Part one
Trade in times of global imbalances and crises
I. A trade theory explanation of global imbalances

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There has been concern for many years over the large and growing trade imbalances of various countries in the world economy. This has led to calls for “global rebalancing” in which countries with persistent trade deficits, such as the United States, would reduce net imports while countries with persistent trade surpluses, such as China, would reduce net exports. This issue has become associated with concerns about the managed exchange rates of China and other economies as well as budget imbalances of the United States and other economies. The purpose of this chapter is to look at global imbalances from the perspective that a trade theorist would take to global trade. The issue is whether trade imbalances are necessarily harmful to global welfare and, therefore, a sign that policies are needed to correct them.

From a trade perspective, trade imbalances need not be a sign of disequilibrium. Rather, they could be a simple indication that there is trade across time as well as across space. This is illustrated simply by figure 1, which shows the familiar trade theorists’ illustration of differing production possibilities in two countries, A and B, together with indifference curves showing the welfare that they can achieve both in autarky and with free trade. However, instead of the axes showing quantities of two different goods at the same point in time, they show what could be the same good but at different times. That is, country A is relatively better at, and therefore has a comparative advantage in, producing the good in the present, while the production possibilities of country B are similarly skewed towards production in the future. In autarky, these differences are reflected in a relative price that is lower at present in country A than in country B compared with future consumption; this corresponds to a lower real interest rate in A than in B. With free trade (shown by price lines with the same slope and thus the same interest rate in both countries), country A expands production in the present, exporting its excess to country B, while B does the reverse. In the present, it follows that country A is producing more than it is consuming, and thus is running a trade surplus, while country B is running a deficit.

Are there gains from this trade? Certainly, as each country is exploiting its own inter-temporal comparative advantage, and both are accordingly able to reach higher indifference curves, representing higher welfare. If this were the situation in the world economy of today, it would not be a cause for concern.

However, what differentiates the two countries in figure 1 is that country A has a comparative advantage in present production while country B has a comparative advantage in future production. This difference in the two production possibility curves means that the ratio of real output in the future, compared with the present, is larger in

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country B than in country A; in other words, real output is growing faster in country B. That is why it makes sense for consumers in country B to run a trade deficit, in effect smoothing their consumption over time.

However, trying to match this scenario to the current situation in the world economy creates a problem. The country that is running the largest chronic trade surplus is rapidly-growing China, not the slow-growing United States. Thus, in the figure, the United States would be country A and China would be country B. The theory would indicate that the United States should be running a surplus and China should be running a deficit.

How is it possible, in the context of this model, to account for the fact that the two countries are doing just the opposite? One possibility would be to let them have different preferences. Suppose that country A has an even greater preference for present consumption than its ability to produce in the present, while country B has a similarly extreme preference for consuming in the future. Figure 2 shows such a free trade equilibrium. It has the two countries gaining from this inter-temporal trade, which is now motivated more by their difference in preferences than by their difference in their ability to produce.

Is figure 2 a plausible explanation of the situation in the world today? Perhaps. It is certainly true that many in the United States, the author included, act as though present consumption is preferred over future consumption to an extreme degree, while the savings rates of China and other developing countries suggest the opposite preference. However, if that were the whole story, then a higher real interest rate could be expected in the United States than in China, except to the extent that trade and/or capital flows have equalized interest rates internationally. That does not seem plausible. In any case, the author hesitates
Figure 2. Free inter-temporal trade with non-identical preferences: Country A consumers favouring Q_{present} and country B consumers favouring Q_{future}

![Diagram showing inter-temporal trade with non-identical preferences](image)

In trade theory, we are most accustomed to considering barriers to trade such as tariffs, but these would not help in this case. They would only drive the trade imbalances to zero, not reverse them.

Instead, policies are needed that artificially stimulate trade that is counter to comparative advantage. Most simply, suppose that countries use policies to subsidize or otherwise encourage exports of the good in which they have comparative disadvantage. Specifically, suppose that country A subsidizes exports of the future good, while country B subsidizes exports of the present good. The outcome of this pair of policies is shown in figure 3. Trade takes place along a common (broken) price line. Because of the subsidy to export the future good in country A, its relative price is higher within the domestic market, both for producers and for consumers, than on the world market. The opposite is true in country B. Also, in both countries, the budgets of consumers at domestic prices are reduced below the value of production at those prices by the need to levy lump-sum taxes to finance the subsidies. Although this may all look somewhat unfamiliar, it is just the export-subsidy analogue of the usual two-country analysis of an import tariff.

The result shown in figure 3 has welfare of both countries reduced well below the autarky level. However, this is not necessarily the case, since it would be possible for one country to gain if its own subsidy were sufficiently small compared with the other. But a net loss for the world as a whole, compared to autarky, is necessary, since by trading contrary to comparative advantage, the world is promoting inefficiency.
Figure 3 tells a dramatic story of how pernicious a global imbalance can be if it is caused by policies that promote inter-temporal trade that is contrary to comparative advantage. The fact that certain fast-growing economies, such as China, are running trade surpluses while slow-growing economies, such as the United States, are running deficits is suggestive that something similar to this might be going on. However, this raises the question as to what types of policies might be in place that would play the role of the export subsidies shown in figure 3.

In the case of China, the answer is relatively straightforward. For many years, the Government of China has accumulated foreign assets as a by-product of its exchange market intervention. It is, in effect, lending massively each year to the rest of the world. That policy comes about as close as can be imagined to subsidizing exports of present goods.

In the United States, it is harder to see a policy that can be interpreted as subsidizing future exports or present imports. However, the stance of both monetary and fiscal policies during recent years appears to have promoted present consumption over future consumption, and thus low saving. That does not fit quite as neatly into this theoretical framework, but it seems likely to have similar effects.

Therefore, this interpretation of global imbalance, from the perspective of trade theory, suggests that it is likely to be undermining world welfare. In addition, to the extent that it is caused by policies of both the surplus and the deficit countries, it is likely to be making them all worse off.