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## Basics of Comparative Advantage Aren't So Hard to Learn

By Manuel F. Ayau

As a former member of the protectionist lobby in my country who had the opportunity to learn the error of his ways, I am annoyed with myself for having failed for so long to understand why countries are misled into paying the high cost of restricting trade.

Many people, including professional economists who should know better, seem oblivious to the implication of the difference between *competitive* advantage and *comparative* advantage, despite the fact that David Ricardo explained it about 200 years ago.

Competitive advantage means, of course, that one party can do something at lower cost than another, and it typically is the basis for protectionist arguments. Comparative advantage is the relationship of one competitive advantage to another, or a comparison among competitive advantages.

The uneconomic diversion of resources abetted by failure to comprehend this seemingly elusive distinction is enormous. Getting it right should have high priority because policies based upon correct understanding could alone solve much of the problem of underdevelopment in short order.

For instance, to illustrate the magnitude of the damage, I once calculated the irrecoverable cost of trade barriers in Guatemala in the mid-1960s. It exceeded the whole government budget, year after year. In the U.S., trade restrictions imposed the equivalent of a hidden tax of \$1,200 in 1980 on the average American family of four, according to Washington University's Center for the Study of American Business.

What is rare in economic discussion is a simple example that demonstrates quantitatively the benefits derived from free trade. If the reader wants to do a little arithmetic, I offer the following exercise, based first on barter, and then on the use of money.

This is a worst-case example. Japonia has a clear competitive advantage over Latinia in producing both radio and television receivers, as follows:

### Man-Hours Required for One Unit

	Japonia	Latinia
Radio	1	4
TV	4	8

It follows that 48 man-hours of production results in 24 radios and six televisions in Japonia. The same number of man-hours produces six radios and three TVs in Latinia. Adding, we find 30 radios and nine TVs being produced with 96 man-hours of effort.

Suddenly, Japonia and Latinia choose free trade and tear down the barriers they had erected against each other's products. And miraculously, with the same man-hour requirement per unit and the same number of man-hours devoted to production, their combined output can rise to 32 radios and 10 TVs.

This is not really a miracle. It simply is division of labor based on comparative advantage. Under free trade, Latinia is induced to withdraw resources it had devoted to radio production and concentrate entirely on TVs. Now, with 48 man-hours' input, Latinia produces six TVs and zero radios.

Japonia is induced to reallocate some resources. It devotes 32 man-hours to radios, where its competitive advantage is greatest, and the remaining 16 hours to TVs, enabling it to turn out 32 radios and four TVs with every 48 man-hours of effort.

The world has more product, but are Japonia and Latinia better off individually? To find out, we have to introduce the price system. In doing that, one thing needs emphasis: It isn't prices per se that count, but price relationships. Differences in price relationships are what people act on.

Here is the lineup of prices (we'll use the same prices both before and after free trade):

	<b>Japonia</b>	<b>Latinia</b>
<b>Radio</b>	<b>24,000 yen</b>	<b>600 pesos</b>
<b>TV</b>	<b>96,000 yen</b>	<b>1,200 pesos</b>

After free trade, the Japonian retailer can choose a TV at 96,000 yen or 1,200 pesos, corresponding to an exchange ratio of 80:1. He will want to buy pesos whenever he can get them for less than 80 yen apiece. The Latinian retailer can choose a radio at 24,000 yen or 600 pesos, corresponding to a ratio of 40:1. He will be in the market for yen whenever he can get more than 40 for a peso.

The differential in price relationships between TVs and radios in the two countries has created an entrepreneurial opportunity: buying and selling currencies. Price differentials on many products in addition to radios and TVs, and many other factors, including people's expectations concerning the relative economic outlook of the countries involved, play a part in establishing exchange rates. But the Japonian and Latinian radio and TV marketers should be satisfied if the yen/peso rate falls somewhere between 40:1 and 80:1.

We could choose any number, but let us say that the exchange rate becomes 60:1—right in the middle.

Before free trade, a Japonian retailer could buy a shipment of 20 radios and five TVs for 960,000 yen. A Latinian retailer could buy the same shipment for 18,000 pesos. After free trade, the Japonian and Latinian retailers, each acting in his own self-interest, do their buying. Here is the result:

**Japonian retailer:**  
 20 radios x 24,000 yen = 480,000 yen  
 5 TVs x 1,200 pesos x 60 yen = 360,000 yen

**Shipment = 840,000 yen**  
**Saving: 120,000 yen**

**Latinian retailer:**  
 20 radios x 24,000 yen x 60 pesos = 8,000 pesos  
 5 TVs x 1,200 pesos = 6,000 pesos

**Shipment = 14,000 pesos**  
**Saving: 4,000 pesos**

In both countries, purchasing power has been increased. Both can afford to buy more of the same things, or to buy new things they could not afford before. Both are wealthier.

Possibly you aren't convinced until you can see it "in dollars and cents." So why not create a world price, in dollars, for radios and TVs and do the arithmetic over again? At a 60:1 yen/peso exchange rate, the dollar price of a radio is \$80 and the dollar price of a TV is \$240, based on 300 yen equals 5 pesos equals \$1. You will find that Japonia will have enough extra radios to sell at \$80 each to buy from Latinia the TVs it stopped producing, and still have some dollars to spare. And Latinia will have dollars left over after selling extra TVs to buy all of the radios it no longer makes.

This is a severe test because neither radios nor TVs are sold at the "average" price (nor are they produced at the "average" cost). When voluntary exchange is the rule, these products, like all others, are produced at marginal cost and they are sold at the price the market is willing to pay for the next increment of supply.

If we allow ourselves to think in terms of averages, it is easy to jump to wrong conclusions. One such conclusion is that our industry will collapse because it cannot compete with their industry.

It is true that some radio and TV manufacturers will not be able to compete with the lower-priced foreign products. It is also true that some manufacturers may have to close down some of their more antiquated production facilities. In either event, it is the marginal use of resources that must be relinquished, and that act could add to, rather than subtract from, well-being.

There is a myth, which has about as many lives as a cat, that countries import and export surpluses. “Dumping” of surplus is a frequent complaint. But the fact is that most exported goods have been produced for export as a means of generating foreign exchange, which, when in turn sold, produces a greater income in local currency than if the resources employed in export production had been devoted to production for domestic use.

I often ask students during exams: If our country wants more corn, which should we plant—corn or cotton? The answer, of course, is that if with the cotton that we can sell we can buy more corn than we can produce with the same resources, we should plant cotton to have corn.

If we stubbornly insist on producing our own corn, we deny ourselves the advantage of division of labor. Denial of that advantage is exactly the cost that trade barriers impose. But the cost is greater than money can measure because division of labor is the basis of civilization.

Somehow, watching the way the world behaves, it seems that it must be easy to forget the addition to well-being that results from the satisfaction of needs at lower costs. Free trade allows pursuit of lowest cost, liberating resources that generate new consumption demands and new investment and jobs.

Protective trade barriers amount to self-inflicted punishment, universally practiced. This tragic, divisive misunderstanding of our age probably will be a mystery to future generations. They will wonder how a period of great technological achievement could possibly have been accompanied by such strenuous efforts to obstruct trade and increase poverty.

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