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Factor Prices, Comparative Advantage and International Trade

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ABSTRACT:

Economics fundamental ideas of comparative advantage and international commerce explain the advantages of specialization and trade between nations. An overview of comparative advantage and its function in global trade is given in this chapter. The ability of a nation or an individual to produce a certain good or service at a lower opportunity cost when compared to other nations or individuals is known as comparative advantage. It is founded on variations in resource endowments, technology, and degrees of efficiency. According to the idea of comparative advantage, nations should focus on producing commodities and services in which they have a comparative advantage before engaging in international trade to acquire goods and services that other nations produce more effectively.

KEYWORDS:

Comparative Advantage, Goods Services, International Trade, International Commerce, Opportunity Cost.

I. INTRODUCTION

Understanding international trade is essential to understanding why countries engage in trade. The existence of pricing variations in goods and services between nations is the direct cause of international commerce. Different supply and demand factors result in price variations. Different supply circumstances result from a variety of elements, including natural endowments of economic resources, the degree of factory utilization efficiency, the level of technology, worker skill levels, factor abundance, etc. Demand variations are mostly caused by the income and dietary preferences of people in various nations. International trade will lead to an equalization of factor prices and product prices. It would be essential to familiarize ourselves with some key terms employed in the study of international trade before we continue our analysis.A definition of internal or interregional trade is the exchange of goods and services among citizens of the same nation.

The exchange of products and services between citizens of one country and those of other countries is referred to as international trade. Trade within a nation and trade between nations are both governed by the same basic principles. Within a single country, manufacturing factors can move around freely, but this is not the case internationally. In the first scenario, regional disparities in factor prices were not possible[1], [2].The places with greater pricing are always the ones that draw the factors. As a result, they would relocate from the areas where they are paid poorly to those that would pay them more. This movement would continue until there were no longer any regional price discrepancies. In the latter scenario, immigration regulations that forbid unrestricted lab our movement between nations impede mobility. The limitations apply to both the movement of capital and investment between the nations as well as the movement of workers. The movement of capital and lab our is also hampered by social, political, and cultural barriers. It is free to move products and services throughout a country. The cost of transportation and the distance are the only internal obstacles.

Due to different restrictions, such as exchange controls, non-tariff barriers, import and export levies and quotas, etc., mobility in the case of international trade is not free. The national economic climate is

largely consistent throughout all areas. Within a country, the economic environment, including the legal system, rules governing the production and trade of products, infrastructure, etc., are all the same. But the economic environments of different countries vary significantly. When it comes to monetary units, there is a major difference between domestic and foreign trading. Different nations have different currencies. All regions of a country have access to the same money and capital markets, which facilitate the interchange of commodities and services. But this is not true in a global context. International monetary discrepancies complicate transactions in ways that are not present in local trade.

Absolute Price Difference for a Factor

It happens when a factor's price in one country differs, in absolute terms, from that factor's price in another. For instance, if a person earns Rs. 100 for working a day in India but receives Rs. 500 for the same lab our in Japan, there is an absolute factor price differential between these two nations.

The Foundational Theory of Global Trade

Adam Smith's Theory of Absolute Advantage The foundation for the traditional notion of global trade was laid by Adam Smith. The hypothesis of Absolute Advantage is the name given to his hypothesis. Smith argues that if one country has a definite edge over another in one area of production and the second country has a definite advantage over the first country in a different area of production, then commerce would benefit both nations. Thus, he demonstrated how the global division of lab our will benefit all nations through commerce. Let's use an illustration to explain Smith's notion of global trade. Assume that there are only two nations in the world: America and India. Additionally, we assume that both tea and textiles are traded between these nations. Assume further that both nations are capable of producing both items if they so choose.

Assume that America can manufacture 50 units of rice or 100 units of textiles with a certain number of production components, or any other combination of two items, as long as the opportunity cost ratio stays at 2:1. It would entail giving up the chance to create two units of textiles in order for America to produce one extra unit of rice. India can create 50 units of textiles, 100 units of rice, or any other combination in the opportunity ratio of 1:2 in the same way and with the same number of production inputs. It implies that India must forgo producing 1 unit of textiles in order to produce 2 units of rice. Therefore, it is obvious that India has a distinct advantage in the production of rice whereas America has a distinct advantage in the manufacture of textiles. This means there is room for India to develop economic ties with America by focusing on the manufacturing of the good or service where each has a distinct edge[1], [3].

When they begin trading with one another, America will specialize in the manufacturing of textiles and India in the production of rice. When a country has no trading contacts with the rest of the world, it is said to be in autarky. After the commerce is established, only textiles are produced in America, while rice is produced in India. The two nations divide their resources between the productions of the good they are most advantageous at. Trade has caused the GNP of both nations to rise to 100 units. Additionally, the global trade has grown by 50 units. Trade has improved the economies of both countries without harming any of them[4], [5].

II. DISCUSSION

Although David Ricardo has made incalculable contributions to economics, he is best known for his work on important theories including the lab our theory of value, comparative advantage, and the law of diminishing returns. According to Ricardo and other economists, after a certain point in production, adding another unit will only lead to lesser increases in output. This principle is known as the law of diminishing returns. The comparative advantage argument put out by Ricardo contends that countries perform better when they concentrate on providing items with the lowest manufacturing opportunity costs. According to the lab our theory of value, a good's value is determined by the number of labs our hours it took to manufacture it, not by how much was paid for the lab ours. The concept of rentals was first introduced by Ricardo, who is also well recognized for it. He claimed in his theory of rents that asset owners only receive accruing benefits as a result of their ownership rights.English economist

David Ricardo, who lived in the eighteenth century, is recognized for his contributions to economic theory. He created the theories of rents, lab our theory of value, and comparative advantage, which are the cornerstones of current economic philosophy and the foundation of other schools of thought. Despite being best renowned for his work in economics, he also held a seat in Parliament and exercised influence in politics.

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Using the Theory of Comparative Advantage, David Ricardo

Smith's model has been further improved by Ricardo's theory of international trade. In his view, international trade would still be profitable even if no country had a clear competitive advantage over another in any given sector of production. Let's go over an explanation of Ricardo's model. Let's use the scenario where there are only two nations in the world: America and India, and rice and textiles are the only two commodities produced. In both production lines, Ricardo makes the assumption that one nation has a definitive edge over the other. It implies that the other nation has a definite disadvantage in both manufacturing sectors. Additionally, he makes the assumption that the first country has a greater comparative advantage in one line of production than the other and that the second country has a smaller comparative disadvantage in the second line of production than the first line of production[6], [7].

In other words, the comparative advantage of one country is bigger in one production line while the comparative disadvantage of the other country is less in the other line of production. Gains in production and consumption would result from the establishment of trade between these two nations. America can produce 120 units of rice or 120 units of textiles, or any other textile and rice combination, at a 1:1 opportunity cost ratio. It implies that America can create 1 unit of textile while sacrificing 1 unit of textile. In this area, America has a clear advantage in the manufacturing of both rice and textiles. India, meanwhile, is completely at a disadvantage in both production sectors. At a 1:2 opportunity ratio, she can create either 40 units of textiles, 80 units of rice, or any combination.

It would entail India producing 2 units of grains in exchange for 1 unit of textiles. Traditionally, it takes two textile units to make one unit of rice. The internal cost ratios for producing two items in the two nations are different, which suggests that there may be room for advantages via international commerce. In America, the cost of producing any good is the same, but this is not the case in India. In India, it takes two units of rice to generate one unit of textiles, and one unit of textiles to make one unit of rice. As can be seen from the table above, America has a higher comparative advantage over India in the manufacturing of textiles (3:1) than in the production of rice (1.5:1). As a result, America would focus more on producing textiles than rice. In the production of rice (1:1.5) as opposed to textile (1:3), India currently has a comparative edge over America. As a result, India would focus more on producing grains than textiles. The idea contends that a nation ought to concentrate on producing and exporting those items in which either its comparative advantages are greater or its comparative disadvantages are smaller. Therefore, only a nation can maximize its output and improve economic welfare.

Time Cost of Opportunity

The lab our theory of value, which Adam Smith and David Ricardo used as the foundation for their theories, has been criticized since it assumes that lab our is the only element in production and is therefore homogeneous. Land, work, money, and organization all of the components of production are used to make goods, not only lab ours. In 1936, Heeler created a hypothesis based on opportunity costs employing lab our and capital. It doesn't matter whether things are produced by lab our alone or by all means of production along with lab our once comparative advantage is defined in terms of opportunity

costs. Let's use an example to illustrate the notion. Let's say the United States has the capacity to create 100 units of either wheat or fabric when every resource is utilised to its full potential. The nation will be more interested in creating various products in pairs rather than individually. Since continuous returns to scale in the production have been assumed, the production possibility curve (PP), which is a straight line, displays the many combinations of wheat and cloth that the United States can create.

We measure cloth units on the X-axis and wheat units along the Y-axis. Any position on the PP production possibility curve that is inside the curve, but not outside it, is where the nation can manufacture both items. If it chooses to produce at K, 50 pieces of each fabric and grain are produced. A unit of cloth must be sacrificed in order to generate one unit of wheat, according to the production possibility curve, which is straight. So, in our scenario, the opportunity cost is 1:1. The production possibility curve of India can be depicted in a similar way. Assume India has the capacity to manufacture either 100 units of textile or 50 units of wheat. The opportunity cost of making cloth in terms of wheat is therefore 1:1/2. Both nations will gain from trade. While fabric is generally more affordable in India, wheat is more affordable in the United States. This is because it takes one unit of wheat in the United States to generate one unit of cloth, whereas it takes half a unit of wheat in India to produce the same amount of cloth. This demonstrates unequivocally that India produces fabric more cheaply than the United States and has a comparative advantage in the production of wheat. As a result, the United States will export wheat and import fabric, while India will import wheat from the United States and export cloth. Both countries would profit from this trade.

Huckster and Ohlin's Modern Theory of International Trade

Eli Huckster and Bertie Ohlin created the Modern Theory of International Trade. They contend that disparities in the relative prices of commodities among the nations are the direct cause of international commerce. These variations result from the different factor supply between the two nations. The following presumptions form the foundation of the theory:

1. Labor and capital are the only two factors.
2. There are only two nations, one of which has an abundance of capital and the other, an abundance of lab ours.
3. Only two commodities utilised both of the components in their production.
4. The marketplaces for products and factors both exhibit perfect competition.
5. The resources are fully utilised.
6. Technology has not changed.

Huckster and Ohlin projected that countries with a capital surplus would specialize in producing and exporting commodities that need a lot of capital, while nations with an abundance of lab our would focus on producing items that require a lot of labs ours.

Factor Frequency

Factor pricing can be used to define factor abundance. Accordingly, a country is said to have an abundance of capital if capital is comparatively cheap and lab our is relatively expensive, independent of the actual physical quantities of capital and lab our in the two countries. A country with a high lab our force is one where lab our costs are lower than those for capital. Ohlin discovers that the variations in factor supplies between the two nations are what account for the variations in factor pricing. You can define factor abundance in terms of physical properties. If a nation has a larger ratio of capital to lab our than another nation, that nation is considered to have comparatively abundant capital. In a similar vein, a country that has an abundance of workers is one where lab our outnumbers capital. Where KA and LA represent the total amounts of capital and lab our in-nation A, respectively, and KB and LB represent the total amounts of capital and lab our in-country B. Since country A has an abundance of capital, it will manufacture commodities that require capital, while country B will generate goods that require lab ours. The curves AB and CD represent the production possibility curves of country A and country B, respectively. While fabric requires more work than capital, steel does[8], [9].

Country A would create at Q' on its production potential curve AB and country B at Q" on its production possibility curve CD if the two nations produced the items in the same proportion along the OR ray. It is obvious that the slope at Q' is steeper than that at Q. In other words, P'P' displays a steeper commodity price line than P"P. This implies that, assuming two countries produce at Q' and Q," respectively, steel is more affordable in country A and fabric more affordable in country B. As a result, nation A would create more steel than cloth and export it to country B, while country B would concentrate on producing cloth and export it to country A. As can be seen from the image above, the two nations produce these numerous items with a higher degree of specialization. However, because to the declining returns to scale conditions for both items, total specialization is lacking. It should be emphasized that the production and export of a nation's goods are influenced by factors affecting demand. According to the physical definition of factor abundance, the hypothesis is true if consumers have identical desires in commodities.

The ability of an economy to produce a specific good or service at a lower opportunity cost than its trading partners is known as comparative advantage. Comparative advantage is a theory that explains why businesses, nations, or people might gain from trade. Comparative advantage, as it relates to international trade, refers to the goods that a nation can produce more easily or at a lower cost than other nations. Even though this typically shows the advantages of trade, some modern economists now recognize that relying solely on comparative advantages can lead to resource exploitation and depletion in a nation. Although it's more likely that James Mill, David Ricardo's mentor, developed the theory first, the law of comparative advantage is most often associated with English political economist David Ricardo and his book On the Principles of Political Economy and Taxation, published in 1817. Threatt wrote a paper titled James Mill and the Early Development of Comparative Advantage.

Political economy history Comparative advantage explained one of the most crucial ideas in economic theory is comparative advantage, which is a cornerstone of the claim that voluntary cooperation and trade can always benefit all parties involved. Additionally, it is the basis of the theory of global trade. A thorough understanding of opportunity cost is essential to comprehending comparative advantage. An opportunity cost is merely a possible advantage that someone forgoes while choosing one alternative over another. In the situation of comparative advantage, one company's opportunity cost is lower than that of another is since a potential gain has been lost. This form of advantage belongs to the business with the lesser opportunity cost, and as a result, the smallest potential benefit that was forfeited. Comparative advantage can also be thought of as the optimal decision given a trade-off. The option with the comparative advantage is the one that offers the best overall package when two alternatives are being compared, each of which has trade-offssome advantages as well as some downsides.

Differentiated Skills

Through salaries, people become aware of their competitive advantages. People are compelled by this to pursue the careers they are comparatively most adept at. A good mathematician should practice engineering if it pays better than being a teacher for them and the people they trade with. Greater levels of value creation are possible thanks to more effective lab our organization and wider gaps in opportunity costs. The potential for profitable trade through comparative advantage increases with the diversity of individuals and their talents.

Comparative Advantage

Think about a well-known athlete like Michael Jordan as an illustration. Michael Jordan, a well-known basketball and baseball player, is a gifted athlete whose physical prowess is unmatched by the majority of people. Due to his skills and great height, Michael Jordan would probably be able to paint his house swiftly. Imagine that Michael Jordan could paint his entire house in just eight hours. However, he could also participate in a television commercial's filming over those same eight hours, which would pay him $50,000. Joe, a neighbor of Jordan, could paint the house in 10 hours. He might work in a fast-food restaurant for the same amount of time and make $100. Even if Michael Jordan could paint the house faster and more effectively, Joe has a comparative advantage in this scenario. The finest deal would be for Joe to paint Joe's house in exchange for Michael Jordan filming a television commercial. The trade

is successful as long as Michael Jordan makes the anticipated $50,000 and Joe makes more than $100. Joe and Michael Jordan would undoubtedly agree that this arrangement is ideal for their mutual interests given their variety of abilities.

Absolute Advantage Versus Comparative Advantage

Absolute advantage is in opposition to comparative advantage. The ability to generate more or better goods and services than competitors is referred to as having an absolute advantage. The ability to create goods and services at a lower opportunity cost, not necessarily at a higher volume or quality, is referred to as having a comparative advantage. Think of an attorney and their secretary to understand the differences. The lawyer can produce legal services more effectively than the secretary, who is also a speedier typist and organizer. The production of legal services as well as secretarial work in this situation are completely in the attorney's favor. However, because of their comparative advantages and drawbacks, they gain from trade.

Let's say the lawyer charges $175 an hour for legal services and $25 an hour for secretarial work. In one hour, the secretary can complete $20 worth of secretarial work while providing no legal services. Opportunity cost plays a major role in this situation. The attorney must forfeit $175 in revenue due to not being able to practice law in order to earn $25 from secretarial work. They lose a lot of money by working as secretaries. Producing an hour's worth of legal services and paying the secretary to type and organize will benefit them more. The secretary's opportunity cost is cheap; thus, it is far better for them to organize and type for the attorney. Their comparative advantage is there. A crucial realization is that trade will continue to take place even if one country has an absolute edge in all goods.

Comparison of Comparative and Competitive Advantages

A corporation, economy, nation, or individual with a competitive advantage is able to provide consumers a better value than its rivals. It is comparable to comparative advantage but different from it. The company should be the lowest-cost provider of its goods or services, it should provide better goods or services than its rivals, and/or it should concentrate on a specific consumer segment in order to gain a competitive advantage over others in the same field or industry.

Comparative Advantage in Global Commerce

David Ricardo is credited for demonstrating how Portugal and England may both profit by commerce and specializing in accordance with their comparative advantages. In this instance, Portugal was able to produce wine for a reasonable price while England was able to produce cloth for a reasonable price. Each nation would finally acknowledge these facts, according to Ricardo, and quit seeking to produce the more expensive commodity. In fact, England stopped making wine and Portugal stopped making cloth over time. Both nations realized that it would be in their best interests to stop attempting to produce these goods domestically and start trading with one another in order to obtain them. Tariffs closely resemble restricted trade and a zero-sum game, whereas comparative advantage closely resembles free trade, which is viewed as advantageous.

A current illustration is that China has a lab our cost advantage over the United States. Simple consumer goods are produced by Chinese employees at a far lower opportunity cost. Specialized, capital-intensive lab our is an area where the United States has a comparative advantage. American employees generate high-end products or profitable investment prospects for less money. Both trading in this manner and specializing are advantageous. The notion of comparative advantage contributes to the understanding of why protectionism frequently fails. Followers of this analytical strategy think that nations involved in international trade will have already made efforts to identify partners who possess comparative advantages. There may be a local advantage in the form of new employment and industry if a nation withdraws from an international trade agreement, imposes tariffs, etc. This, however, is not a long-term answer to a trade issue. When compared to its neighbors, nations that were already better able to produce these goods at a lower opportunity cost, that nation will eventually be at a disadvantage. Certain drawbacks of over-specialization are not taken into consideration by the traditional view of

comparative advantage. An agricultural nation that prioritizes cash crops and buys its food on the global market, for instance, may be more susceptible to price shocks on the world market.

Arguments against Comparative Advantage

There are several potential causes for this, but rent seeking, as it is known in economics, is the most significant. When one group organizes and presses the government to advance its interests, rent seeking happens. Imagine, for instance, that American shoe manufacturers understand and support the free-trade position but are also aware that cheaper imported shoes will harm their particular interests. No one in the shoe industry wants to lose their job or see profits fall in the short term, even if doing so would allow workers to be more productive than if they switched from making shoes to making computers. The shoemakers use this motivation to campaign for things like exclusive tax benefits for their goods and/or higher levies or outright banson international footwear. Even if such protectionist measures will ultimately make American workers relatively less productive and American consumers relatively poorer, there are numerous calls to safeguard American employment and maintain a time-honored American craft.

Benefits and Drawbacks of Comparative Advantage Benefits

Since countries can achieve better material results by manufacturing only the items for which they have a comparative advantage and exchanging those goods with other nations, the law of comparative advantage is frequently employed in international trade to support globalization. Countries with comparative advantages in specific export-focused industries, such as China and South Korea, have seen significant productivity improvements by concentrating their economy in these sectors. By concentrating primarily on jobs or goods that can be produced more efficiently, production becomes more effective when one uses comparative advantage. Products that require more money or time to create can be obtained from other sources. A company's overall profit margins will increase as a result, as the costs related to less-efficient production will be avoided.

Disadvantages

However, excessive specialization can also be harmful, particularly for emerging nations. Free trade has huge human costs because it exploits local lab our forces, even as it gives industrialized countries access to inexpensive industrial lab ours. Companies can profit from child lab our and coercive employment practices that are unlawful in their native countries by outsourcing manufacturing to nations with laxer lab our regulations. Similar to this, an agricultural nation that primarily concentrates on a few export products may experience soil degradation, resource destruction, and harm to indigenous populations. Additionally, over-specialization has strategic drawbacks because the nation would become reliant on fluctuations in world food prices.

III. CONCLUSION

Economic fundamentals such as comparative advantage and international commerce show the advantages of specialization and trade among nations. According to the principle of comparative advantage, it is crucial for nations to concentrate on manufacturing commodities and services in which they have lower opportunity costs than other nations. Countries can increase their productivity, efficiency, and general welfare in this way.By engaging in the exchange of products and services on the world market, international commerce enables nations to take use of their comparative advantages. Trade enables nations to access a larger variety of products and services at affordable rates, increasing consumer choice and raising living standards. Additionally, trade stimulates innovation, competitiveness, and the effective use of resources on a global scale.

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