[Academic Script]

[Absolute, Equal and Comparative Cost Differences]

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Absolute, equal and comparative cost differences

Introduction:

International trade means trade between nations. According to Ohlin, "international trade is a special case of inter-regional trade". No country can produce all the goods and services that it requires. Countries import the goods and services which are not available with them and export goods and services which are in excess in quantities. The need for international trade arises due to uneven distribution of natural and human resources. International trade increases employment and competition which lead to economic growth. It also increases the welfare of the consumers. Consumers can buy the commodities which nation cannot produce at home.

International trade arises because of following reasons:

1. Human wants are unlimited. One nation cannot produce everything that it demands. Nation has to depend on the other nation.

2. The quality of factors of production in different nations is different.

3. Natural resources are unevenly distributed among various nations.

4. Technological developments in different countries differ.

5. International trade is a result of division of labor and specialization. The division of labor in each country is also different.

6. The factor endowment in different nations differs because the quality of factors of production in different nations is different.

Absolute Cost Differences:

This concept was given by Adam Smith in his famous book 'An Enquiry into the Nature and the Causes of Wealth of the Nations' published in 1776. According to Smith the main reason for international trade is division of labor. Due to division of labor each country has the advantage of producing a particular commodity. We assume that there are two countries X and Y, and two commodities A and B. Both countries can produce both commodities. The production of both countries with 8 hours of labor work is depicted in Table-1.

Table-1: Absolute Cost Differences (production with 8 hours of labor work)

	Commodity	
Country	**A**	**B**
X	40	20
Y	20	40

1. Country X can produce 40 units of A and 20 units of B with 8 hours of labor work.

2. Country Y can produce 20 units of A and 40 units of B with 8 hours of labor work.

3. It means that country X has the absolute advantage in the production of commodity A and country Y has the absolute advantage in production of commodity B.

4. Therefore, country X produces commodity A and exports to country Y and country Y produces commodity B and exports to country X. it means that country X specializes in the production of A and country Y specializes in the production of B. This kind of situation arises due to natural monopoly. Some countries have more natural resources than other countries and therefore some countries have the advantage in the production of some particular commodities.

Domestic Exchange Rate:

Country X:

40 A = 20 B.
Therefore, 1 A = 0.5 B.

It explains that country X will enter into international trade if it gets more than 0.5 units of B for 1 unit of A.

Country Y:

20 A = 40 B.
Therefore, 1 A= 2 B.

Country Y will enter into international trade if it gives up less than 2 units of B for 1 unit of A.

Therefore, the international exchange rate is higher than 1 A = 0.5 B and less than 1 A = 2 B.

We can say that country X can produce commodity A at lower cost and country Y can produce commodity B at lower cost. Thus, in such a situation international trade is mutually beneficial.

Equal Cost Differences:
If equal cost differences exist, international trade will not take place. The trade is not beneficial to any country in this situation. The equal cost differences can be explained by Table-2. We again assume that there are two countries X and Y and two commodities A and B. Both nations can produce both commodities.

Table-2: Equal Cost Differences (production with 8 hours of labor work)

	Commodity	
Country	**A**	**B**
X	40	40

Y	20	20

1. Country X can produce 40 units of A and 40 units of B with 8 hours of labor work.

2. Country Y can produce 20 units of A and 20 units of B with 8 hours of labor work.

3. Country X produces A and B both at lower cost than country Y and country Y produces A and B both at higher cost than country X.

Domestic Exchange Rate:

Country X:

40 A = 40 B.
Therefore, 1 A = 1 B.

It explains that country X will enter the international trade if it gets more than 1 unit of B for 1 unit of A.

Country Y:

20 A = 20 B.
Therefore, 1 A= 1 B.

Country Y is ready to give up less than 1 unit of B for 1 unit of A.

Country X will not accept less than 1 unit of B for 1 unit of A and Country Y is not ready to give more than 1 unit of B for 1 unit of A. In this situation trade between two countries is not possible and beneficial. No nation will gain by international trade and specialization because one country produces both commodities at lower cost than the other country. Country X is equally efficient in production of both commodities than country Y.

Comparative Cost Differences:

This theory was propounded by David Ricardo in 1817 in his book 'Principles of Political Economy and Taxation.' This theory is also known as classical theory of international trade. According to Ricardo, if comparative cost differences exist between two nations then international trade is beneficial for both nations. If all the nations have same source of production and equally developed then international trade will not take place. All nations have different natural resources, different human resources and different physical resources and therefore there is a difference in the cost of production of commodities.

Definition: The production cost of both commodities in one nation is lower than the other nation which means that one nation has the absolute advantage in production of both commodities. But one nation has the comparative advantage in production of one commodity than another commodity at home. Therefore, the nation has the comparative advantage in production of that commodity.

According to Ricardo's theory, country produces the commodity in which it has either more comparative advantage or less comparative disadvantage.

Assumptions of the Theory:

1. **2*2 model:**

   There are two nations and two commodities. We assume that there are two nations X and Y and two commodities A and B.

2. **Perfect competition:**

   There is perfect competition in the market. Which means that product is homogenous and there are large number of buyers and sellers in the market.

3. **Mobility of factors of production:**

   All the factors of production are mobile within the nation but perfectly immobile between two nations.

4. **Production cost:**

   The production cost considered as labor cost. There is only one factor of production i.e. labor. How many labor hours are used in the production of a commodity is very important.

5. **Constant cost:**

   It was assumed that production will take place under the constant cost condition. It means that the output level cannot affect the cost of production.

6. **Transportation cost:**

   The theory assumes that there are no transportation charges. This is impractical but theory assumes because transportation cost affects the prices of the commodity.

7. **No trade restrictions:**

   The international trade is not restricted by tariffs and other instruments. The international trade is free from all barriers.

8. **Size of the nation:**

   Both nations are of equal size. It means that there is no huge difference between two nations regarding their respective natural resources.

9. **Taste of the consumers:**

   There is no differences in the tastes of the consumers in both nations.

10. **Trade cycle:**

    There are no trade cycle in both nations. Economy of both nations is stable.

Theory:

Ricardo takes into account real cost, not monetary cost. Ricardo measures cost in terms of labor hours. We can explain the theory of comparative cost differences with the help of Table-3. Again we assume that there are two nations: X and Y, two commodities: A and B.

Table-3: comparative Cost Differences (production cost in hours)

Country	Commodity	
	A	**B**
X	80	90
Y	120	100

1. Country X requires 80 hours of labor work to produce 1 unit of A and 90 hours of labor work to produce 1 unit of B.

2. Country Y requires 120 hours of labor work to produce 1 unit of X and 100 hours of labor work to produce 1 unit of B.

Country X:

- Country X produces A and B at lower cost than Country Y.
- Country X has an absolute advantage in production of both commodities.
- But Country X produces A at a lower cost than B at home. Therefore, Country X has comparative advantage in production of A.
- Country X produces commodity A and exports to country Y.

Country Y:

- Country Y produces A and B at higher cost than Country X.
- Country Y has an absolute disadvantage in production of both commodities.
- But Country Y produces B at lower cost than A at home. Therefore, Country Y has less comparative disadvantage in production of B.
- Country Y produces commodity B and exports to country X.

Cost Ratio:

The cost ratio is explained in table-4.

Table-4: Cost Ratio		
Country	**Cost ratio of commodity A**	**Cost ratio of commodity B**
X	80/120 = 0.67	90/100 = 0.90
Y	120/80 = 1.50	100/90 = 1.10

Country X:

- The cost ratio of A = 0.67 (80/120)
- The cost ratio of B = 0.90 (90/100)
- **The cost ratio of A < The cost ratio of B**
- Country X produces commodity A, because production cost of commodity A is lower than the production cost of commodity B in country X. Therefore, country X specializes in production of commodity A.

Country Y:

- The cost ratio of A = 01.50 (120/80)
- The cost ratio of B = 1.10 (100/90)
- **The cost ratio of B < The cost ratio of A**
- Country Y produces commodity B, because production cost of commodity B is lower than the production cost of commodity A in country Y. Therefore country Y specializes in production of commodity B.

In general, the country produces that commodity in which the cost ratio is lower because it is either more advantageous or less disadvantageous for the country.

Domestic Exchange Rate:

International trade will take place if it is beneficial to both the countries. The domestic exchange rate is depicted in table-5:

Table-4: Domestic Exchange Rate	
Country	Domestic exchange rate
X	1 A = 80/90 B 1 A = 0.89 B

Y	1 A = 120/100 B 1 A= 1.2 B

Country X:

- 1 A= 0.89 B
- Country X has to give up 1 unit of commodity A to produce 0.89 units of commodity B
- Country X will trade if it gets more than 0.89 units of B for 1 unit of A

Country Y:

- 1 A= 1.2 B
- Country Y has to give up 1.2 unit of commodity B to produce 1 units of commodity A
- Country Y will trade if it gives up less than 1.2 units of B for 1 unit of A

Therefore, international exchange rate will be determined between 1 A= 0.89 B and 1 A = 1.2 B.

If international trade takes place then exchange rate will be determined between 1 A= 0.89 B and 1 A = 1.2 B.

Benefits from international trade:

Suppose international exchange rate is 1 A = 1 B

Country X:

- Domestic exchange rate is 1 A = 0.89 B.
- If country X trades with country Y, it gets 1 unit of B for 1 unit of A. (at home country X gets 0.89 units of B for 1 unit of A.)
- Benefit: 1 unit of B – 0.89 units of B = 0.11 units of B
- It means that firstly, country X can save 0.11 hours of labor work by entering into the international trade. Secondly, country X can use this excess labor hours in the production of commodity A to enhance the output of A.

Country Y:

- Domestic exchange rate is 1 A = 1.2 B.
- If country Y trades with country X, it gives up 1 unit of B for 1 unit of A. (at home country Y gives up 1.2 units of B for 1 unit of A.)
- Benefit: 1.2 units of B – 1 unit of B = 0.2 units of B
- It means that firstly, country Y can save 0.2 hours of labor work by entering into the international trade. Secondly, country Y can use this excess labor hours in the production of commodity B to enhance the output of B.

Limitations of the Comparative Cost Differences Theory:

1. The theory considers only two nations and two commodities. In practical world more nations are involved in international trade with more than two commodities.
2. Ricardo measures cost in terms of labor hours. It is very difficult to measure the cost in labor hours because it is quite subjective. Normally, cost is measured in money.
3. This theory assumes perfect competition. This assumption is also far from reality.
4. This theory ignores the demand side. Ricardo considers only supply side to explain the theory.
5. This theory assumes that factors are mobile within the country only. Factors cannot move from one nation to another nation. This assumption is again far from reality.
6. Ricardo makes assumption of free trade. It means that there is no obstruction to international trade. But in real world, countries impose tariffs, quota etc. and creates barriers t trade.
7. This theory explains complete specialization. It explains that one country produces only one commodity after having trade. This is not true in the real world.

Summary:

I would like to conclude this topic by summarizing what we have studied. There are mainly three types of cost differences which affect the international trade. In case of equal cost differences trade will not occur. Absolute cost differences explain that one country has the natural advantage in production of one commodity and another country has the natural advantage in production of second commodity. This natural advantage arises due to the natural monopoly of the natural resources. Ricardo's theory of comparative cost advantage is most popular and useful to understand the basic and fundamental reason of international trade.