# Examples of principle of comparative advantage economics essay

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# Introduction

Thousands of years ago, people used fabrics to change for foods in ancient China. Together with the development of society, supply and demand of goods rises steadily in both amount and variety so that trade becomes a more and more important part in people's lives. Along with the great progress of trade, economics gradually becomes an independent subject which studies the production and consumption of goods and services and the commercial activities of a society. Therefore, close relationship are established between basic economic theories and trade. In the year of 1815, Robert Torrens described comparative advantage firstly in an essay on the Corn Laws while he concluded the trading between England and Portugal. Though has been developed for more than 190 years, comparative advantage is still one of the most significant principles in economic. Different from absolute advantage, comparative advantage is a vital concept to explain why people trade, how they can benefit from trade and why trade can make everyone better off.

This assignment will start from the definition of comparative advantage with clear examples. After that, it will give adequate applications to explain its reasonableness and the profound influence on trade. Moreover, in the last part of this essay, limitations and deficiency of comparative advantage will be shown in order to have a better overall perspective of the principle.

# Definition

People and countries become more and more interdependent in this era. More precisely, people rely on each other on goods and services much more than before and so as countries. For example, Tom, a common English, starts his typical day from breakfast-an fried egg from France and a cup of coffee which the beans come from Brazil. Then his turns on TV made in Korea, watching the latest news of Israel blocks ships to Turkey. After that, he uses his mobile phone which is designed in California and assembled in China to call his boss that he will be late for the meeting about investing a new factory in Malaysia.

Before introducing the principle of comparative advantage, it is essential to explain other two important concepts- absolute advantage and opportunity cost. The reason why people become more interdependent is that they can be better off from trade. That is, everyone who takes part in trade can gain from the exchange. In order to measure how much one can gain from trade, cost and revenue are the main parts which should be considered. Imagine there are two farmers named Tom and Jack and both of them work 40 hours per week. Tom can produce 10 kilograms of potatoes while Jack can produce 8 kilograms in a week. Therefore, 1 kilogram of potatoes cost Tom 4hours and cost Jack 5 hours, in the other word, Tom has absolute advantage on growing potatoes because his cost is lower than Jack. If they have alternative choice to plant tomatoes, Tom can produce 10 kilograms and Jack can produce 20 kilograms, then it is easy to find out that Jack has absolute advantage on growing tomatoes. Moreover, if they can plant either potato or tomato, or both, one can be used as cost to measure the other. More specifically, potatoes can be used as cost to measure tomatoes and so as tomatoes. In this example, every kilogram of potatoes cost Tom 0. 8 kilogram of tomatoes while that cost Jack 2 kilograms of tomatoes. In economics, whatever must be given up to obtain some item is called opportunity cost. (Mankiw, 2005) For example, Tom can use 30 hours to plant potatoes so that these hours cannot be used to produce tomatoes. When it comes back to the example above, Jack needs 5 hours to produce 1 kilogram of potatoes or 2. 5 kilograms of tomatoes, which means, Jack's opportunity cost of 1 kilogram of potatoes is 2. 5 kilograms of tomatoes and his opportunity cost of 1 kilogram of tomatoes is 0. 4 kilogram of potatoes.

Comparative advantage is used to demonstrate two producer's opportunity cost. If one has a lower opportunity cost on certain goods than the other, he or she has comparative advantage of producing that goods. " Comparative advantage shows relative opportunity cost. Only in case that two people have the same opportunity cost, one person will have a comparative advantage in one good, and the other will have comparative advantage in the other goods." (Mankiw, 2005: 54-55) Difference in opportunity cost leads comparative advantage which makes gain from trade. For instance, Tom can produce 5 kilograms of potatoes and tomatoes while Jack can produce 4 kilograms of potatoes and 10 kilograms of tomatoes if they use 20 hours to plant each of crops. It is easy to find out that Tom and Jack has a lower opportunity cost to produce potatoes and tomatoes, respectively. So Tom has relative advantage in planting potatoes while Jack has relative advantage in planting tomatoes. If they both cultivate what they are specialized in, in another word, that is what they have lower opportunity cost, the result is that Tom produces 10 kilograms of potatoes and Jack produces 20 kilograms of tomatoes. Moreover, if Jack exchanges 4. 5 kilograms of potatoes for Tom's 8 kilograms of tomatoes, Jack could have 5.

5 kilograms of potatoes and 8 kilograms of tomatoes and Tom could have 4. 5 kilograms of potatoes and 12 kilograms of tomatoes which are better than they produce these corns independently. When Tom and Jack focus on what planting what they have comparative advantage, they can share from the increase of total output.

Consequently, Trade can benefit everyone in society because it allows people to specialize in activities in which they have a comparative advantage. As for countries, certain goods should be produced by the country which has lower opportunity cost or in another word, comparative advantage to produce that goods. (Mankiw, 2005) Moreover, both trade in services, such as offering financial services or computer software and goods are the concept of comparative advantage. (Brad, 2009)

## Applications

The principle of comparative advantage explains why countries trade and how they can benefit from trade. Because exchange is everywhere in the world, the principle of comparative advantage has many applications. Here are two typical examples; one of them is fanciful while the other one is practical.

The first application is that Ming Yao, an excellent basketball player with a height of 2. 26m, is also good at some other activities, too. Suppose Ming Yao can paint walls and ceiling of his house in 1 hour, which is faster than anyone else and the hourly employee in the labor market can do this in 3 hours with a pay of $60. Ming Yao can choose to do it himself or take part in an advertisement for the revenue of $10000 in 1 hour. Though Ming Yao has absolute advantage in painting his walls and ceiling because he can do it in less time, according to the principle of comparative advantage, hourly employee has comparative advantage in it for the reason that Ming Yao's opportunity cost of 1 hour is $10000 while that of the hourly employee is 20. Therefore, Ming Yao gets $10000 through participating in the advertisement and then pays $60 for the hourly employee; both of them are benefit from trade.

People can benefit from trade, so can countries. The second application is trade of soybean and laptops between China and America. Because of the high technology production line and mechanization of agriculture, America has absolute advantage in both goods. Suppose that in a week, 1 worker can produce 1 ton of soybeans or 100 laptops in China and 5 tons of soybeans or 200 laptops in America. It is obvious that the opportunity cost for 1 ton of soybeans is 100 laptops in China while that is 40 laptops in America. America has a lower opportunity cost in soybeans so that it should produce more soybeans than it is needed and export them to China exchange for laptops. At the same time, having a comparative advantage of laptops, China should produce more and then export redundant laptops and import soybeans from America. After trade, both countries can have more soybeans and laptops than produce them independently. In the other word, both countries are better off through trade according to the principle of comparative advantage.

Though the real trade among countries is far more complicated than in the application and sometimes trade makes some people worse off such as the soybean farmers in China in the application above, comparative advantage makes the countries, as a whole, better off from international trade.

## Past& Present

Comparative advantage was first described by Robert Torrens in 1815. He wrote an essay and concluded that though England can produce grain with lower costs than Portugal, it was to England's advantage to trade with Portugal for grain. However, this concept is usually thought to be raised by David Ricardo who wrote a book named Principles of Political Economy and Taxation in 1817. In this book he explained this concept in an example of trade between England and Portugal. Portugal can produce certain amount of both wine and cloth with less labor than England while England was hard to produce wine and relatively difficult to produce cloth, therefore, Portugal would benefit from producing extra wine and trading that for English cloth even if Portugal can produce cloth cheaper. The conclusion was that each country can gain by specializing in the good where it has comparative advantage, and trading that good for the other. (Ricardo, 1817)

Though has been developed for more than 180 years, the principle of comparative advantage is still one of the most significant principles in economics and the main concept of theory of international trade. Most economists agree that globe trade, which can be one of the most argumentatively political problems domestically and internationally, makes countries better off. (Brad, 2009) Kwan argues that in order to get full employment, chain of comparative advantages, which means " when factor prices differ between two countries producing many products with two factors, every export of the capital abundant country would be more capital intensive than any of its imports" should be broken. (Kwan, 2010) Ha-Joon Chang criticizes that the principle of comparative advantage may have helped developed countries maintain relative dominance of technology and industry to developing countries. In his book Kicking Away the Ladder, he argues that all major developed countries, including the United States and United Kingdom, uses interventionist, protectionist economic policies in order to get rich and then tried to forbid other countries from doing so. He asserts that " premature free trade has been one of the fundamental obstacles to poverty alleviation in many developing world." Recently, Asian countries such as South Korea, Japan and China are beginning to use protectionist economic policies in their economic development as developed countries. (Chang, 2002: 43-44)

## Conclusion

Though the principle of comparative advantage has some limitations and deficiency, it is still a fundamental concept of economics which explains why people trade and how they can benefit from trade. Comparative advantage reflects the opportunity cost of two producers on certain goods. In the view of opportunity cost, it is comparative advantage but not absolute advantage makes people, as well as the countries, better off from trade for the reason that they are specialized in what they have comparative advantage.