

# The Theory of Comparative Advantage

## Why It Is Wrong

By IAN FLETCHER

The theory of comparative advantage, invented by the British economist David Ricardo in 1817, is the core of the case for free trade. All the myriad things we are told about why free trade is good for us are boiled down to hard economics and weighed against the costs by this single theory and its modern ramifications. If this theory is true, then no matter how high the costs of free trade, we can rely upon the fact that somewhere else in our economy we are reaping benefits that exceed them. If it is false, we cannot.<sup>1</sup>

### Absolute Vs. Comparative Advantage

To understand comparative advantage, it is best to start with its simpler cousin absolute advantage. The concept of absolute advantage simply says that if some foreign nation is a more efficient producer of some product than we are, then free trade will cause us to import that product from them, and that this is good for both nations. It is good for us because we get the product for less money than it would have cost us to make it ourselves. It is good for the foreign nation because it gets a market for its goods. And it is good for the world economy as a whole because it causes production to come from the most efficient producer, maximizing world output.

**Absolute advantage is thus a set of fairly obvious ideas. It is, in fact, the theory of international trade most people instinctively hold, without recourse to formal economics, and thus it explains a large part of public opinion on the subject.**

It sounds like a reassuringly direct application of basic capitalist principles. It is the theory of trade Adam Smith himself believed in.

It is also false. Under free trade, America observably imports products of which we are the most efficient producer – which makes absolutely no sense by the standard of absolute advantage. This causes complaints like conservative commentator Patrick Buchanan's:

"Ricardo's theory ... demands that more efficient producers in advanced countries give up industries to less efficient producers in less advanced nations... Are Chinese factories more efficient than U.S. factories? Of course not."<sup>2</sup>

Buchanan is correct: this is *precisely* what Ricardo's theory demands. It not only predicts that less efficient

producers will sometimes win (observably true) but argues that this is good for us (the controversy). This is why we must analyze trade in terms of not absolute but *comparative* advantage. If we do not, we will never obtain a theory that accurately describes what happens in international trade, which is a prerequisite for evaluating whether what happens is beneficial.

**Boiled down to its essence, the theory of comparative advantage simply says this:**

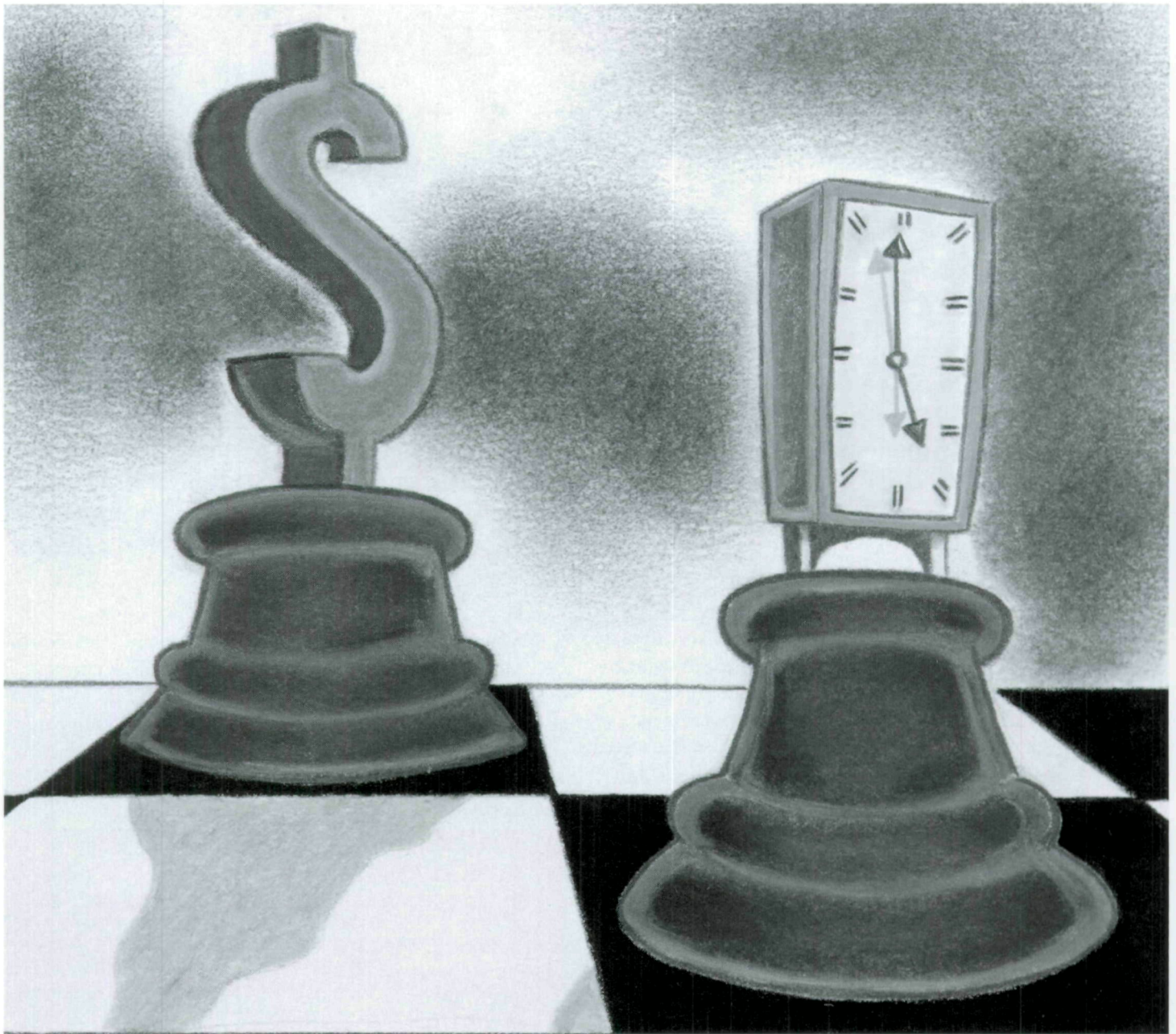
***Nations trade for the same reasons people do.***

**And the whole theory can be cracked open with one simple question:**

***Why don't pro football players mow their own lawns?***

Why should this even be a question? Because the average footballer can almost certainly mow his lawn more efficiently than the average professional lawn mower. The average footballer is, after all, presumably stronger and more agile than the mediocre workforce attracted to a badly paid job like mowing lawns. (If we wanted to quantify his efficiency, we could measure it in acres per hour.) Efficiency, also known as productivity, is always a matter of *how much output we get* from a given quantity of inputs, be these inputs hours of labor, pounds of flour, kilowatts of electricity, or whatever. Because the footballer is more efficient, in economic language he has absolute advantage at mowing lawns. Yet nobody finds it strange that he would "import" lawn-mowing services from a less efficient "producer." Why? Obviously, because he has *better things to do with his time.* ➤





This is the key to the whole thing. The theory of comparative advantage says that it is advantageous for America to import some goods simply in order to free up our workforce to produce more-valuable goods instead. We, as a nation, have better things to do with our time than produce these less valuable goods. And, just as with the football player and the lawn mower, it does not matter whether *we* are more efficient at producing them, or the country we import them from is. As a result, it is sometimes advantageous for us to import goods from less efficient nations.

This logic does not only apply to our time, that is, our man-hours of labor, either. It *also* applies to our land, capital, technology, and every other finite resource used to produce goods. So the theory of comparative advantage says that if we could produce something more valuable with the resources we currently use to produce some product, then we should import that product, free up those resources, and produce that more valuable thing instead.

Economists call the resources we use to produce products “factors of production.” They call whatever we *give up* producing, in order to produce something else, our “opportunity cost.” The opposite of opportunity cost is direct cost, so while the direct cost of mowing a lawn is the hours of labor it takes, plus the gasoline, wear-and-tear on the machine, et cetera, the opportunity cost is the value of whatever else these things could have been doing instead.

Direct cost is a simple matter of efficiency, and is the same regardless of whatever else is going on in the world. Opportunity cost is a lot more complicated, because it depends on what opportunities exist for using factors of production. Other things being equal, direct cost and opportunity cost go up and down together because if the time required to mow a lawn doubles, then twice as much time cannot be spent doing something else. As a result, high efficiency tends to generate both low direct cost and low



opportunity cost. If someone is such a skilled mower that they can mow the whole lawn in fifteen minutes, then their opportunity cost of doing so will be low because there is not much else they can do in fifteen minutes.

The opportunity cost of producing something is always the *next most valuable thing* we could have produced instead. If either bread or rolls can be made from dough, and we choose to make bread, then rolls are our opportunity cost. If we choose to make rolls, then bread is. And if rolls are worth more than bread, then we will incur a larger opportunity cost by making bread. It follows that the smaller the opportunity cost we incur, the less opportunity we are wasting, so the better we are exploiting the opportunities we have. Therefore our best move is always to *minimize our opportunity cost*.

This is where trade comes in. Trade enables us to “import” bread (buy it in a store) so we can stop baking our own and bake rolls instead. In fact, trade enables us to do this for all the things we would otherwise have to make for ourselves. So if we have complete freedom to trade, we can systematically shrug off all our least valuable tasks and reallocate our time to our most valuable ones. Similarly, nations can systematically shrink their least valuable industries and expand their most valuable ones. This benefits these nations and under global free trade, with every nation doing this, it benefits the entire world. The world economy and every nation in it become as productive as they can possibly be.

Here is a real-world example: if America devoted millions of workers to making cheap plastic toys (we don’t; China does) then these workers could not produce anything else. In America, we (it is hoped) have more-productive jobs for them to do, even if American industry could hypothetically grind out more plastic toys per man-hour of labor and ton of plastic than the Chinese. So we are better off leaving this work to China and having our own workers do more-productive work instead.

**This all implies that under free trade, production of every product will automatically migrate to the nation that can produce it at the lowest opportunity cost – the nation that wastes the least opportunity by being in that line of business.**

The theory of comparative advantage thus sees international trade as a vast interlocking system of tradeoffs, in which nations use the ability to import and export to shed opportunity costs and reshuffle their factors of production to their most valuable uses. And (supposedly) this all happens automatically, because if the owners of some factor of production find a more valuable use for it, they will find it profitable to move it to that use. The natural drive for profit will steer all factors of production to their most valuable uses, and opportunities will never be wasted.

It follows (supposedly) that any policy other than free trade just traps nations producing less-valuable output than

they could have produced. It saddles them with higher opportunity costs – more opportunities thrown away – than they would otherwise incur. In fact, when imports drive a nation out of an industry, this must actually be good for that nation, as it means the nation must be allocating its factors of production to producing something more valuable instead. If it were not doing this, the logic of profit would never have driven its factors out of their former uses. In the language of the theory, the nation’s “revealed comparative advantage” must lie elsewhere, and it will now be better off producing according to this newly revealed comparative advantage.

## Quantifying Comparative Advantage

Let’s quantify comparative advantage with an imaginary example. Suppose an acre of land in Canada can produce either one unit of wheat or two units of corn.<sup>iii</sup> And suppose an acre in the U.S. can produce either three units of wheat or four units of corn. The U.S. then has absolute advantage in both wheat (three units vs. one) and corn (four units vs two). But we are twice as productive in corn and thrice as productive in wheat, so we have *comparative* advantage in wheat.

**Importing Canadian corn would obviously enable us to switch some of our corn-producing land to wheat production and grow more wheat, while importing Canadian wheat would enable us to switch some of our wheat-producing land to corn production and grow more corn. Would either of these be winning moves? Let’s do some arithmetic.**

Every three units of wheat we import will free up one acre of our land because we will no longer need to grow those three units ourselves. We can then grow four units of corn on that acre. But selling us that wheat will force Canada to take three acres out of corn production to grow it, so it will cost Canada  $3 \times 2 = 6$  units of corn. Canadians obviously will not want to do this unless we *pay* them at least six units of corn. But this means we would have to pay six units to get four. So no deal.

What about importing Canadian corn? Every four units of corn we import will free up one acre of our land, on which we can grow three units of wheat. Selling us those four units will force Canada to take  $4 / 2 = 2$  acres out of wheat production, costing Canada  $2 \times 1 = 2$  units of wheat. So we can pay the Canadians what it cost them to give us the corn (two units of wheat) and still come out ahead, by  $3 - 2 = 1$  unit of wheat. So importing Canadian corn makes economic sense. And not only do we come out ahead, but because the world now contains one more unit of wheat, it is a good move for the world economy as a whole. ➤



The fundamental question here is whether America is better off producing corn, or wheat we can exchange for corn. Every nation faces this choice for every product, just as every individual must decide whether to bake his own bread or earn money at a job so he can buy bread in a store (and whether to mow his own lawn or earn money playing football so he can hire someone else to mow it). The entire theory of comparative advantage is just endless ramifications of this basic logic.

The above scenario all works in reverse on the Canadian side, so it benefits Canada too. Free traders generalize this into the proposition that free trade benefits *every* trading partner and applies to every product and factor of production. As the late Paul Samuelson of MIT explains it, using China as the trading partner:

**Yes, good jobs may be lost here in the short run. But still total U.S. net national product must, by the economic laws of comparative advantage, be raised in the long run (and in China, too). The gains of the winners from free trade, properly measured, work out to exceed the losses of the losers.<sup>iv</sup>**

## **Low Opportunity Costs Equals Poor Nation**

Note that the opportunity cost of producing a product can vary from one nation to another even if the two nations' *direct* costs for producing the product are the same. This is because they can face different alternative uses for the factors of production involved. So having a low opportunity cost for producing a product can just as easily be a matter of having poor alternative uses for factors of production as having great efficiency at producing the product itself.

This is where underdeveloped nations come in: their opportunity costs are low because they do not have a lot of other things they can do with their workers. The visible form this takes is cheap labor, because their economies offer workers few alternatives to dollar-an-hour factor work. As Jorge Castaneda, Mexico's former Secretary of Foreign Affairs and a critic of the North American Free Trade Agreement (NAFTA), explains it:

The case of the auto industry, especially the Ford-Mazda plant in Hermosillo, Mexico, illustrates a well-known paradox. The plant manufactures vehicles at a productivity rate and quality comparable or higher than the Ford plants in Dearborn or Rouge, and slightly below those of Mazda in Hiroshima. Nevertheless, the wage of the Mexican worker with equal productivity is between twenty and twenty-five times less than that of the U.S. worker.<sup>v</sup>

The plants in the U.S. and Japan are surrounded by advanced economies containing many other industries able to pay high wages. So these plants must match these wages or find no takers. The plant in Mexico, on the other hand,

is surrounded by a primitive developing economy, so it only needs to compete with low-paid jobs, many of them in peasant agriculture. As a result, the productivity of any one job does not determine its wage. Economy-wide productivity does. This is why it is good to work in a developed economy even if the job you yourself do, such as sweeping floors, is no more productive than the jobs people do in developing countries.

If wages, which are paid in domestic currency, do not accurately reflect differences in opportunity costs between nations, then exchange rates will (in theory) adjust until they do. So if a nation has high productivity in most of its internationally traded industries, this will push up the value of its currency, pricing it out of its lowest-productivity industries. But this is a good thing, because it can then export goods from higher-productivity industries instead. This will mean less work for the same amount of exports, which is why advanced nations rarely compete in primitive industries, or want to. In 1960, when Taiwan had a per capita income of \$154, sixty-seven percent of its exports were raw or processed agricultural goods. By 1993, when Taiwan had a per capita income of \$11,000, ninety-six percent of its exports were manufactured goods.<sup>vi</sup> Taiwan today is hopelessly uncompetitive in products it used to export such as tea, sugar, and rice. Foreign competition drove it out of these industries and destroyed millions of jobs. Taiwan does not mind one bit.

## **What the Theory Does Not Say**

The theory of comparative advantage is sometimes misunderstood as implying that a nation's best move is to have as much comparative advantage as it can get – ideally, *comparative* advantage in every industry. This is actually impossible by definition. If America had superior productivity, therefore lower direct costs, and therefore absolute advantage, in every industry, we would still have a greater margin of superiority in some industries and a lesser margin in others. So we would have comparative advantage where our margin was greatest and comparative disadvantage where it was smallest. This pattern of comparative advantage and disadvantage would determine our imports and exports, and we would still be losing jobs to foreign nations in our *relatively* worse industries and gaining them in our *relatively* better ones, despite having absolute advantage in them all.

So what is the significance of absolute advantage, if it *does* not determine who makes what? It does determine relative wages. If the U.S. were exactly ten percent more productive than Canada in all industries, then Americans would have real wages exactly ten percent higher. But because there would be no *relative* differences in productivity between industries, there would be no differences in opportunity costs, neither country would have comparative advantage or disadvantage in anything, and there would be no reason for trade between them. There would be no corn-for-wheat swaps that were winning moves.



All potential swaps would cost exactly as much as they were worth, so there would be no point. (And under free trade, none would take place, as the free market is not stupid and would not push goods back and forth across national borders without reason).

Conversely, the theory of comparative advantage says that whenever nations do have different relative productivities, mutual gains from trade *must* occur. This is why free traders believe that their theory proves free trade is always good for every nation, no matter how poor or how rich. Rich nations would not be bled dry by the cheap labor of poor nations, and poor nations would not be crushed by the industrial sophistication of rich ones. These things simply cannot happen, because the fundamental logic of comparative advantage guarantees that only mutually beneficial exchanges will ever take place. Everyone will always be better off. It follows that trade conflicts between nations are always misguided and due solely to their failure to understand why free trade is always good for them.

**The theory of comparative advantage is thus a wonderfully optimistic construct, and one can certainly see why it would be so appealing. Not only does it appear to explain the complex web of international trade at a single stroke, but it also tells us what to do and guarantees that the result will be the best outcome we could possibly have obtained.**

*It is actually rather a pity that the theory is not true.*

## **The Theory's Seven Dubious Assumptions**

The flaws of the theory of comparative advantage consist of a number of dubious assumptions it makes. To wit:

### **Assumption #1: Trade is sustainable**

This problem divides into two parts: unsustainable imports and exports.

When America does not cover the value of its imports with the value of its exports, it must make up the difference by either selling assets or assuming debts. If either is happening, America is either gradually being sold off to foreigners or gradually sinking into debt to them. Xenophobia is not necessary for this to be a bad thing, only bookkeeping: we are poorer simply because we own less and owe more. Our net worth is lower.

And this situation is unsustainable. We have only so many existing assets we can sell off, and can afford to service only so much debt.<sup>vii</sup> By contrast, we can produce goods indefinitely. So deficit trade, if it goes on year after

year, must eventually be curtailed – which will mean reducing our consumption one day.<sup>viii</sup> We get a decadent consumption binge today and pay the price tomorrow, but because the free-market economics does not traffic in concepts like “decadent,” it does not see anything wrong.<sup>ix</sup> We wanted consumption and that is what we got, so it is efficient.

**The implied solution is to tax exports.  
And that is not free trade.**

Now consider unsustainable exports. This usually means a nation that is exporting nonrenewable natural resources. The same long vs. short term dynamics will apply, only in reverse. A nation that *exports* too much will maximize its short-term living standard at the expense of its long-term prosperity. But free market economics – which means free trade – will again perversely report that this is “efficient.” The oil-rich nations of the Persian Gulf are the most obvious example, and it is no accident that OPEC was the single most formidable disruptor of free trade in the entire post-WWII era. But other nations with large land masses, such as Canada, Australia, Russia, and Brazil, also depend upon natural resource exports to a degree that is unhealthy in the long run. Even the United States, whose Midwestern agricultural exports rely upon the giant Ogallala Aquifer, a depleting accumulation of water from glacial times, is not exempt from this problem.

**The implied solution is to tax or otherwise to restrict nonrenewable exports.  
And that is also not free trade.**

### **Assumption #2: There are not externalities.**

An externality is a missing price tag. More precisely, it is the economists' term for when the price of a product does not reflect its true economic value. The classic *negative* externality is environmental damage, which reduces the economic value of natural resources without raising the price of the product that harmed them. The classic *positive* externality is technological spillover, where one company's inventing a product enables others to copy or build upon it, generating wealth that the original company does not capture. The theory of comparative advantage, like all theories of free-market economics, is driven by prices, so if prices are wrong due to positive or negative externalities, it will recommend bad policies.

For example, goods from a nation with lax pollution standards will be too cheap. As a result, its trading partners will import too much of them. And the exporting nation will import too much of them, overconcentrating its economy in industries that are not really as profitable as they seem, due to ignoring pollution damage. Free trade not only permits problems such as these, but positively encourages them, as skimping on pollution control is an easy way to grab a cost advantage. ➤



**Positive externalities are also a problem. For example, if an industry generates technological spillovers for the rest of the economy, then free trade can let that industry be wiped out by foreign competition because the economy ignored its hidden value.**

Some industries spawn new technologies, fertilize improvements in other industries, and drive economy-wide technological advance; losing these industries means losing all the industries that would have flowed from them in the future.

These problems are the tip of an even larger iceberg known as GDP-GPI divergence. Negative externalities and related problems mean that increases in GDP can easily coincide with *decreases* in the so-called Genuine Progress Indicator or GPI.<sup>x</sup> GPI includes things like resource depletion, environmental pollution, unpaid labor like housework, and unpaid goods like leisure time, thus providing a better metric of material well-being than raw GDP.<sup>xi</sup> This implies that even if free trade were optimal from a GDP point of view (it is not), it could still be a bad idea economically.

### **Assumption #3: Factors of production move easily between industries.**

As noted, the theory of comparative advantage is about reshuffling factors of production from less-valuable to more-valuable uses. But this assumes that the factors of production used to produce one product can switch to producing another. Because if they cannot, then imports will not push a nation's economy into industries better suited to its comparative advantage. Imports will just kill off its existing industries and leave nothing in their place.

Although this problem actually applies to all factors of production, we usually hear of it with regard to labor and real estate because people and buildings are the least *mobile* factors of production. (Thus the unemployment line and the shuttered factories are the classic visual images of trade problems.) When workers cannot move between industries – usually because they do not have the right skills or do not live in the right place – shifts in an economy's comparative advantage will not move them into an industry with lower opportunity costs, but into unemployment.

**Sometimes the difficulty of reallocating workers shows up as outright unemployment. This happens in nations with rigid employment laws and high *de facto* minimum wages due to employer-paid taxes, as in Western Europe.**

But in the United States, because of our relatively low minimum wage and hire-and-fire labor laws, this problem tends to take the form of *underemployment*. This is a decline in the quality rather than quantity of jobs. So U.S.

\$28 an hour ex-autoworkers go work at the video rental store for eight dollars an hour.<sup>xii</sup> Or they are forced into part-time employment.

In the Third World, decline in the quality of jobs often takes the form of workers pushed out of the formal sector of the economy entirely and into casual labor of one kind or another, where they have few rights, pensions, or other benefits. Mexico, for example, has over forty percent of its workers in the informal sector.<sup>xiii</sup>

**This all implies that low unemployment, on its own, does not prove that free trade has been a success. The human cost is obvious, but what is less obvious is the purely economic cost of writing off investments in human capital when skills that cost money to acquire are never used again.**

This kind of cost is most visible in places such as Moscow in the 1990s, when one saw physics PhDs driving taxis and the like, but America is not exempt.

There is also a risk for the economy as a whole when free trade puts factors of production out of action. As Nobel Laureate James Tobin of Yale puts it, "It takes a heap of Harberger triangles to fill an Okun gap."<sup>xiv</sup> Harberger triangles represent the benefits of free trade on the standard graphs used to quantify them.<sup>xv</sup> The Okun gap is the difference between the GDP our economy would have, if it were running at full output, and the GDP it does have, due to some of its factors of production lying idle.<sup>xvi</sup> Tobin's point is simply that the benefits of free trade are quantitatively small, compared to the cost of not running our economy at full capacity due to imports.

### **Assumption #4: Trade does not raise income inequality.**

When the theory of comparative advantage promises gains from free trade, these gains are only promised to the economy as a whole, not to any particular individuals or groups thereof. So it is entirely possible that even if the economy as a whole gets bigger thanks to freer trade, many (or even most) of the people in it may lose income. This is not a trivial problem: it has been estimated that freeing up trade reshuffles five dollars of income between different groups of people domestically for every one dollar of net gain it brings to the economy as a whole.<sup>xvii</sup>

Free trade squeezes the wages of ordinary Americans largely because it expands the world's effective supply of labor, which can move from rice paddy to factory overnight, faster than its supply of capital, which takes decades to accumulate at prevailing savings rates. As a result, free trade strengthens the bargaining position of capital relative to labor. This is especially true when combined with growing global capital mobility and the entry into capitalism of large formerly socialist nations such as India and China.



As a result, people who draw most of their income from returns on capital (the rich) gain, while people who get most of their income from labor (the rest of us) lose.

The underlying mechanism of this analysis has long been part of mainstream economics in the form of the so-called Stolper-Samuelson theorem.<sup>xviii</sup> This theorem says that freer trade raises returns to the abundant input to production (in America, capital) and lowers returns to the scarce one (in America, labor). Because America has more capital per person, and fewer workers per dollar of capital, than the rest of the world, free trade tends to hurt American workers.

**Free trade also affects different kinds of labor income differently. The impact of free trade on a worker in the U.S. is basically a function of how easy it is to substitute a cheaper foreign worker by importing the product the American produces.<sup>xix</sup>**

For extremely skilled jobs, like investment banking, it may be easy to substitute a foreigner, but foreign labor (some yuppie in London) is just as expensive as American labor, so there is no impact on American wages. For jobs that cannot be performed remotely, such as waiting tables, it is impossible to substitute a foreign worker, so again there is no direct impact. The occupations that suffer most are those whose products are easily tradable and can be produced by cheap labor abroad. This is why unskilled manufacturing jobs were the first to get hurt in the U.S.: there is a huge pool of labor abroad capable of doing this work, and manufactured goods can be packed up and shipped around the globe. Because low-paid workers are concentrated in these occupations, free trade hurts them more.<sup>xx</sup>

There is another problem. Suppose that opening up a nation to freer trade means that it starts exporting more airplanes and importing more clothes than before. (This is roughly the situation the U.S. has been in.) Because the nation gets to expand an industry better suited to its comparative advantage and contract one less suited, it becomes more productive, and its GDP goes up, just like the theory says. So far, so good. But here is the rub: suppose that a million dollars' worth of clothes production requires one white-collar worker and nine blue-collar workers, while a million dollars of airplane production requires three white-collar workers and seven blue-collar workers. This means that for every million dollars' change in what gets produced, there is a demand for two more white-collar workers and two fewer blue-collar workers. Because demand for white-collar workers goes up and demand for blue-collar workers goes down, the wages of white-collar workers will go up and those of blue-collar workers will go down. But most workers are blue-collar workers – so free trade has lowered wages for most workers in the economy!

It follows from the above problems that free trade, even if it performs as free traders say in other respects (it does not), could still leave most Americans with lower

incomes. And even if it expands our economy overall, it could still increase poverty. Taking an approximate mean of available estimates, we can attribute perhaps twenty-five percent of America's three-decade rise in income inequality to freer trade.<sup>xxi</sup> It was estimated in 2006 that the increase in inequality due to freer trade cost the average household earning the median income more than \$2,000.<sup>xxii</sup>

### **Assumption #5: Capital is not internationally mobile.**

Despite the wide scope of its implications, the theory of comparative advantage is, at bottom, a very narrow theory. It is *only* about the best uses to which nations can put their factors of production. We have certain cards in hand, so to speak, the other players have certain cards, and the theory tells us the best way to play the hand we have been dealt. Or more precisely, it tells us to let the free market play our hand *for us*, so market forces can drive all our factors to their best uses in our economy.

Unfortunately, this all relies upon the impossibility of these same market forces driving these factors right *out* of our economy. If that happens, all bets are off about driving these factors to their most productive use *in* our economy. Their most productive use may well be in another country, and if they are internationally mobile, then free trade will cause them to migrate there. This will benefit the world economy as a whole, and the nation they migrate to, but it will not necessarily benefit us.

This problem actually applies to all factors of production. But because land and other fixed resources cannot migrate, labor is legally constrained in migrating, and people usually do not try to stop technology or raw materials from migrating, the crux of the problem is capital. Capital mobility replaces comparative advantage, which applies when capital is forced to choose between alternative uses within a single national economy, with our old friend absolute advantage. And absolute advantage contains no guarantees whatsoever about the results being good for *both* trading partners. The win-win guarantee is purely an effect of the world economy being yoked to comparative advantage and dies with it.

**Absolute advantage is really the natural order of things in capitalism, and comparative advantage is a special case caused by the existence of national borders that factors of production cannot cross. Indeed, that is basically what a nation is, from the point of view of economics: a part of the world with political barriers to the entry and exit of factors of production.**

This forces national economies to interact indirectly, by exchanging goods and services *made from* those factors, which places comparative advantage in control. Without these barriers, nations would simply be regions of a single ➤



economy, which is why absolute advantage governs economic relations *within* nations. In 1950, Michigan had absolute advantage in automobiles and Alabama in cotton. But by 2000, automobile plants were closing in Michigan and opening in Alabama. This benefited Alabama, but it did not necessarily benefit Michigan. (It only would have if Michigan had been transitioning to a higher-value industry than automobiles. Helicopters?) The same scenario is possible for entire nations if capital is internationally mobile.

**Capital immobility does not have to be absolute to put comparative advantage in control, but it has to be significant and as it melts away, trade shifts from a guarantee of win-win relations to a possibility of win-lose relations. David Ricardo, who was wiser than many of his own modern-day followers, knew this perfectly well. As he put it:**

The difference in this respect, between a single country and many, is easily accounted for, considering the difficulty with which capital moves from one country to another, to seek a more profitable employment, and the activity with which it invariably passes from one province to another of the same country.<sup>xxiii</sup>

**Ricardo then elaborated, using his favorite example of the trade in English cloth for Portuguese wine and cutting right to the heart of present-day concerns:**

It would undoubtedly be advantageous to the capitalists of England, and to the consumers in both countries, that under such circumstances the wine and the cloth should both be made in Portugal, and therefore that the capital and labor of England employed in making cloth should be removed to Portugal for that purpose.<sup>xxiv</sup>

But he does not say that it would be advantageous to the workers of England! This is precisely the problem Americans experience today: when imports replace goods produced here, capitalists like the higher profits and consumers like the lower prices – but workers *do not* like the lost jobs. Given that consumers and workers are ultimately the same people, this means they may lose more as workers than they gain as consumers. And there is no theorem in economics which guarantees that their gains will exceed their losses.<sup>xxv</sup> Things can go either way, which means that free trade is sometimes a losing move for them.

### **Assumption #6: Short-term efficiency causes long-term growth.**

The theory of comparative advantage is a case of what economists call static analysis. That is, it looks at the facts of a single instant in time and determines the best response to those facts at that instant. This is not an intrinsically invalid way of doing economics – balancing one's checkbook

is an exercise in static analysis – but it is vulnerable to a key problem: *it says nothing about dynamic facts*. That is, it says nothing about how today's facts may change tomorrow. More importantly, it says nothing about how one might cause them to change in one's favor.

Imagine a photograph of a rock thrown up in the air. It is an accurate representation of the position of the rock at the instant it was taken. But one cannot tell, from the photograph alone, whether the rock is rising or falling. The only way to know *that* is either to have a series of photographs, or add the information contained in the laws of physics to the information contained in the photograph.

The problem here is that even if the theory of comparative advantage tells us our best move today, given our productivities and opportunity costs in various industries, it *does not* tell us the best way to raise those productivities tomorrow. That, however, is the essence of economic growth, and in the long run much more important than squeezing every last drop of advantage from the productivities we have today. Economic growth, that is, is ultimately less about *using* one's factors of production than about *transforming* them – into more productive factors tomorrow.<sup>xxvi</sup> The difference between poor nations and rich ones mainly consists in the problem of turning from Burkina Faso into South Korea; it does not consist in being the most efficient possible Burkina Faso forever. The theory of comparative advantage is not so much wrong about long-term growth as simply silent.

**Analogously, it is a valid application of personal comparative advantage for someone with secretarial skills to work as a secretary and someone with banking skills to work as a banker. In the short run, it is efficient for them both, as it results in both being better paid than if they tried to swap roles. (They would both be fired for inability to do their jobs and earn zero.)**

But the path to personal success does not consist in being the best possible secretary forever; it consists in upgrading one's skills to better-paid occupations, like banker. And there is very little about being the best possible secretary that tells one how to do this.

Ricardo's own favorite example, the trade in English textiles for Portuguese wine, is very revealing here, though not in a way he would have liked. In Ricardo's day, textiles were produced in England with the then-state-of-the-art technology like steam engines. The textile industry thus nurtured a sophisticated machine tool industry to make the parts for these engines, which drove forward the general technological capabilities of the British economy and helped it break into related industries like locomotives and steamships.<sup>xxvii</sup> Wine, on the other hand, was made by methods that had not changed in centuries (and have only begun to change since about 1960, by the way). So for hundreds of years, wine production contributed no technological



advances to the Portuguese economy, no drivers of growth, no opportunities to raise economy-wide productivity.

And its own productivity remained static: it did the same thing over and over again, year after year, decade after decade, century after century, because this was where Portugal's immediate comparative advantage lay. It may have been Portugal's best move in the short run, but it was a dead end in the long run.

**Today, the theory of comparative advantage is similarly dangerous to poor and undeveloped nations because they tend, like Portugal, to have comparative advantage in industries that are economic dead ends. So despite being nominally free, free trade tends to lock them in place.**

### **Assumption #7: Trade does not induce adverse productivity growth abroad.**

As previously noted, our gains from free trade derive from the difference between *our* opportunity costs for producing products and the opportunity costs of our trading partners. This opens up a paradoxical but very real way for free trade to backfire. When we trade with a foreign nation, this will generally build up that nation's industries, i.e., raise its productivity in them. Now it would be nice to assume that this productivity growth in our trading partners can only reduce their direct costs, therefore reduce their opportunity costs, and therefore increase our gains from trading with them. Our foreign suppliers will just become ever more efficient at supplying the things we want, and we will get even cheaper foreign goods in exchange for our own exports, right?

Wrong. As we saw in our initial discussion of absolute vs. comparative advantage, while productivity (output per unit of input) does determine direct costs, it does not on its own determine opportunity costs. The alternative uses of factors of production do. As a result, productivity growth in some industries can actually raise our trading partners' opportunity costs in other industries, by increasing what they give up producing in one industry in order to produce in another. If the number of rolls they can make from a pound of dough somehow goes up (rolls get fluffier?), this will make it more expensive for them to bake bread instead. So they may cease to supply us with such cheap bread! It sounds odd, but the logic is inescapable.

Consider our present trade with China. Despite all the problems this trade causes us, we do get compensation in the form of some very cheap goods, thanks mainly to China's very cheap labor. The same goes for other poor countries we import from. But labor is cheap in poor countries because it has poor alternative employment opportunities. What if these opportunities improve? Then this labor may cease to be so cheap, and our supply of cheap goods may dry up.

This is actually what happened in Japan from the 1960s to the 1980s, as Japan's economy transitioned from primitive to sophisticated manufacturing, and the cheap merchandise readers over forty will remember (the same things stamped "Made in China" today, only less ubiquitous) disappeared from America's stores. Did this reduce the pressure of cheap Japanese labor on American workers? Indeed. But it also deprived us of some very cheap goods we used to get. (And it is not like Japan stopped pressing us, either, as it moved upmarket and started competing in more sophisticated industries.) The same thing happened with Western Europe as its economy recovered from WWII from 1945 to about 1960, and cheap European goods disappeared from our stores. Remember when BMWs were cheap little cars and Italian shoes were affordable?

**It is as if our football player woke up one morning and found that his lawn man had quietly saved his pennies from mowing lawns and opened a garden shop. No more cheap lawn mowing for him! (Maybe it was a bad idea to hire him so often.)**

Now this is where things get slippery and non-economists tend to get lost. Because, as we saw earlier, gains from trade do not derive from absolute but comparative advantage, these gains can be killed off *without* our trading partners getting anywhere near our own productivity levels. So the above problem does not merely consist in our trading partners catching up to us in industrial sophistication. But if their *relative* tradeoffs for producing different goods cease to differ from ours, then our gains from trading with them will vanish. If Canada's wheat vs. corn tradeoff is two units per acre vs. three and ours is four vs. six, all bets are off. Because both nations now face the same tradeoff ratio between producing one grain and the others,<sup>xxviii</sup> all possible trades will cost Canada exactly as much as the benefit the U.S. – leaving no profit, no motivation to trade, and no gain from doing so. And if free trade helped raise Canada's productivity to this point, *then trade deprived us of benefits we used to get.*

It is worth retracing the logic here until it makes sense, as this really is the way the economics works. Most of the time, this problem has low visibility because it consists in the silent change of invisible ratios between the productivities of industries here and abroad. Few people worry about it because it has no easily understood face like cheap foreign labor. But it definitely does mean that free trade can "foul its own nest" and kill off the benefits of trade over time. Even within the most strictly orthodox Ricardian view, only the existence of gains from free trade is guaranteed.<sup>xxix</sup> It is not guaranteed that changes induced by free trade will make these gains grow, rather than shrink.<sup>xxx</sup> So free trade can do billions of dollars worth of damage even if Ricardo were right about everything else (he was not).

This problem is actually even more significant than explained here because it is also the foundation of an even more radical critique of free trade based on so-called multiple-equilibrium analysis. This concerns the nightmare



scenario that *really* haunts Americans: the idea that free trade can help other nations catch up with us in industrial sophistication, driving us out of our own most important industries. Unfortunately, this type of analysis is beyond the scope of this essay because it is outside the Ricardian framework, though it is worth knowing that it exists.<sup>xxxi</sup>

### **Conclusion: Trade Yes, Free Trade No**

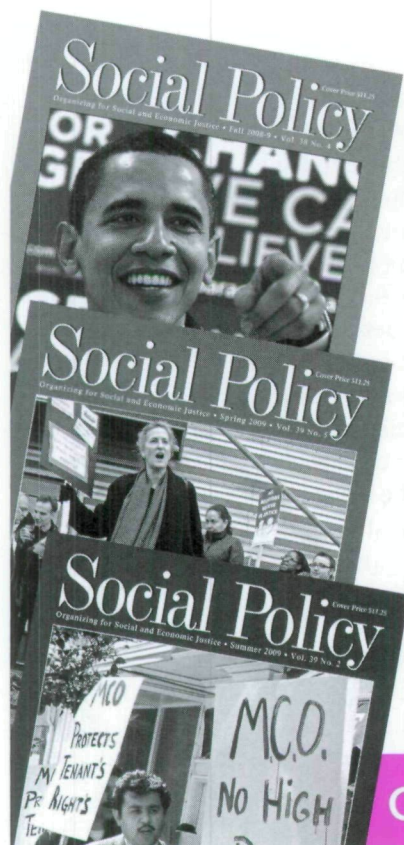
Given that the theory of comparative advantage has all of the above-described flaws, how much validity does it really have? Answer: some. Asking what industries a nation has comparative advantage in helps illuminate what kind of economy it has. And insofar as the theory's assumptions do hold to some extent, some of the time, it can give us some valid policy recommendations. *Fairly open trade, most of the time, is a good thing.* But the theory was never intended to be by its own inventor, and its innate logic will not support its being, a blank check that justifies 100 percent free trade with 100 percent of the world 100 percent of the time. It only justifies free trade insofar as its assumptions hold true,<sup>xxxii</sup> and they largely do not.

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*Adapted from Free Trade Doesn't Work: What Should Replace It and Why, by Ian Fletcher (USBIC, 2010), [www.freetradedoesntwork.com](http://www.freetradedoesntwork.com). Ian Fletcher is an Adjunct Fellow with the U.S. Business & Industry Council.*

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