



GOODBYE, GLOBALIZATION?

Why trade growth has slowed down — and what it might mean for the global economy

BY JESSIE ROMERO

The first container ship sailed from Newark, N.J., to Houston, Texas, in 1956, marking the beginning of a revolution in global shipping and transportation. Thirteen years later, ARPAnet sent its first message from a computer at the University of California, Los Angeles to a computer at Stanford University, sparking the modern Internet. Over the next several decades, further advances in transportation and communications would make the world increasingly interconnected and enable goods to be shipped all over the world. Today, if you're like most consumers, the shirt you're wearing is made out of cotton grown in the southern United States, milled into fabric in India or China, and cut and sewn into clothing in Bangladesh.

But after decades of rapid growth, trade suffered its greatest drop in the postwar era during 2008 and 2009, an episode known as the “Great Trade Collapse.” Today, growth rates are still well below the previous trend. The reasons for this sluggishness are unclear: Are there lingering effects from the global financial crisis and recession, or has some fundamental change occurred in the world economy? Either way, the answer has important implications for development — and maybe for world peace.

Why Trade Boomed

For much of the postwar era, world trade grew faster than world GDP. Between 1950 and 2007, the value of world goods exports increased an average of 11 percent per year, compared to average GDP growth of 3.6 percent (calculated at market exchange rates), according to data from the World Trade Organization (WTO). The value of exports is highly sensitive to changes in prices and exchange rates, so economists also measure exports by volume to account for these changes. The volume of world goods exports also increased more quickly than GDP, averaging 6 percent per year. Goods make up the majority of total world exports. Between 1960 and 2008, according to the World Bank, the

world exports-to-GDP ratio increased from 12 percent to 29 percent (see chart). The World Bank's measure includes both goods and services.

Several factors contributed to rapid growth in trade. One was the world's increasing openness to trade. There was a proliferation of new trade agreements during the 1990s, including the Uruguay round of negotiations under the General Agreement on Tariffs and Trade (the precursor to the WTO) and the North American Free Trade Agreement. By 2001 there were more than 200 regional trade agreements, although not all of them lasted.

Another factor was the dissolution of the Soviet Union in 1991, which started a process of economic liberalization in Eastern European countries and allowed them to begin trading with the world. But perhaps the most crucial entrant into the global economy was China.

In 1978, China's new leader, Deng Xiaoping, announced an “open door policy” to begin opening up China to the world market. Over the next several years, he set up Special Economic Zones to encourage foreign direct investment, laying the groundwork for China to become the world's factory. In just over a decade, China almost doubled its share of world trade, moving from being 32nd in the world in export volume to 13th. By 2014, China was the world's largest exporter and second largest importer of goods. Overall, China exports about 12 percent and imports about 10 percent of the world's goods.

It's no coincidence that the rise of China in world trade coincided with a rise in “global value chains” (GVCs), in which a country imports intermediate goods to produce goods for export, rather than for domestic consumption. (See “American Made,” *Region Focus*, Fourth Quarter 2011.) This vertical specialization, as the process is called, accelerated in the 1990s as decreased transportation and communications costs made it feasible and profitable for companies to split the production of their goods across different countries, depending on where a step or

component was cheapest. Quite often, that was in China.

The increase in GVCs significantly increased trade, but the way trade is measured might have made that increase appear greater than it was. “Measured trade depends on and is affected by the back and forth movement of these intermediate inputs,” says Aaditya Mattoo of the World Bank. “Since the 1990s was when the great global fragmentation of production took place, that’s why we saw that as a period of dramatically faster trade growth compared to GDP growth.”

Because goods produced via a GVC cross borders multiple times, gross measures of trade include double counting. “Imagine a semiconductor gets made in Malaysia, and then shipped to Taiwan to have some component added, and then shipped to China where it’s added to something else, and then shipped to the United States where it’s finally consumed. That little semiconductor is being counted every time it’s jumping,” says Caroline Freund, a senior fellow at the Peterson Institute for International Economics.

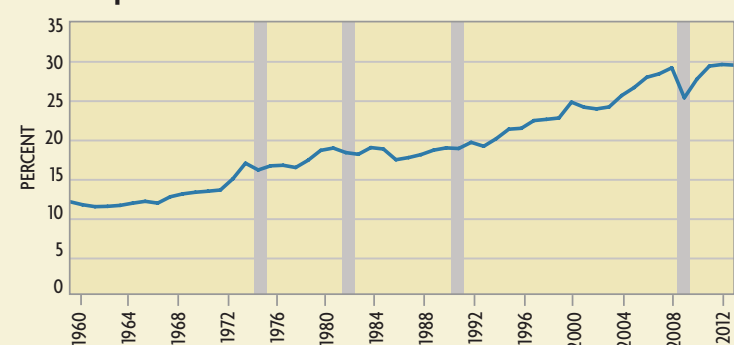
Value-added trade, in contrast, counts only the value added in each country. For example, if the semiconductor was worth \$50 when it left Malaysia, \$100 when it left Taiwan, and then left China embedded in a \$300 smartphone, the gross value of trade would be \$450. The value added would be just \$300: \$50 of value added in Malaysia, \$50 in Taiwan, and \$200 in China. In a 2014 article, Robert C. Johnson of Dartmouth College and Guillermo Noguera of the University of Warwick found that the ratio of value-added trade to gross trade has declined from 85 percent in the early 1970s to about 75 percent today. Put another way, about 25 percent of gross trade could be double counted.

The rise of GVCs also appears to have made trade more responsive to changes in income. Economists refer to this as the income elasticity of trade, that is, the percent change in trade for a 1 percent change in GDP. In a 2002 article, Douglas Irwin of Dartmouth College calculated long-run elasticities for 1870–2000. Between 1870 and 1985, the elasticity fluctuated between about 1 and 1.6, meaning that a 1 percent increase in world GDP was associated with between a 1 percent and 1.6 percent increase in world export volume. Between 1985 and 2000, a period that coincides with the adoption of GVCs, the elasticity increased to 3.39.

Why Trade Busted

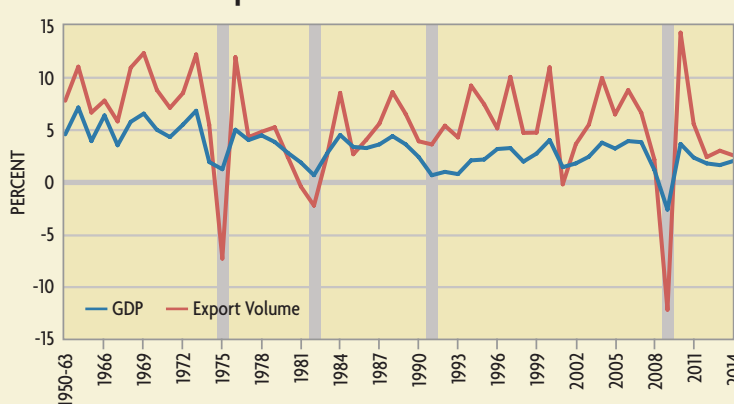
The era of rapid trade growth came to a crashing halt in 2008. Between April of that year and May of 2009, total world merchandise trade volumes fell 20 percent, according to the World Trade Monitor published by the CPB Netherlands Bureau of Economic Policy Analysis — the largest decline since the 1930s and the steepest decline in history. (Trade fell by a larger percentage during the Great Depression, but that decline took several years.) The decline in trade was significantly larger than the decline in world industrial production, which fell 12 percent between April 2008 and April 2009 and began to tick back upward in May 2009. World GDP declined about 2 percent in 2009.

World Exports-to-GDP Ratio



NOTE: Exports includes goods and services. Shaded areas denote global recessions as defined by the IMF. SOURCE: World Bank World Development Indicators

Growth in World Export Volume and World GDP



NOTE: Export volume is merchandise exports. GDP is calculated at market exchange rates. Percent change is year-over-year. Shaded areas denote global recessions as defined by the IMF. SOURCE: World Trade Organization, *International Trade Statistics 2015*

Trade typically declines by a greater percentage than GDP during a global downturn, according to research by Freund, and then rebounds equally sharply. Trade did rebound significantly in 2010; the volume of world exports increased 14 percent that year, according to the WTO. But unlike in previous periods, trade growth slowed again in 2011, and since then it has barely kept pace with GDP growth (see chart). As of 2013, the most recent year for which the World Bank has data, the exports-to-GDP ratio was stuck at its 2008 level.

Why did trade fall so steeply in 2008 and 2009? Largely, it was due to weak demand. About 70 percent of the decline can be explained by changes in demand, according to a 2010 article by Rudolfs Bems of the International Monetary Fund, Dartmouth College’s Johnson, and Kei-Mu Yi of the University of Houston. The drop in demand translated disproportionately to a drop in trade as a result of “composition effects”: During recessions, businesses and consumers tend to cut back more on investment and durable goods, such as new equipment or cars, than they do on consumption goods. But durable goods tend to be much more heavily traded than nondurable goods and also rely more on imported inputs for production. As a result, declines in investment and durable goods purchases can have an outsized effect on trade.

Why is Trade Growth Still Slow?

Weak demand can explain much of the Great Trade Collapse. But why, after a brief rebound, is trade growth still slow?

In part, trade growth might be slow because GDP growth in advanced economies is still relatively slow. Recent research by Patrice Ollivaud and Cyrille Schwellnus, economists at the Organization for Economic Co-operation and Development, found that trade growth since the crisis is close to predicted values based on certain ways of measuring global GDP growth.

Weak demand from European countries might be having an especially large effect on measures of global trade growth. Overall, the 19 euro area countries have averaged just 0.8 percent GDP growth between 2010 and 2015, compared with 2.2 percent between 2000 and 2007, according to data from the International Monetary Fund. A fall in European demand has a disproportionate impact on world trade numbers since it reduces both imports from outside the euro area and intra-euro area trade, which is 10 percent of global trade. In Ollivaud and Schwellnus' analysis, this is because the members of the euro area are treated as separate countries for the purposes of measuring trade, despite the fact that intra-eurozone trade is akin to intra-national trade in that there are no tariffs, the currency is the same, and transportation costs are low. Ollivaud and Schwellnus found that if intra-eurozone trade is excluded, post-crisis global trade intensity (measured as the ratio of import volume to GDP volume) is only slightly below its pre-crisis trend.

Weak demand, along with a strong yuan, also has depressed exports from China, and there are signs of longer-term changes in the Chinese economy. "Two dimensions of the Chinese economy have changed," says the University of Houston's Kei-Mu Yi. "First, as they've become more technologically proficient, they can make a lot of the intermediate inputs themselves, and to the extent they do, their demand for imports would fall. Second, as their economy has gotten bigger, they are selling more domestically rather than exporting." Just as China's entry into the global market boosted trade for the world as a whole, a persistent decrease in China's trade could depress global trade growth.

Have We Reached Peak Trade?

Just how much trade elasticity has declined, and when that decline started, is the subject of considerable debate among economists. But some research suggests the process actually started well before the global financial crisis. With Cristina Constantinescu and Michele Ruta, also of the World Bank, Matteo found that the trade elasticity started falling around 2001, to about half of what it was between 1986 and 2000. According to their analysis, this decrease in elasticity explains about half of the trade slowdown in 2012 and 2013.

The authors pointed to a slowdown in the adoption of GVCs as one major reason the trade elasticity has decreased. Comparing the elasticity of gross trade to the elasticity of

value-added trade, which has been relatively stable over time, they find the measures have converged since the early 2000s, suggesting a slower pace of vertical specialization.

Partly, that's just mathematical. "When offshoring is new, you end up with this big boost in gross trade as you're increasing the round-tripping of the parts," says Freund. "But once global value chains are established, the base is so much bigger that growth is going to look a lot slower."

But it also could reflect that businesses have become slower to adopt GVCs or are pulling back from them altogether. First, the returns might have shrunk, as companies have already adopted GVCs for the products where gains are most likely to be realized. In addition, rising labor costs in developing countries could alter the calculation; hourly manufacturing wages in China, for example, have increased on average 12 percent per year since 2001. Natural disasters such as the Fukushima earthquake also could make managers nervous about having long supply chains. Anecdotally, a number of American companies have been "reshoring" manufacturing to the United States. The Reshoring Initiative, an advocacy group, estimates that about 248,000 jobs that left the United States have returned since 2010.

While Constantinescu and her co-authors pinpointed 2000 as the beginning of the decline in the trade elasticity, other research has found that the decline did not occur until the Great Trade Collapse. In this view, the decline is still attributable to a pullback from vertical specialization, but that itself might be for cyclical reasons. Whether vertical specialization — and with it the trade elasticity — will accelerate when and if global demand picks back up remains to be seen.

"When you look at what's been happening in the global economy over the past decade, it's possible to be a little pessimistic and conclude that the globalization movement since World War II is not just an inevitable force that won't be stopped," says Yi.

Still, there are factors that could lead to faster trade growth in the future. For example, technology has made it increasingly possible for small and medium-sized enterprises (SMEs) to reach customers around the world. (International organizations generally define a medium-sized enterprise as one with fewer than 250 employees and a small enterprise as one with fewer than 50.) SMEs continue to account for only a small portion of trade relative to their share of businesses in the economy; in the United States, for example, SMEs are more than 99 percent of all businesses, while accounting for only about 15 percent of exports and 10 percent of imports. Policy changes that make it easier for SMEs to participate in international trade, such as raising the threshold above which an importer must pay customs duties, reducing trade compliance costs, or harmonizing postal systems, could help boost trade growth.

Another potential source of trade growth is trade in services, such as computer programming or accounting. Services trade has grown more quickly than merchandise trade since the 1980s and equaled about 13 percent of world GDP in 2014 — still small relative to services' 70 percent share of the

world economy. “The scope for liberalization in services is still quite large,” says Mattoo. Reductions in barriers to trade in services, such as the Trade in Services Agreement currently being negotiated by 23 members of the WTO (including the United States), could lead to greater trade growth.

Finally, it’s possible that other developing countries could eventually increase their manufacturing base and their participation in world trade. “South Asia, Latin America, and Africa haven’t really participated in the finer and finer international division of labor that has been made possible by global fragmentation,” says Mattoo. “So there is the potential to expand supply chains elsewhere in the world. That could unleash another burst.”

Trade Matters

Underlying the debate about whether or not trade growth will accelerate is the question, does the amount of trade matter? “It matters to the extent it improves our standard of living,” says Yi. “What ultimately matters is consumption, how much people are eating, spending, and enjoying life. Trade plays a significant role in increasing consumption. But that doesn’t necessarily require global trade to be growing faster than global GDP.”

At the same time, says Yi, “The period when the global economy did really well happened to be the period when globalization increased a lot. There is clearly a link between these two forces, but just how strong is that link?”

There is a strong consensus among economists, dating back to Adam Smith, that trade is beneficial because it allows countries to specialize in producing those goods for which they have a comparative advantage. In 1776, Smith wrote, “If a foreign country can supply us with a commodity cheaper than we ourselves can make it, better buy it of them with some part of the produce of our own industry employed in a way in which we have some advantage.” Trade also gives firms access to new markets and can increase productivity via technology spillovers from imports, as well as competitive pressures. Slower trade growth thus could limit an important channel for productivity growth.

In addition, research suggests that trade can be an important avenue of economic growth, especially for developing countries. “From that perspective,” says Freund, “trade slowing down bodes ill for the developing countries. We’ve seen a lot of countries that have grown primarily through trade, and if trade is really slowing down it makes it harder to follow

that model.” Between 1981 and 2010, for example, China’s growth pulled nearly 700 million people out of poverty. The presence of GVCs in particular might be important for developing countries, because they allow a country to industrialize without having to develop a diversified manufacturing base from scratch. As Richard Baldwin of the Graduate Institute Geneva described it in a 2011 paper, countries can join a supply chain rather than build an entirely new one.

In addition, it has long been conventional wisdom in some branches of political science that trade promotes peace because it increases the opportunity cost of armed conflict. This view underpinned the formation of European Economic Community in the 1950s and continued to motivate European leaders even decades later. As Jacques Delors, former president of the European Commission, stated regarding the introduction of the euro, “The argument in favor of the single currency should be based on the desire to live together in peace.”

There is some empirical evidence to support this view. For example, between 1950 and 2000, wars occurred only about one-tenth as frequently as between 1820 and 1949. While a variety of political, technological, and economic changes occurred during this period, the decrease could be attributed to the increasing density of international trade networks, according to a 2015 article by Matthew Jackson and Stephen Nei of Stanford University. Using game theory, Jackson and Nei compared alliances based on military incentives alone to alliances augmented by international trade and found that the latter are significantly more stable. The authors also found that the regions with the most armed conflicts, such as central Africa, have relatively few trade ties, which suggests that countries could benefit from more than the development opportunities afforded by trade.

Still, trade doesn’t necessarily prevent war. The “first wave” of globalization occurred between 1870 and 1913, and “Many pundits thought economic ties between the European nations were too strong to have a war,” says Yi. “But of course they were wrong.”

The many benefits of trade are why the Great Trade Collapse of 2008-2009 — and sluggish trade growth thereafter — attracted so much attention from economists and policymakers. And while economists have largely reached a consensus that the initial collapse was the result of weak demand, there is still considerable debate about why trade growth today remains slow and what it might mean for the future. **EF**

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