and trade volume.
2. Distribution of trade profit between the countries.
3. Terms of trade.
4. International trade and income distribution.
5. Standard model of international trade.
6. The influence of external trade on consumers' welfare and producers' income.



#### Key Concepts and Terms

Market efficiency and inefficiency, consumer surplus, producer surplus, domestic price changes, foreign price changes, world prices, trade profit, terms of trade, consumers' welfare, producers' income, budget constraint, diminishing returns, mobile factor, production function, production possibility frontier, specific factor, specific factors model.

#### ?Study questions?

1. What is the difference between income and wealth? Which is easier to analyse? Which has most often been equated with economic power?
2. How does the commodity terms-of-trade concept attempt to measure the direction of trade gains?
3. What are the effects of transportation costs on international trade patterns?
4. Explain how the international movement of products and of factor inputs promotes an equalization of the factor prices among nations.
5. How does the Heckscher-Ohlin theory differ from Ricardian theory in explaining international trade patterns?
6. The Heckscher-Ohlin theory demonstrates how trade affects the distribution of income within trading partners. Explain.
7. How does the Leontief paradox challenge the overall applicability of the factor-endowment model?
8. Identify who benefits and who loses as a result of trade.
9. Explain graphically that there are gains and losses from trade, but that the overall effect is a net gain.
- 10 How can economies of large-scale production affect world trade patterns?

#### Multiple-Choice Questions?

1. Producer surplus is represented in the typical supply and demand diagram as:
  - a. the product of the equilibrium price and the equilibrium quantity.
  - b. the area below the supply curve up to the equilibrium price and quantity.
  - c. the area above the demand curve but below the equilibrium price;
  - d. the area above the supply curve and below the equilibrium price.
2. Consumer surplus is:
  - a. the area between the supply curve and the demand curve;
  - b. the difference between welfare gained from consuming the equilibrium level of

- output and the total revenue paid to producers;
- c. the welfare gain to consumers from being able to buy extra products below the equilibrium price;
  - d. all of the above;
  - e. none of the above.
3. When an economy shifts from no trade to free trade, the adjustment costs in the economy depend on:
- a. how well banks and financial markets can shift the flow of savings from financing investment in shrinking industries to financing investment in the expanding export industries;
  - b. how easily the owners of specialized physical and human capital can shift their capital to other industries;
  - c. how long it takes to shift physical capital from one sector to another;
  - d. all of the above;
  - e. none of the above.
4. All other things equal, the partial equilibrium model shows that a decline in transport costs will:
- a. decrease the volume of trade;
  - b. raise the price of imports in the importing country;
  - c. increase the volume of trade;
  - d. reduce the total gains from trade.
5. Which of the following statement(s) is/are always true?
- a. a product's value is determined entirely by the consumer;
  - b. value depends on cultural perceptions;
  - c. providing value to overseas customers is not as difficult as marketing in a producer's home economy;
  - d. the perceived benefits of goods and services in export markets are often similar to the perceived benefits of those same goods and producers' home markets.
6. The terms of trade are defined as export to import prices. According to neoclassical analysis introduction of an import duty will:
- a. decrease terms of trade of a large country;
  - b. decrease terms of trade of a small country;
  - c. increase terms of trade of a small country;
  - d. increase terms of trade of a large country;
  - e. not change terms of trade of a large country.
7. In trade between a small and a large nation:
- a. the large nation is likely to receive all of the gains from trade;
  - b. the small nation is likely to receive all of the gains from trade;
  - c. the gains from trade are likely to be equally shared;
  - d. we cannot say.
8. "The importance of being unimportant" refers to which of the following?
- a. small countries are likely to gain a great deal from trade since they have little impact on world prices;
  - b. small countries are likely to gain a great deal from trade because they will be able to sell large amounts on world markets;

- c. large countries are likely to gain a great deal from trade since they have a large impact on world prices;
- d. all countries are will gain from trade because every country will have a comparative advantage in at least one good.

9. If nation A can produce 5 units of good X or 10 units of good Y and nation B can produce 4 units of good X or 12 units of good Y we can conclude that both nations would gain from trade if nation A sold \_\_\_\_\_ units of good \_\_\_\_\_ for one unit of good \_\_\_\_\_

- a. 0.4; Y; X;
- b. 2.5; Y; X;
- c. 2.5; X; Y;
- d. 0.4; X; Y.

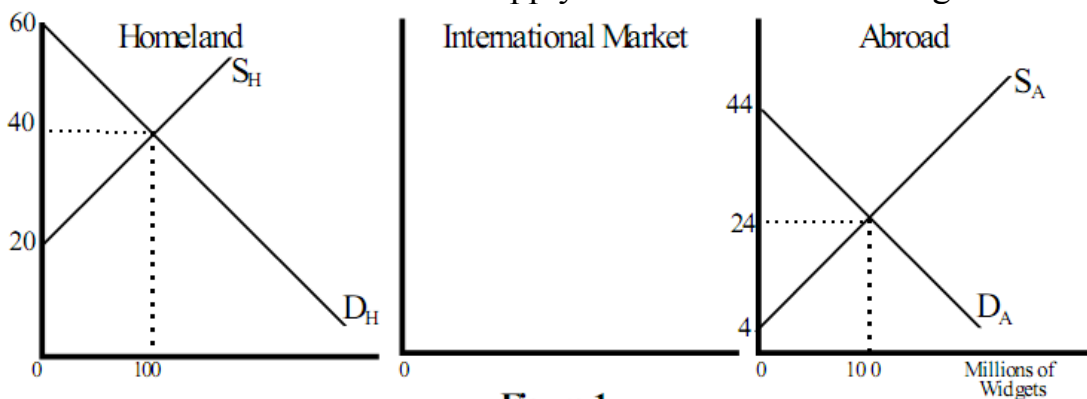
10. An offer curve”

- a. shows a country's willingness to trade at the most favourable terms of trade;
- b. is also called a reciprocal demand curve;
- c. shows a country's willingness to trade at all possible terms of trade;
- d. b and c are both correct

### ✍ Exercises

1. Suppose that the Homeland and Abroad markets for widgets are given in Figure 1 below. Prices are in dollars and quantities are given in millions of widgets. Note that the supply and demand curves are straight lines, so it is easy to calculate the slopes and find the intersections points.

a. Draw the international demand and supply curves in the centre diagram.



**Figure 1**  
The World Market for Widgets

b. Calculate the gains from trade in widgets in Homeland and Abroad, distinguishing among the gains and losses in consumer surplus and producer surplus.

2. Use the Solow model to illustrate how international trade causes (a) an immediate increase in output and (b) a secondary increase in output.

3. Explain the “resource curse.”

4. Table 3.1 illustrates the supply and demand schedules for calculators in Sweden and Norway. On graph paper, draw the supply and demand schedules of each country.

Table 3.1

Sweden			Norway		
Price	Supply	Demand	Price	Supply	Demand

0	0	1200	0	--	1800
5	200	1000	5	--	1600
10	400	800	10	--	1400
15	600	600	15	0	1200
20	800	400	20	200	1000
25	1000	200	25	400	800
30	1200	0	30	600	600
35	1400	--	35	800	400
40	1600	--	40	1000	200
45	1800	--	45	1200	0

- In the absence of trade, what are the equilibrium price and quantity of calculators produced in Sweden and Norway? Which country has the comparative advantage in calculators?
  - Assume there are no transportation costs. With trade, what price brings about balance in exports and imports? How many calculators are traded at this price? How many calculators are produced and consumed in each country with trade?
  - Suppose the cost of transporting each calculator from Sweden to Norway is \$5. With trade, what is the impact of the transportation cost on the price of calculators in Sweden and Norway? How many calculators will each country produce, consume, and trade?
  - In general, what can be concluded about the impact of transportation costs on the price of the traded product in each trading nation? The extent of specialization? The volume of trade?
5. Please explain how an intra-industry trade in horizontally differentiated goods (the same quality) can appear. What will be impact of such a trade on consumers' welfare? Will producers be better off? (Hint: please use Krugman's model).
6. Study the table below and answer the questions that follow.

Table 3.2

Year	Index of export prices	Index of import prices	Terms of trade
2005	100	100	100
2010	105	101	A

- Calculate the terms of trade for A. Show ALL calculations.
  - What does a decrease in the terms of trade mean?
  - What is the base year according to the table?
  - Describe the movement in the terms of trade from 2005 – 2010.
7. Suppose the demand for baseballs is given by  $D = 1,000 - 20P$ . Calculate consumer surplus at a market price of \$20. Calculate the change in consumer surplus if the price increases by \$5.
8. Suppose the supply of baseballs is given by  $S = 30P$ .
- Calculate producer surplus at a market price of \$20.
  - Calculate the change in producer surplus if the price decreases by \$5.
8. Please give three different reasons, why countries can benefit from free trade. In Isoland international trade is forbidden. The country's Minister of Economics argues

that Isoland has nothing to gain from free trade, because as a cutting-edge leader in all industries the labour productivity is higher than in the rest of the world. To underpin his view he refers to the following statistic of labour input used in the production of cars and computers:

Table 3.3

	Working hours per car	Working hours per computer
Rest of the world	120	40
Isoland	50	32

What would be your advice for the government of Isoland? Please elaborate.

The population of Isoland consists of 1000 workers, each of them working 120 hours per year. Every year, each worker buys a new car, the rest of the income is spent on new computers. How many computers could a worker afford with and without free trade if you assume that Isoland is too small to have any significant effect on world prices?

9. In 1986, the price of oil on world markets dropped sharply. Since the United States is an oil-importing country, this was widely regarded as good for the U.S. economy. Yet in Texas and Louisiana 1986 was a year of economic decline. Why?

10. In the text you have examined the impacts of increases in the supply of capital and land. But what if the mobile factor, labour, increases in supply?

- a. Analyse the qualitative effects of an increase in the supply of labour in the specific factors model, holding the prices of both goods constant.
- b. Graph the effect on the equilibrium for the numerical example in problems 2 and 3, given a relative price of 1, when the labour force expands from 100 to 140.