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МІНІСТЕРСТВА ОСВІТИ І НАУКИ УКРАЇНИ

Theories of International Trade

Countries engage in international trade for two basic reasons, each of which contributes to their gain from trade.

First, countries trade because they are different from each other. Nations, like individuals, can benefit from their differences by reaching an arrangement in which each does the things it does relatively well.

Second, countries trade to achieve economies of scale in production. That is, if each country produces only a limited range of goods, it can produce each of these goods at a larger scale and hence more efficiently than if it tried to produce everything.

In the real world, patterns of international trade reflect the interaction of both these motives. As a first step toward understanding the causes and effects of trade, however, it is useful to look at simplified models in which only one of these motives is present.

1. CLASSICAL THEORIES OF INTERNATIONAL TRADE

According to the classical theory of international trade, every country will produce their commodities for the production of which it is most suited in terms of its natural endowments (climate, quality of soil, means of transport, capital, etc.) It will produce these commodities in excess вЫШЕ of its own requirement and will exchange the surplus with the imports of goods from other countries for the production of which it is not well suited or which it cannot produce at all.

Thus all countries produce and export these commodities in which they have cost advantages and import those commodities in which they have cost disadvantages.

Types of Cost Difference in Production

Economists speak about three types of cost difference in production, they are

1. Absolute cost difference,
2. Equal cost difference,
3. Comparative cost difference.

Absolute Cost Differences:

Adam Smith argued that international trade is advantageous for all the participating countries only if they enjoy absolute differences in the cost of production of the commodity which they specialise. As in the case of individuals where each specialises in the production of that commodity in which he has an absolutely superiority in terms of cost, so also each country specialises in production of goods based on absolute advantage.

The principle of absolute difference in cost can be explained with the help of table given below. Let us assume that we have 2 countries, I and II specialising in the production of X and Y.

One Day's Labour Produces

Country	Commodity X (in Units)	Commodity Y (in Units)	Internal Exchange Rate	
			X	Y
I	20	10	2	1
II	10	20	1	2

In country I, one day's labour produces 20x or 10y. The internal exchange rate is 2 : 1. In country II, one day's labour produce 10x or 20y which gives us the domestic exchange rate of 1 : 2. Country I has the absolute advantage in the production of X (as $20 > 10$) and country II in Y (as $10 < 20$). If these countries enter into trade with the international exchange of 1 : 1, both countries stand to benefit. Country I will have 1y for 1x as against $1/2y$ for 1x within the country. Similarly country II will have 1x for 1y as against $1/2x$ for 1y within the country.

Based on this example, according to Adam Smith, it can be pointed out that international trade to be beneficial, each country must enjoy absolute difference in cost of production.

2. Equal Difference in Cost:

Adam Smith, in order to strengthen his argument in favour of absolute difference in cost pointed out that trade is not possible if countries operate under equal difference in cost instead of absolute difference.

Country	Commodity X (in Units)	Commodity Y (in Units)	Internal Exchange Rate	
			X	Y
I	20	10	2	: 1
II	10	5	2	: 1

The above table gives us the internal exchange rate $2x : 1y$ in both countries. Since the exchange ratio between X and Y in both countries is the same; none of them will benefit by entering into international trade.

Based on this example, according to Adam Smith, for international trade to be beneficial countries must enjoy absolute difference in cost. Trade would not take place when the difference in cost is equal.

3. Comparative Difference in Cost:

David Ricardo agreed that absolute difference in cost gives a clear reason for trade to take place. He, however, went further to argue that even that the country has absolute advantage in the production of both commodities it is beneficial for that country to specialise in the production of that commodity in which it has a greater comparative advantage. The other country can be left to specialise in the production of that commodity in which it has less comparative advantage. **According to Ricardo the essence for international trade is not the absolute difference in cost but comparative difference in cost.**

Ricardo's Theory of Comparative Advantage

David Ricardo stated a theory that other things being equal a country tends to specialise in and exports those commodities in the production of which it has maximum comparative cost advantage or minimum comparative disadvantage. Similarly the country's imports will be of goods having relatively less comparative cost advantage or greater disadvantage.

Ricardo's Assumptions:-

1. There are two countries and two commodities.
2. There is a perfect competition both in commodity and factor market.
3. Cost of production is expressed in terms of labour i.e. value of a commodity is measured in terms of labour hours/days required to produce it. Commodities are also exchanged on the basis of labour content of each good.
4. Labour is the only factor of production other than natural resources.
5. Labour is homogeneous i.e. identical in efficiency, in a particular country.
6. Labour is perfectly mobile within a country but perfectly immobile between countries.
7. There is free trade i.e. the movement of goods between countries is not hindered by any restrictions.
8. Production is subject to constant returns to scale.
9. There is no technological change.

10. Trade between two countries takes place on barter system.
11. Full employment exists in both countries.
12. There is no transport cost.

2. **HECKSCHER- OHLIN INTERNATIONAL TRADE THEORY**

The original H-O model assumed that the only difference between countries was the relative abundances of labor and capital. The original Heckscher–Ohlin model contained two countries, and had two commodities that could be produced. Since there are two (homogeneous) factors of production this model is sometimes called the "2×2×2 model".

Relative endowments обеспеченность of the factors of production (land, labor, and capital) determine a country's comparative advantage. Countries have comparative advantages in those goods for which the required factors of production are relatively abundant насыщенный locally. This is because the profitability of goods is determined by input costs. Goods that require inputs that are locally abundant will be cheaper to produce than those goods that require inputs that are locally scarce.

3. . LEONTIEF PARADOX

The Heckscher-Ohlin theory states that each country exports the commodity which uses its abundant factor intensively.

The HO theory was generally accepted on the basis of casual empiricism.

Moreover, there wasn't any technique to test the HO theory until the input-output analysis was invented.

The first serious attempt to test the theory was made by Professor Wassily W. Leontief in 1954.

Leontief reached a paradoxical conclusion that the US – the most capital abundant country in the world by any criterion – exported labor-intensive commodities and imported capital - intensive commodities. **This result has come to be known as the Leontief Paradox.**

Leontief himself suggested an explanation for his own paradox. He argued that US workers may be more efficient than foreign workers. Perhaps U.S. workers were three times as effective as foreign workers. Note that this increased effectiveness of the American workers was not due to a higher capital-labor ratio, because we assume that countries have identical technologies and hence identical capital-labor ratios.

It means that the average American worker is three times as effective as he would be in the foreign country. Given the same K/L ratio, Leontief attributed the superior efficiency of American labor to superior economic organization and economic incentives in the U.S.

However, Leontief found very few believers among economists.

4. Rybczynski Theorem

Rybczynski Theorem discusses the effect of economic growth on a nation's trade.

It states that at constant prices, an increase in one factor endowment will increase by a greater proportion the output of the good intensive in that factor and will reduce the output of the other good.

An increase in the supply of labour expands production possibilities disproportionately in the direction of the production of labour-intensive good (wheat), while an increase in the supply of capital expands them disproportionately in the direction of the production of capital-intensive good (cloth).

Suppose the supply of capital increases by 10% and that of labour is unchanged. If both goods continue to be produced, then factor prices will not change (because of factor-price equalisation theorem) and so the techniques of production will also not change.

As a result of increase in capital,

(a) the output of both goods cannot rise by 10% because this would require 10% more labour, and the supply of labour has not changed;

(b) output of both goods cannot rise by more than 10%,

(c) output of both goods cannot fail to rise by 10% because otherwise the increased capital could not all be utilised;

(d) thus the output of one rises by more than 10% and that of the other does not. Because cloth is capital intensive, it must be cloth output that rises

more than 10%. The labour supply has not changed, but the cloth industry has expanded and so has increased US use of labour. Therefore, the output of wheat must actually fall.

By combining this result with the Heckscher-Ohlin theorem, we can see how economic growth affects a nation's trade.

If a country's capital increases by 10%, national income will rise by some smaller proportion, because only part of national income comes from the earnings of capital.

This increased income will normally be spent on both goods, so that at constant prices, national demand for both goods will rise by less than 10%.

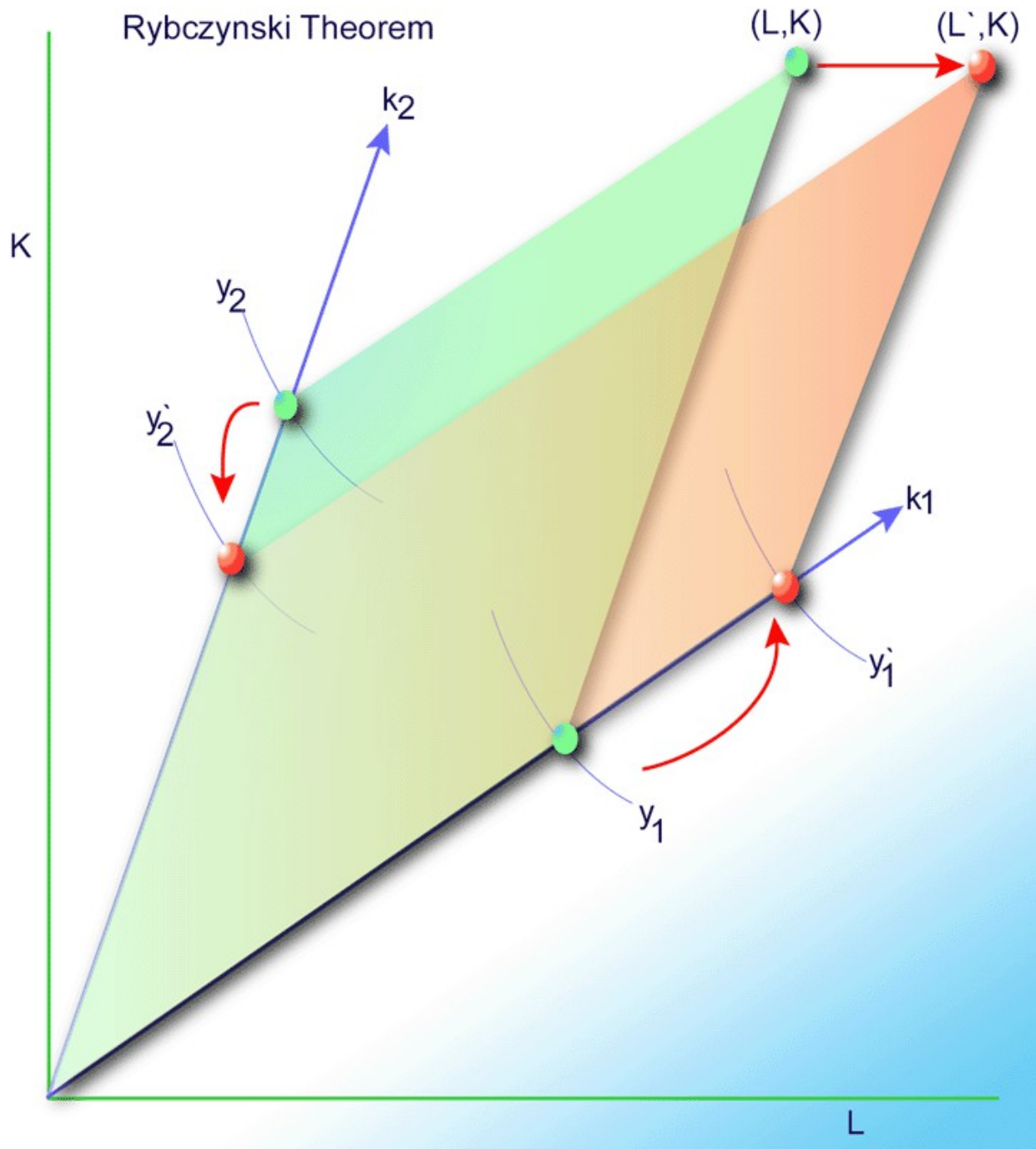
According to Rybczynski Theorem, the supply of capital-intensive good (cloth) rises more than 10%, while the supply of labour-intensive good (wheat) falls.

Thus, cloth supply rises relative to demand, and wheat demand rises relative to supply.

Now, if the country is capital intensive, then according to the Heckscher-Ohlin theory, it exports cloth and imports wheat, so that the growth of capital causes the country to trade more at each price.

Thus, its offer curve shifts outward. If the country is labour abundant, its offer curve shifts inward. The general conclusion is economic growth that accentuates country's relative factor abundance shifts its offer curve out; economic growth that moderates the country's relative factor abundance shifts its offer curve in.

Rybczynski Theorem



4.1 Dutch Disease

In the late 1950s, the Netherlands discovered the huge Slochteren gas fields in the Groningen province. As a result, the country initiated a rapid exploitation of the natural resource, quickly becoming a net exporter of natural gas and experiencing a huge increase in revenues. Consequently, national wealth and overall general welfare increased.

However, amid the beneficial results of the natural gas-based export boom, Holland witnessed several negative effects as well. First, the country's manufacturing sector declined throughout the 1960s and into the 1970s. Second, manufacturing employment declined steadily during the same time. For example, in 1964 the Netherlands had 1,823,000 workers in industry but by 1986 the number had fallen to 1,381,000--a 25% reduction in industry jobs.

Dutch Disease refers to the adverse effects of a natural resource boom on the manufacturing or agriculture sector. Massive increases in revenue from the booming sector result in a temporary appreciation of the real exchange rate. The immediate impact of this is to reduce worldwide demand for other exports of this country. In addition, assuming that the country does not devalue the nominal exchange rate to maintain the old level, the booming energy sector causes domestic inflation greater than the world inflation rate; consequently, profits for exporters will decline as wages and other input prices rise more quickly than the world price of exports.

Since their profits fall, producers of exports will produce less and incomes and employment will decrease.

Said in another way, the boom and subsequent surge in resource exports cause an appreciation of the real

exchange rate (through the appreciation of the nominal exchange rate and/or a rise in the domestic price level) which decreases the competitiveness of the country's other, non-resource tradable goods. This tradable goods sector experiences a decrease in production since fewer international buyers are purchasing these goods due to their higher relative prices. In addition, since the boom causes the domestic price level to increase, producers of tradable goods face higher production costs, which causes them to reduce their output. Consequently, the tradable goods sector contracts, and deindustrialization or de-agriculturalization sets in.

5. New trade theory

Paul Krugman's explanation of trade between similar countries was proposed in a 1979 paper in the *Journal of International Economics*, and involves two key assumptions: that consumers prefer a diverse choice of brands, and that production favors economies of scale. Consumers' preference for diversity explains the survival of different versions of cars like Volvo and BMW. However, because of economies of scale, it is not profitable to spread the production of Volvos all over the world; instead, it is concentrated in a few factories and therefore in a few countries (or maybe just one). This logic explains how each country may specialize in producing a few brands of any given type of product, instead of specializing in different types of products.

Many models of international trade now follow Krugman's lead, incorporating economies of scale in production and a preference for diversity in

consumption. This way of modeling trade has come to be called New Trade Theory.

Krugman's theory also took into account transportation costs, a key feature in producing the "home market effect", which would later feature in his work on the new economic geography. The home market effect "states that, *ceteris paribus*, the country with the larger demand for a good shall, at equilibrium, produce a more than proportionate share of that good and be a net exporter of it."

When there are economies of scale in production, it is possible that countries may become 'locked in' to disadvantageous patterns of trade. Nonetheless, trade remains beneficial in general, even between similar countries, because it permits firms to save on costs by producing at a larger, more efficient scale, and because it increases the

range of brands available and sharpens the competition between firms.