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## The Modern Global Economy and Inherent Trade Rivalry: Introduction

Some of the truths most dear to the hearts of economists are those that clash with the practical intuition of those not trained in the field. It does not require special training to see that foreign competition can put some domestic jobs in danger, or that once vibrant home-grown industries sometimes succumb to foreign competitors who can make the goods they once produced more cheaply or better. International trade sometimes leads to the contraction or even loss of some industries, even significant ones such as automobiles or consumer electronics, and can therefore cause hardship and unemployment. But economists generally maintain that such localized pain is more than compensated for by the availability of better automobiles or compact disc players to the large consuming public.

This conclusion rests to a considerable extent on time-honored and simple models of international trade. These models map out a world in which, through the unrestrained exchange of goods with all the gain that entails, each nation ends up producing the goods at which it is *naturally* best, compared to the other countries and products, and all the nations participating in trade benefit from the exchange of the goods thus efficiently produced. While the simplicity<sup>1</sup> of these models has often been attacked as a weakness, we must realize that no model of large-scale economic activity can encompass the true complexity of reality. Economics can offer valuable insights only by focusing on a few essential aspects of any situation it analyzes—those aspects that are most important for the matter that is being studied—and by disregarding the myriad other influences that are present but whose role is not vital for the subject.

However, it is also true that in the time since these basic models of international trade were first formulated, there have been major changes in the world economy. David Ricardo's world of agriculture,

slow-moving technology, and tiny businesses has been replaced by a world dominated by manufactured goods, rapidly evolving technology, and huge firms. This calls for re-examination of those classical models, and such a re-examination has indeed been under way in the economic literature.<sup>2</sup>

In this book we will show that the classical trade models, on which so much has been built, are quite resilient and adaptable to the new conditions of the world economy. The models can be modified in ways that preserve their essential simplicity, to reflect both the effect of large-scale economic activity and the rapid diffusion of technology.

However, as modified by us, the theory shows that there are in fact *inherent conflicts in international trade*. This means that it is often true that improvement in one country's productive capabilities is attainable only at the expense of another country's general welfare. An improvement in the productive capability of a trading partner that allows it to compete effectively with a home-country industry, instead of benefiting the public as a whole, may come at the expense of that home country overall. And this harm is not the localized damage previously mentioned, loss of jobs in the immediately affected industry, but an adverse effect that is felt throughout the home country.

When does development abroad help and when does it harm? Put somewhat loosely, our central conclusion is that a developed country such as the United States can benefit in its global trade by assisting the substantially less developed to improve their productive capability. However, the developed country's interests also require it to compete as vigorously as it can against other nations that are in anything like a comparable stage of development to avoid being hurt by their progress.

More carefully put, we will show that an industrialized country will benefit if a *very underdeveloped* trading partner acquires new industries and generally improves its productivity. It will continue to benefit until that partner reaches a level of development that enables it to play a more substantial role in the global marketplace. Usually this level of development is still very substantially lower than that of the industrialized country, but it is nevertheless a significant turning point. After this point acquisition of more industries by the newly developing partner *becomes harmful* to the more industrialized country. That country's interests are then best served by competing vigorously to maintain undiminished its still substantial advantage over the newly

emerging rival. To the extent it fails to do so its economic prosperity will be diminished. Thus U.S. interests are served by progress in trading partners such as India or Indonesia, but the United States is better off staying as far ahead as possible, in terms of productivity, of trading partners like France, Germany, or Japan.

The underlying reason for these significant departures from the original model is that the modern free-trade world is so different from the original historical setting of the free-trade models. Today there is not one uniquely determined best economic outcome based on natural national advantages. Today's global economy does not single out a single best outcome, arrived at by international competition, in which each country serves the world's best interests by producing just those goods that it can naturally turn out most efficiently. Rather, there are *many possible outcomes* that depend on what countries actually choose to do, what capabilities, natural or human-made, they actually develop.

These outcomes vary in their consequences for the economic well-being of the countries involved. Some of these outcomes are good for one country, some are good for the other, some are good for both. But it often is true that the outcomes that are the very best for one country tend to be poor outcomes for its trading partner. The existence of this range of outcomes, with such different consequences for the countries involved, implies that in a modern free-trade environment a country's welfare is critically dependent on the success of its industries in international trade. The country as a whole has a vital stake in the competitive success or failure of its industries.

### 1.1 Multiple Economic Outcomes—Large-Scale Industry and High Start-up Costs

In the unmodified classical model the economic outcomes for trading countries tend to be unique. Free-market forces, including free international competition, will determine what goods are made where. From this unique outcome also flows a fixed and theoretically predictable degree of prosperity for each country. A country that ends up producing little of value will have little to consume at home and little to trade abroad, and will have a low standard of living.

A well-known and appropriately antique example, taught to generations of economics students by generations of economics professors, illustrates the point: If England and Portugal trade wine and cloth, Portugal, because of its natural advantages, will end up as the producer

of wine, and England as the producer of textiles. Matters will never go the other way around. England's relatively sunless slopes will not produce grapes in either the abundance or quality that will enable English winemakers to out-compete the Portuguese either in price or quality. As a result English winemakers will not be able to remain in business unless the demand for wine exceeds Portugal's capacity to produce it. But England's wooly sheep, and long-established cloth-making capabilities, give it a relative advantage in textiles that does enable it to succeed in that business.

As this example illustrates, which country makes what product is generally uniquely determined in the classical economic model of trade. And that outcome always serves the economic interests of the general public in all the countries involved because a country can be the prime supplier in an industry only if it is the best supplier of that product. "Best" can mean that it is the lower-cost supplier of the item at a fixed quality level or, alternatively, that at a given cost, it is the higher-quality supplier.

It is one of the most remarkable results of economic theory that this unique outcome will tend to be best for consumer welfare and productive efficiency in every one of the countries involved.

But today's world of industry contrasts sharply with the wine-wool example that is so typical of the past. Today, in many lines of business, efficiency, or *even the ability to make a product at all*, requires firms to operate on a large scale.

There was a time when anyone with a ten-person firm could enter the automobile industry and build competitive cars. Once, all automobile companies were small and experimental, and many of today's firms are the grown-up survivors of that era. But that time is long past. Today a competitive auto company must produce on a large scale, and must operate a huge dealer and support network. Any new competitive entrant industry in another country must start on something like that scale, and that is not easy to do against those who are already entrenched.

Just as in the automobile example, much of modern technology requires activities to be carried out on a very large scale in order to be economical and competitive. Consequently entry into one of these industries, against an entrenched competitor, is slow, expensive, and very much an uphill battle if left entirely to free-market forces.

In these modern industries patterns of industrial dominance can occur simply as the result of the vagaries of historical accident. A war may force some country to invest heavily in some military product, like aircraft, or to develop a chemical industry because the country is cut off from its traditional supplier. Or a single, farseeing entrepreneur can start a company that inaugurates an industry. Such historical accidents, which can be quite divorced from any natural advantage, can give a country an edge in plants, knowledge and personnel that allows it to dominate an industry for many years.

In many of today's industries, with large-scale operations required, with difficulties of entry, and with acquired advantages rather than natural ones playing a more decisive role, the situation is basically different from the wine and wool example—*there is no single clear-cut and natural outcome*. If the United States and Japan trade in semiconductors, automobiles, and aircraft, it is easy to imagine circumstances in which the United States dominates in aircraft and semiconductors and Japan in automobiles, but it is also eminently possible for the United States to have evolved into an entrenched position in automobiles and semiconductors while Japan dominates in the production of aircraft. Or, for that matter, almost any other combination can emerge.

Any such position once arrived at, whether deliberately or by the purest accident of historical events, does not break down overnight. Market forces will preserve it because of the difficulty of entry for new competitors in such an industry. In the wine-wool world, market forces, driven by demand and natural advantages, led the world to a single outcome. In today's world, market forces do not select a single, predetermined outcome, instead they tend to preserve the established pattern, whatever that pattern may be.

As a result modern international trade analyses must deal with many possible outcomes. If many assignments of industries among countries once established are possible stable outcomes in the world economy—if Japan can be the producer of good *X* and Germany of good *Y*, but the opposite assignment is also equally viable once established—then, since there are hundreds of industries, there are an enormous number of possible combinations of production assignments that can establish themselves as the entrenched state of affairs. And all of these permutations are consistent with the free play of market forces.

Furthermore, if these disparate industry-country combinations differ in their economic consequences for each trading country—some being good for a particular country and some not so good—why should a country necessarily be satisfied with the position it currently holds? Clearly, that position is not the inevitable and optimal outcome of the working of the market mechanism. It is more a historical accident that is currently maintained by market forces. Why should a country be satisfied with the current state of affairs if it can see a way to do better?

And there are things a country can do to change its position in the global balance. A home market closed off to foreign competition is one traditional way to shelter an industry while it is growing up to a reasonable size. Such closure of the market can be natural if there is something special about the home market that the home producer exploits, or it can be the result of deliberate government action intended to foster the home industry. Either circumstance can transform the almost insurmountable entry problem into one that is merely difficult. And there is a long list of other things that can be attempted for this purpose.

While it made little sense for England to attempt to produce wine, it may make sense for a modern nation to enter the automobile industry or some other industry and establish a new and better position in the global balance that is then maintained by market forces. But this requires someone to know something about which outcomes are better. In this book we will study which of the possible outcomes are better for a given country, and we will also describe the effect on that country's trading partners.

Analyzing all these different outcomes and their effects on countries and their trading partners may seem like a daunting task. There are hundreds of industries and a large number of countries capable of entering into those industries. Do we have to consider each and every one of the conceivable matchups of industry and country? Fortunately, we are rescued from the enormous task of dealing with this truly vast array of possibilities by the fact that all these outcomes obey certain simple rules. We will describe these rules and their consequences in the succeeding chapters.

These rules will show us, however, that among the multitude of stable outcomes, *those that are best for one country tend to be disadvantageous for its trading partner*. And we mean that it is disadvantageous for its trading partner in a very wide sense. It is a sense that

takes into account not only the local effects on individual industries but also the wider effects on the entire national population. It is in this sense that we find that there is inherent conflict in international trade.

So far we have discussed the different stable outcomes made possible by the difficulty of entering an industry. However, there is a second and equally important source of multiple outcomes. That second source is change in a country's ability to produce.

## 1.2 Multiple Economic Outcomes—Capturing the Lead through Productivity Growth

In the modern world countries can change their productive capabilities rather rapidly. We will consider the possibility of a country learning how to become good at producing something, perhaps a simple assembly process, say, shirt-making, or the manufacture of artificial Christmas trees. In contrast to our earlier discussion, we will now consider things that can be done on a small scale just as well as on a large scale and that do not necessarily have high entry costs. Nevertheless, in this case, too, we will reach the same conclusions about international trade as we reached under the assumption of high entry cost. We will again see inherent conflict in international trade.

In the world of the classical trade model, with its emphasis on natural advantage derived from climate or natural resources, it was difficult, for example, for England to become a substantial presence in wine production. However, in the modern world it is possible for many countries to learn the skills involved in making a product, and then to practice those skills until they approach the capability of the world's productivity leaders.

The skills and know-how of large, multinational corporations<sup>3</sup> enable them to set up shop—making athletic shoes, for example—almost anywhere in the world. The company's present employees, both management and labor, know the techniques for making athletic shoes rapidly and effectively, and they can teach new workers in other countries the assembly and other skills required to make athletic shoes rapidly and effectively in a new location. If the new workers learn to perform these skills as productively as the world leaders, and if their wages are lower than those in other countries, then the unit cost of athletic shoes will be lower in the new assembly plant than elsewhere. And

its ability to compete at low cost can change the course of world trade in that industry.

The same outcome can occur by means other than the stimulus of multinational corporations. Any means of learning will do. Workers or managers can be hired from the firms that are already skilled, or people can go abroad to participate in the leading industries and learn from the leading firms. The only thing that matters is that the skills can be acquired or developed and that the resulting unit cost of production is low. If, by any of these means, the new plant becomes one of the world's low-cost producers, then market forces will keep it going, and we will have a new pattern of international trade and new national outcomes.

Thus countries today can change their circumstances and can acquire (or lose) industries through rapid alterations of their capabilities in industries that do not have high entry costs. This can lead to a new outcome in international trade. The possibility of such changes and such new outcomes is another and different source of multiple outcomes.

Remarkably enough, the resulting different outcomes obey the same simple laws as those that govern the case of high entry cost and large-scale operations. Once again, we will find inherent conflict in the countrywide interests of trading partners. Once again, the outcome that is best for one country tends not to be good for another. Once again, a multitude of possible outcomes become a possible source of conflict in international trade.

### 1.3 Concluding Comments

The central conclusion of this chapter is the profound contrast between the single, determinate outcome that tends to result from international trade in the classical world of small-scale industries, in which advantage is based on fixed natural capabilities, and the great and rich set of possibilities that opens up in the presence of high startup costs of entry into a large-scale industry. That same abundant set of possibilities exists even in the case of small-scale operations if it is possible for skills to be acquired, and in the modern world they can be. A grapevine cannot learn to flourish in England as well as in Portugal, but an assembler of radios can learn to assemble about equally well in many different countries.



In the classical trade model, market forces—Adam Smith’s Invisible Hand—could arrive at only one outcome. In contrast, either high startup cost or learning provide the Invisible Hand with a vast array of options. This raises the possibility of attempting to modify the outcome through private acts or by public policy. History has brought us to where we are today. But people can act in the present to change the accidental outcome of history.



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