Manufacturing and the Limits of Comparative Advantage

The concept of comparative advantage is used with great effect by economists as a sheep/goat separator. Those who understand it are the sheep, almost exclusively economists. The sheep sometimes use comparative advantage to justify things that seem to the goats, the non-understanders, to be counter to common sense. But the poor goats are helpless, silenced by their own ignorance and the confidence of the knowledge-wielding sheep.

Unfortunately, among the sheep are some who tell us that it doesn't matter if we lose one industry after another to our rapidly developing trading partners. We will just do something else that is in accord with comparative advantage in the new economic situation.

I have suffered through too many discussions of this sort to view this with anything approaching equanimity. One of these I remember particularly vividly came at an economics meeting during a panel discussion on trade. An audience member asked a university professor on the panel how he would feel if most of the professor's courses were delivered from India by someone else and at a lower price. His reply, delivered with perfect confidence, was that it would not matter; he and his peers would rather just teach graduate students anyway.

In a similar vein but on a far grander scale, the Financial Times recently lectured the nation of Japan on its attempts to retain manufacturing in Japan (using robots) in the face of low-wage competition from other parts of Asia. The Financial Times, calling on the wisdom that the recent economic successes of the financial sector had apparently made self-evident, told the Japanese to give up manufacturing and concentrate on research and on telling other nations what to manufacture. The FT article had as its title "The malady of manufacturing."

Ignored in all these discussions is the obvious fact that when you don't make for yourself the things you need, you will have to trade for them. If you have to import cars and all sorts of manufactured goods, you will be importing on a large scale; to trade for them you will need to create additional goods or services that you can export on an equally large scale.
How does the FT's prescription for Japan stack up if we look at it that way? It looks like nonsense. Research is a small-scale activity; in most companies only a few percentage points of revenue. There is no way that the output of this small activity can be traded against a nation's need for manufactured goods. Similarly, you simply cannot pay for large-scale imported education by teaching smaller numbers of graduate students, even if they were all visiting foreigners so that all the teaching you did counted as export.

If you give up large things and specialize in exporting small-scale things for which the demand is limited, you will not be able to buy many of the things that are needed on a large scale. If the things you are going to export don't add up to something big, you will be neither making nor importing what you need. You will simply not have them. You will be a poor nation.

These are facts that are not easily overlooked and there is no reason to think that David Ricardo, usually regarded as the father of comparative advantage, overlooked them. In his 1817 book, Principles of Political Economy and Taxation, Ricardo discussed the wine and cloth trade between England and Portugal. He assumed that Portugal was more productive than England in both of the traded goods, cloth and wine, and that Portugal had a greater productivity advantage in wine.

Ricardo's remarkable observation was this: even though Portugal makes cloth more productively than England, it still benefits her to move some people from cloth-making to winemaking and then send the wine they produce to England to exchange for cloth. Similarly, it benefits England to move people from winemaking to cloth-making to make more cloth for export. A shift of this sort works out well for both countries because Portugal's advantage in wine production is larger than its advantage in cloth. Both countries come out ahead. In the modern terminology, they were exploiting the fact that Portugal has a comparative advantage in wine.

Some of Ricardo's successors, however, have elevated comparative advantage into a principle all its own, with such rules as "countries should specialize in the things in which they have a greater comparative advantage." What is often taught nowadays about the England-Portugal example is that England should make only cloth (specialize in cloth) and Portugal should specialize in wine.

However Ricardo suggested a shift, he did not suggest that Portugal should abandon making cloth, and he was right not to. In fact, in Ricardo's example, whether the specialization prescription is right or wrong depends, as it should, on the scale of the demand for the goods being traded.

Suppose that the demand for wine is small compared to the demand for cloth. And also assume the two countries specialize: England in cloth, Portugal in wine. Portugal, while supplying all the wine that England consumes, will get for it only a small amount; the small amount that England is willing to spend on wine. This small value received for wine exports will buy only a small value of cloth imports. This leaves Portugal without its own production of cloth, for which there is a large demand, and only a small quantity of imports. The Portuguese will be ill clothed; they will be a poor nation.
With these demands, a far better solution with Ricardo's actual numbers is for Portugal to make all the wine for both countries while continuing its own cloth production to supply its cloth needs beyond what its wine buys from England.

Yet the first solution, specializing in the good with the comparative advantage and giving up the other without any regard for the scale of demand, is what is being advocated for Japan by the *Financial Times*, and often is pushed in the United States as well. It too will leave us a nation that is poor indeed.

An alternative available in Ricardo's day was to ship gold to England to buy the needed cloth. This was not a long-term solution then, nor is the equivalent solution now. Each year we make up for the year's huge trade deficit, not by shipping gold, but by shipping IOU's: treasury bills which are essentially promises to pay later. As Warren Buffet puts it, "we are selling the nation out from under us." When we come to pay this enormous accumulation later we will then be poor indeed.

Yet that is the direction many in the United States would have us take when they say that the country doesn't need manufacturing. What do they say will replace manufacturing? One gets only vague responses to this question.

Let us by all means do the things in which we have the greatest advantage. But let us make sure the new things we do, together with the things we continue to do, add up to enough to make us a rich nation. Vague talk about future innovations, about a post-industrial society, or of an enormous explosion of services exports to where they can balance the manufacturing trade deficit is not the stuff on which to bet the prosperity of a nation. This vagueness disguises our real situation and the need to rethink both our fundamental economic goals and how they can be attained.

Manufacturing should not be given up but rather rebuilt, as G.E. CEO Jeffrey Immelt has recently advocated. We cannot afford to get out of manufacturing unless and until there are new things that we are good at and that add up to the same scale. But today that condition is nowhere near being met.

Manufacturing is both high-wage and R&D intensive, and comparative advantage in manufacturing is not a gift of nature but something that is mainly man-made. All of this strongly suggests that we should be aiming at building a strong manufacturing sector rather than wishing it away.