

“FREE TRADE” -- ANOTHER NAME FOR UNREGULATED INTERNATIONAL COMMERCE.

David Ricardo in his 1817 book “On the Principles of Political Economy and Taxation”, described a very simple economic model that has survived for over two hundred years and which has gradually been elaborated and expanded to become an “article of faith” which is to be applied regardless of vastly different circumstances and conditions than those under which this model was developed. Very briefly stated, Ricardo observed under certain very restrictive conditions, many of which were tacit and unstated, that it was possible for the total supply of goods and services to be greater under conditions of (free) trade than under autarky or isolation.

Most explanations of “comparative advantage” in current economics text books are highly mathematical, and difficult to understand. Dr. Robert Schenk¹ has developed a narrative explanation of “Comparative Advantage” which makes minimal use of mathematics and can easily be understood. Dr. Schenk’s analysis is so clear that it is quoted in full below:

“The reasons that free trade is desirable can be developed by extending the discussion of the Crusoe economy that is commonly used to illustrate production-possibilities frontiers. Suppose that Robinson Crusoe, living on an almost deserted desert isle, can either catch four fish a day or find eight coconuts. One day he discovers that Friday also lives on the island. If Friday

¹ Available: <http://ingrimayne.saintjoe.edu/econ/international/comparative.html>

can either catch six fish a day or find seven coconuts, can Crusoe and Friday profit by specialization and trade? The answer is clearly "yes." Crusoe is the better coconut gatherer, and Friday the better fisherman. However, suppose that Friday can either catch ten fish or find ten coconuts. Friday is now better than Crusoe in both activities. Can there be mutual benefit from trade in this case? Or should Friday do all the work and Crusoe none? Or should Friday refuse to trade since he is better in both? It was a major achievement of David Ricardo early in the 19th century to show that in this second Crusoe-Friday story both parties could benefit from trade. His results contributed to the long reign of relatively free trade in 19th century England, and thus to the prosperity that England enjoyed in this period. To see that mutually beneficial trade is possible even though Friday is better in all activities, one must look to opportunity costs. Individually, both Friday and Crusoe trade with nature in the production process. Crusoe can get another fish only by giving up time in which he could find two coconuts, and in getting another coconut he sacrifices one half a fish. Thus a fish costs Crusoe two coconuts and a coconut costs one half a fish. Friday can get another fish by giving up the time during which he can find another coconut, or one tenth of the day. During this time, he could find one coconut. For Friday trading with nature means that one fish costs one coconut and vice versa. Looking at these opportunity costs tells us that Crusoe finds coconuts cheaper and Friday finds fish cheaper. The table below summarizes these results.

Opportunity Cost of Fish and Coconuts		
For Friday:	1 Fish Costs 1 Coconut	1 Coconut Costs 1 Fish
For Crusoe	1 Fish Costs 2 Coconuts	1 Coconut Costs 1/2 Fish

We still have not discovered whether Friday and Crusoe could do better trading with each other rather than with nature. A way to answer this question is to try a few prices. Suppose that one fish was worth one half a coconut, or one coconut was worth two fish. With this trading ratio both would find fish cheap and coconuts expensive. Therefore, both would want to sell coconuts and buy fish. Hence at this price no trading would take place. Suppose the trading ratio was one fish for 1.8 coconuts (and thus one coconut cost $\frac{5}{9}$ fish). With this ratio Crusoe would find fish cheap--rather than spend two coconuts to catch one, he could spend 1.8 coconuts and buy one. Hence Crusoe would be willing to sell coconuts. Friday would find coconuts cheap--rather than give up one fish by gathering his own coconuts, he could sell $\frac{5}{9}$ th of a fish and get one. Hence Friday would be willing to sell fish. Trade will take place because both individuals find that it improves their well-being. In the above example, trade occurs because of comparative advantage. Friday is better in everything than Crusoe, but he is "more better" in catching fish and "less better" in finding coconuts. Crusoe is worse than Friday in everything, but he is "less worse" in finding coconuts. Though they both benefit from trade, Friday will maintain a higher standard of living. The example of Crusoe and Friday also illustrates that exchange is

not a zero-sum game, but a positive-sum game. In a zero-sum game whatever anyone wins comes at someone else's expense. In poker, for example, if one person wins \$100, some other person(s) must have lost \$100. If the amount of winnings is added up and the amount of losses is subtracted away, the result will be zero. The term "zero-sum game" reflects this total. In contrast, both parties in a voluntary exchange can benefit. Because total winnings exceeds any losses, the name "positive-sum" game is appropriate. A negative-sum game, in which winnings will be less than losses, is also possible. War is one example, and a bad marriage is another. A possible reason that few people prior to Adam Smith seem to have recognized this mutually beneficial aspect of exchange may be that in his day much exchange involved bargaining.² In bargaining the seller tries to get as high a price as he can and the buyer as low a price as possible. If the seller can get \$2.50 for a product rather than \$2.00, he benefits from the higher price at the expense of the buyer. People do discuss who got the "better of the bargain." This feature of exchange, of vital importance to those involved in a market, can obscure the fact that no exchange will take place unless both parties believe that they benefit from it. Bargaining determines how big the producer's surplus will be relative to the size of the consumer's surplus, but unless both buyer and seller each have

² However, two thousand years before Smith Plato wrote: " So if one man gives another what he has to give in exchange for what he can get, it is because each finds that to do so is for his own advantage." (Francis MacDonald Cornfield, [trans.], The Republic of Plato. London: Oxford University Press, 1941, p.56.)

some surplus³, no trade will take place. Crusoe and Friday could be replaced by two nations. The principle of comparative advantage continues to hold, and it implies that the world as a whole will not be operating on its production-possibilities curve--that it will be production inefficient--if each nation is self-sufficient. This inefficiency can be illustrated with the numbers given in Crusoe-Friday story to produce the production-possibilities tables below. Suppose in self sufficiency Crusoe chooses two fish and four coconuts and Friday chooses five fish and five coconuts. Then total island production is seven fish and nine coconuts. But with total specialization, with Friday producing only coconuts and Crusoe producing only fish, island production would be eight fish and ten coconuts, which means that under self sufficiency island resources were used inefficiently. Or suppose that originally Crusoe was self sufficient at one fish and six coconuts and Friday at five fish and five coconuts. Island production is six fish and eleven coconuts. In this case only partial specialization might be desirable. If Friday produces three coconuts and Crusoe eight, island production could be eleven coconuts and seven fish, which is a gain of one fish compared to production with no specialization.

Production Possibilities			
Crusoe		Friday	
fish	coconuts	fish	coconuts
4	0	10	0

³ By this definition a trade deficit or surplus cannot exist, which is contrary to the observed conditions.

3	2	9	1
2	4	5	5
1	6	3	7
0	8	0	10

Given that this simple narrative is the basis for much of the current international trade policy, what are some of the unstated assumptions or other factors that may make the “Law of Comparative Advantage” inapplicable in the current economic situation?

- I. The fallacy of composition may apply. This example uses only two entities with two products. In reality there are thousands of trading entities exchanging millions of products. Mathematical indeterminacy may apply for examples with more than two entities. For example, a gravitational problem using Newtonian physics with three or more bodies is indeterminate.
- II. The example uses individual entities, which are implicitly used as surrogates for countries. In reality, countries as countries currently trade only to a very limited extent. Trade is conducted between companies and individuals which may or may not be citizens of the countries involved.
- III. There is an unstated assumption that there is an indefinite supply of , and demand for, coconuts and fish. For example, what if there are only 5 coconuts a day that fall from the tree or 5 fish that swim into the lagoon? What if Crusoe only wants 3 fish a day and Friday can use

only eat 4 coconuts a day? This is exactly the current situation with automobile production in that there currently exists the potential to produce at least 25% more automobiles and light trucks than there is demand or market for.

- IV. This example assumes unitary trading entities. What if Crusoe is actually two people Robinson that only gathers coconuts and Crusoe that only catches fish. Robinson decides to specialize in coconuts, and trades with Friday for his fish because he can get more fish per coconut. This puts Crusoe in the situation of only have fish with no market for them. In this situation Crusoe can represent the highly trained and skilled worker with only their time and expertise to trade with no market.
- V. In the example above, it is shown that by specialization, an additional fish per day can be available. How is this fish to be allocated? If it all goes to one party, what incentive is there for the other party to continue to trade?
- VI. This example assumes a fixed relative value between coconuts and fish. In real life there is a continual variation in the “exchange rate” unless barter or counter-trade is used.
- VII. In this example there is only counter-trade or barter and any “balance-of-payments” problems are immediately noticeable, if they are allowed to occur at all. In real life counter-trade or barter is used only to a

limited extent, generally between organizations that lack access to “hard” currencies.

VIII. This example assumes bilateral trading. A third (off-island) party may intervene when they notice that that 1 fish is worth 2 coconuts to Crusoe and only one coconut to Friday. They can then trade one fish for two coconuts to Crusoe and one coconut for one fish to Friday, thus gaining one coconut for each transaction cycle while removing it from the stream of (island) consumption / commerce. The island GDP measured in terms of fish and coconuts produced would remain the same, or could even increase under the proper conditions, without any increase (indeed, a decrease) in per capita “island” consumption.

These seem to be some of the essential but overlooked limitations and stipulations on the general expansion and application of Ricardo’s “Law of Comparative Advantage.” The researcher was therefore surprised to discover that extensive critical work has been published in the less widely circulated economic literature such as the *Review of International Economics*.

One of the most recent⁴ is Shimomura, Hoji and Wong, Kar-yiu (in-press manuscript #6150) The Law of Comparative Advantage without Social Utility Functions *Review of International Economics*. This paper makes the following points:

⁴ available in text or PDF format <http://wber.u.washington.edu/~kariu/papers/LawComAdv.htm>

- I. Extensive work has been done to extend Recardo's "Law of Comparative Advantage" from two parties / two goods to n parties / n goods. Among many others, Dradbicki, John Z and Takayama, Akira (1979) "An Antinomy in the Theory of Comparative Advantage" *Journal of International Economics* 9 (1979): 211-223 showed that this law was not generally valid when there are more than two goods, Recardo's limited "Law of Comparative Advantage" can be rest ated with several important qualifications as the "General Law of Comparative Advantage" however these qualifications (assumptions) are idealizations necessary for mathematical simplification. Each of these qualifications require other qualifications and simplifications in turn. Rather than attempting to evaluate the mathematical conclusions of this and the supporting papers, some the "assumptions" are listed, and defined. The reviewer can then evaluate these conditions and see if in their opinion these are "plausible" and therefore if the mathematical construct, the "General Law of Comparative Advantage," which requires these conditions seems likely to be valid in contrast to being mathematically correct. Some of the most understandable assumptions are:
- A. Existence of perfect information ...
 - B. Costless transfers or taxation ...

C. “If under natural trade the government uses either lump-sum transfers or consumption taxes to make every household not worse off than under autarky then ...

Why then was Ricardo’s “Law of Comparative Advantage” so widely accepted and why does it continue to be taught, without explicit exceptions, limitations, qualifications and demurs in not only undergraduate but also graduate management and economic courses, that “trade is good” in the same way that Gordon Gecko proclaimed “greed is good”?

Noam Chomsky suggests⁵ one possible explanation:

It should be stressed that the economic doctrines preached by the powerful are intended for others, so that they can be” more efficiently robbed and exploited. No wealthy developed society accepts these conditions for itself, unless they happen to confer temporary advantage; and their history reveals that sharp departure from these doctrines was a prerequisite for development. At least since the work of Alexander Gerschenkron in the 1950s, it has been widely recognized by economic historians that "late development" has been critically dependent on state intervention;

This appears to be unnecessarily harsh. While this statement does appear to fit the know facts, a contextulization of Ricardo’s “Comparative Advantage” substitutes cultural perceptions and class indifference for overt and egregious hypocrisy, at least at in the early years of acceptance. When Recardo first proposed his concept of “Comparative Advantage” early in the 19th century, he used the example of woolen cloth produced in Great Briton

⁵ available: <http://www.contrib.andrew.cmu.edu:/usr/tp0x/chomsky.html> or <ftp://ftp.cs.cmu.edu/user/cap/chomsky/>

and wine (port / Madeira) produced in Portugal, the following conditions existed:

- I. The trading parties effectively were an entity. The only groups that could afford to trade were the ruling classes which at that time were the country, and whose individual interests and tastes to a large extent coincided.
- II. While there were many subdivisions, the trade could be summarized as “luxury goods” so that the actual categories were limited.
- III. Far from being “free trade” freely arrived at, the importation of Portuguese wines (Port) rather than French wines was a political decision largely based on the long-standing association between Great Briton and Portugal and the traditional animosity between Great Briton and France.
- IV. While actual barter did not generally occur, payment was in specie and gold was effectively a commodity to which all others were indexed.
- V. Neither wine nor cloth was (perceived) to be a strategic good, nor was there any other “national defense” factors involved. The abrupt cessation of trade in either or both commodities would involve minimal inconvenience for a small number of people but no significant affect on the community at large.
- VI. Given the social, political and cultural environment of the times, the possible affects of trade on the people directly engaged in viniculture in Great Briton, and the people directly engaged in animal husbandry,

spinning and weaving in Portugal, were of no more of a consideration than the effects of trade such trade on the grape vines and the sheep.

Investigation has shown that there is a large and growing body research showing that most unregulated international commerce or “free trade” as it is currently conducted does not meet the minimal conditions required for either Recardo’s “Law of Comparative Advantage” or the more comprehensive but more restrictive “General Law of Comparative Advantage” to be operational or valid. One of the most easily understood of these, because of the minimal use of mathematics, is “Against Free Trade: Neoclassical and Steady-State Perspectives⁶” by Dr. Herman E. Daly, Senior Research Scholar, School of Public Affairs, University of Maryland, presented April 29, 1994 at the Conference on Trade and the Environment, held at Harvard University. Dr. Daly makes several very cogent and well reasoned arguments against unregulated international commerce using environmental, sustainability and social / ethical / cultural arguments. While highly plausible, these arguments are not included in this study because these implicitly involved “value judgments” such as the non-desirability of forced or slave labor and / or massive environmental degradation. However Dr. Daly makes several key observations which identifies the basic difference between the world in which Recardo’s Theory of Economics is valid and today. These include:

⁶ available: <http://www.ap.harvard.edu/papers/T&E/Daly/Daly.htm>.

The free trade position is grounded in the logic of comparative advantage ... The issue is not the logic, but the relevance of a critical, but often forgotten assumption upon which the logical argument is based, namely that *factors of production, especially capital, are assumed to be immobile internationally* - a condition *not* observed in today's world. An argument that depends for its validity on the impermeability of national boundaries to capital is being used to support a policy aimed at making those same boundaries increasingly permeable⁷ to capital as well as goods! [P2]

Transport costs are energy-intensive and if energy is subsidized, as it frequently is today, then so is trade. Charging full-cost energy prices would reduce the initial gains from long distance trade, whether international or interregional. [P4]

After specialization a country is no longer free not to trade, and if not careful about retaining some self-sufficiency in basics, can become vulnerable to hard bargains. The reduced range of choice of occupations is seldom mentioned but it is important -- most people's enjoyment of life depends at least as much on how they earn their living as on how they spend their earnings. For example, a country like Uruguay with a clear competitive advantage in cattle and sheep would afford its citizens the choice of being either a cowboy or a shepherd, if it adhered strictly to the rules of specialization and trade. [P4]

Over half of world trade is intra industry trade, i.e. simultaneously importing and exporting basically the same commodity. [p4]

When absolute advantage governs, as it must with internationally mobile capital, there is no longer any assurance that both countries will benefit, even though specialization will increase total world output. ... As Ricardo clearly stated, only if capital cannot cross national boundaries in continuing pursuit of absolute advantage is there any reason for it to follow the logic of comparative advantage in its allocation within the nation. [P7]

It is admitted by neoclassical economists that externalities resulting from overpopulation can spillover to other nations, and thus provide a legitimate reason against free immigration, however uncongenial to liberal sentiments. But externalities of overpopulation, in the form of cheap labor, can spill over into other countries through free migration of capital towards abundant labor, just as much as through free migration of labor toward abundant

⁷ This process is currently lumped together under the acronym of MIA or MAI, standing for Multilateral Investment Agreement. "Official" information is available at <http://www.oecd.org/dev/prog/prog3a.htm> or <http://www.eurunion.org/news/eurecom/1997/ecom0597.htm>. There are also several thousand "unofficial" NGO or individual websites.

capital. The legitimate case for restrictions on labor immigration are therefore easily extended to restriction on capital emigration for any country not wanting to suffer the consequences of another country's overpopulation.
[P8]