

# Globalization: What Did We Miss?

Paul Krugman

March 2018

Concerns about possible adverse effects from globalization aren't new. In particular, as U.S. income inequality began rising in the 1980s, many commentators were quick to link this new phenomenon to another new phenomenon: the rise of manufactured exports from a group of newly industrializing economies.

Economists – trade economists, anyway – took these concerns seriously. After all, standard models of international trade do say that trade can have large effects on income distribution: the famous 1941 Stolper-Samuelson analysis of a two-good, two-factor economy showed how trading with a labor-abundant economy can reduce real wages, even if national income grows. There was every reason to believe that the same principle applied to the emergence of trade with low-wage economies exporting not raw materials but manufactured goods.

And so during the 1990s a number of economists, myself included (Krugman 1995), tried to assess the role of Stolper-Samuelson-type effects in rising inequality. Inevitably given the standard framework, such analyses did in fact find some depressing effect of growing trade on the wages of less-educated workers in advanced countries. As a quantitative matter, however, they generally suggested that the effect was relatively modest, and not the central factor in the widening income gap.

Meanwhile, the political salience of globalization seemed to decline as other issues came to the fore. So academic interest in the possible adverse effects of trade, while it never went away, waned.

In the past few years, however, worries about globalization have shot back to the top of the agenda, partly due to new research, partly due to the political shocks of Brexit and Trump. And as one of the people who helped shape the 90s consensus – that the income distribution effects of rising trade were real but modest – it seems appropriate to ask now what we missed. What aspects of rising trade did we either fail to see at the time or fail to anticipate?

### 1. *The 90s consensus*

This is a short paper, not a literature review, so I don't want to go through all the various 90s analyses that tried to assess the distributional effects of trade. Instead, let me summarize the methodological and quantitative conclusions that became fairly orthodox by the mid-1990s.

In terms of methodology: there was, for a time, some confusion (and a bit of heated debate) over how to use data on trade to assess wage impacts. Most studies focused on the volume of trade, and in particular on the factor content of trade – the labor and other resources embodied in exports, the labor and other resources that would have been required to produce imports. Some economists vehemently objected to this approach, since Stolper-Samuelson is strictly speaking about prices rather than quantities – that is, it's about the relationship between goods prices and factor prices. Yet goods prices are endogenous; when trying to assess the impact of globalization, it made no sense to treat prices as a causal variable.

What eventually emerged from this debate was a “but-for” approach: asking how different wages would have been *but for* the rise of manufactured exports from developing countries, which were minimal in 1970 but significant by the mid-1990s. It turned out that this but-for approach was also consistent with a factor content calculation: the effect of North-South manufactures trade on advanced economies was, in simple models, equivalent to what would have happened if the OECD had been a closed economy experiencing immigration of less-educated workers and emigration of more-educated workers corresponding to the factors embodied in the goods being traded.

And the basic fact in the mid 1990s was that imports of manufactured goods from developing countries, while much larger than in the past, were still small relative to the size of advanced economies – around 2 percent of GDP. Given reasonable estimates of factor intensities and elasticities of substitution, this wasn’t enough to cause more than a few percent change in relative wages. This number wasn’t trivial, but it wasn’t big enough to be a central economic story either.

This was a moderately comforting result for free-trade advocates. But what did the 90s consensus miss?

## 2. *Hyperglobalization*

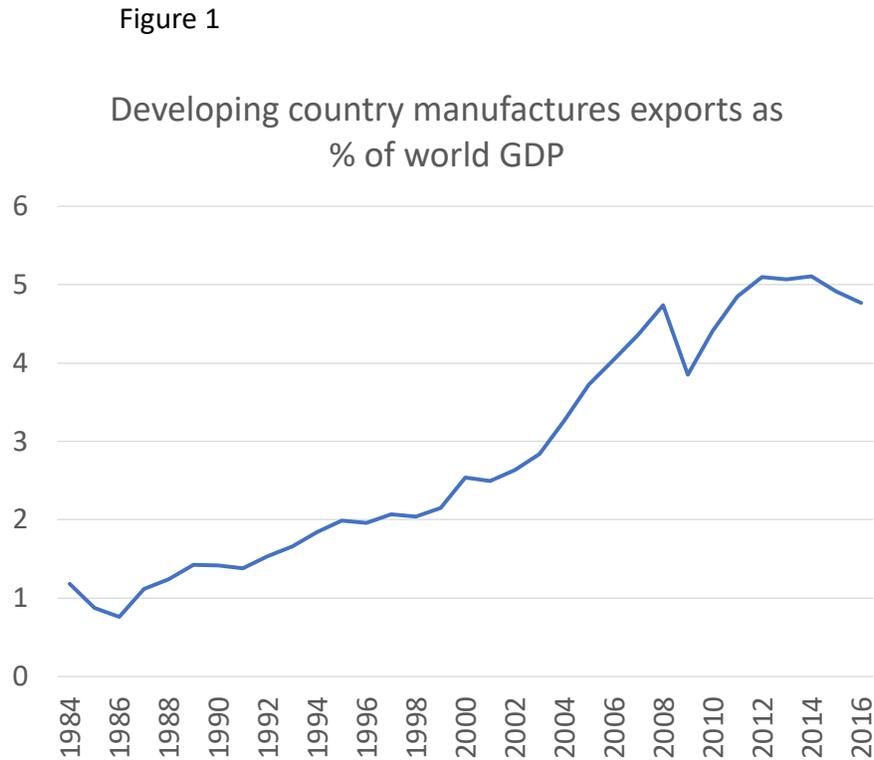
It is, I'd argue, quite possible, even likely, that assessments of the impact of trade made circa 1995, which inevitably relied on data from a couple of years earlier, were right in finding modest effects. In retrospect, however, trade flows in the early 1990s were just the start of something much bigger, what Arvind Subramanian and Martin Kessler (2013) have dubbed "hyperglobalization."

Until the 1980s, it was arguable that the growth of world trade since World War II had mainly reflected a dismantling of the trade barriers erected during the interwar period; world trade as a share of world GDP was only slightly higher than it had been in 1913. Over the next two decades, however, both the volume and the nature of trade moved into uncharted territory.

Figure 1 shows one indicator of this change: manufactured exports from developing countries, measured as a share of world GDP. As you can see, what seemed in the early 1990s like a major disturbance in the trade force was just the beginning.

What caused this huge surge in what was, in the 1990s, still a fairly novel form of trade? The answer probably includes a combination of technology and policy. Freight containerization was not exactly a new technology, but it took time for business to realize how the reduction in trans-shipping costs made it possible to break up value chains, moving labor-intensive parts of the production process overseas. Meanwhile, there was a broad move away from import-

substituting industrialization toward outward-looking policies; and of course China made a dramatic shift from central planning to a market economy focused on exports.



Source: World Bank

Since manufactured exports from developing countries, measured as a share of the world economy, are now triple what they were in the mid-1990s, should we conclude that the effect on income distribution has also tripled? Probably not, for at least two reasons.

First, a significant part of the increase in developing-country exports reflects the rapid growth of South-South trade, which is an important story but not relevant to the impacts on advanced-country workers. Even more important, however, the nature of this trade growth – involving a

breaking up of the value chain – means that the factor content of North-South trade hasn't risen nearly as fast as the volume.

Consider two cases: imports of apparel from Bangladesh, and imports of iPhones from China. In the first case, we are in effect importing the services of less-educated workers, putting downward pressure on the demand for such workers in the U.S.. In the second case, most of the value of that iPhone reflects inputs from high-wage, high-education countries like Japan; we are in effect importing skilled as well as unskilled labor, so the impact on income distribution should be much smaller.

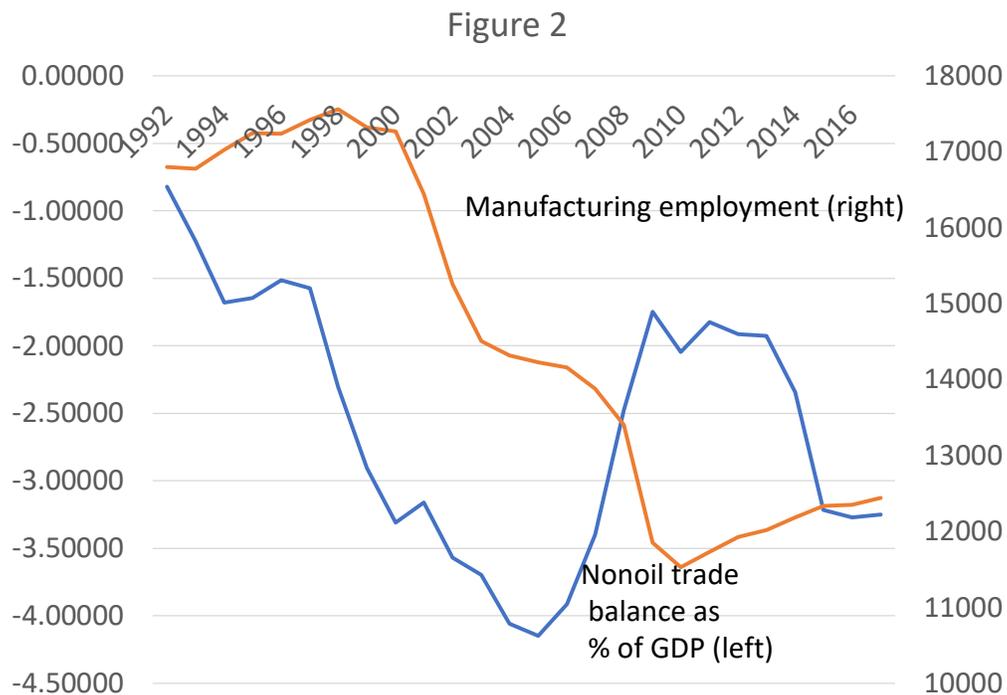
Despite these qualifications, it's clear that the impact of developing-country exports grew much more between 1995 and 2010 than the 90s consensus imagined possible, which may be one reason concerns about globalization made a comeback.

### *3. Trade imbalances*

One major contrast between most economic analyses of globalization's impact and those of the broader public – including, of course, Donald Trump – is focus, or lack thereof, on trade imbalances. The public tends to see trade surpluses or deficits as determining winners and losers; the general-equilibrium trade models that underlay the 90s consensus gave no role to trade imbalances at all.

The economists' approach is almost certainly right for the long run, both because countries must pay their way eventually and because trade imbalances mainly affect the relative shares of traded and nontraded sectors in employment, with no clear effect on the overall demand for labor. However, in the long run we are all dead, and rapid changes in trade balances can cause serious problems of adjustment – a broader theme I'll return to shortly.

Consider, in particular, the developments shown in Figure 2, which compares the U.S. nonoil trade balance (which is overwhelmingly manufactured goods) with U.S. manufacturing employment.



Until the late 1990s employment in manufacturing, although steadily falling as a share of total employment, had remained more or less flat in absolute terms. But manufacturing employment fell off a cliff after 1997, and this decline corresponded to a sharp increase in the nonoil deficit, of around 2.5 percent of GDP.

Does the surge in the trade deficit explain the fall in employment? Yes, to a significant extent. A trade deficit doesn't produce a one-for-one decline in manufacturing value added, since a significant share of both exports and imports of goods include embodied services. But a reasonable estimate is that the deficit surge reduced the share of manufacturing in GDP by around 1.5 percentage points, or more than 10 percent, which means that it explains more than half of the roughly 20 percent decline in manufacturing employment between 1997 and 2005.

Again, this is over a relatively short time period and focuses on absolute employment, not the employment share. Trade deficits explain only a small part of the long-term shift toward a service economy. But soaring imports did impose a significant shock on some U.S. workers, which may have helped cause the globalization backlash.

And trade deficits are, as I said, part of a broader story of adjustment issues.

#### *4. Rapid globalization and disruption*

When trade theorists talk about the distributional effects of trade, they tend to use one of two models (or classes of models.) Heckscher-Ohlin models treat factors of production as fungible across industries, so that possible adverse effects involve broad classes of workers, such as workers without college. Specific-factor models, by contrast, treat factors – definitely capital, but perhaps labor as well -- as being stuck in particular industries.

It's possible, and probably even correct, to think of specific factors as representing the short run while Heckscher-Ohlin represents the long run. How long is the long run? Good question.

The 90s consensus, however, focused almost entirely on Heckscher-Ohlin-type analysis, asking how the growth of trade had affected the incomes of broad labor classes, as opposed to workers in particular industries and communities. This was, I now believe, a major mistake – one in which I shared.

The thing is, anyone who worked on the political economy of trade policy knew that fights over tariffs look very much as if they come out of a specific-factors world: labor and capital within a given industry are generally on the same side in trade policy disputes, not on opposite sides as they would be if they were thinking about the broad factoral distribution of income. It should have been obvious that the general politics of globalization would reflect that same reality.

That is, never mind the question of how trade affects the blue-collar/white-collar wage gap, or the aggregate Gini coefficient; the politics of globalization were likely to be much more influenced by the experience of individual sectors that gained or lost from shifting trade flows.

This is where the now-famous analysis of the “China shock” by Autor, Dorn, and Hanson (2013) comes in. What ADH mainly did was to shift focus from broad questions of income distribution to the effects of rapid import growth on local labor markets, showing that these effects were large and persistent. This represented a new and important insight.

To make partial excuses for those of us who failed to consider these issues 25 years ago, at the time we had no way of knowing that either the hyperglobalization shown in Figure 1 or the trade deficit surge shown in Figure 2 were going to happen. And without the combination of these developments the “China shock” would have been much smaller. Still, we missed an important part of the story.

##### *5. A case for protectionism?*

What did the 90s consensus that the adverse effects of globalization were modest miss? A lot. Developing-country exports of manufactures grew far beyond their level at the time that consensus emerged. The combination of this rapid growth and surging trade imbalances meant that globalization produced far more disruption and cost for some workers than the consensus had envisaged.

So does this mean that – not to put too fine a point on it – Trump is right, that a trade war would be in the interest of workers hurt by globalization?

The answer is, as you might guess, no. This answer is based not so much on some rigid commitment to free trade at all costs as on the nature of the losses globalization imposed. Basically, the big problem with surging globalization wasn't so much changing demand for broadly defined factors of production as the disruption caused by rapid change. And that rapid change appears to be largely behind us: many indicators suggest that hyperglobalization was a one-time event, and that trade has more or less stabilized relative to world GDP. You can even see that leveling off in Figure 1.

As a result, major disruptions now would be more likely to come from an attempt to reverse globalization than from leaving the current trade regime in place. At this point millions of decisions about where to put plants, where to move and take jobs, have been made on the assumption that the open world trading system will continue. Making that assumption false, by raising tariffs and forcing a contraction of world trade, would force a whole new wave of disruption, a whole new set of winners and losers.

So while the 90s consensus on the effects of globalization hasn't stood the test of time very well, one can acknowledge that without accepting the case for protectionism now. We might

have done things differently if we had known what was coming, but that's not a good reason to try turning back the clock.

## REFERENCES

Autor, David H., David Dorn, and Gordon H. Hanson. 2013. "The China Syndrome: Local Labor Market Effects of Import Competition in the United States." *American Economic Review*, 103w(6): 2121-68.

Krugman, Paul, 1995: "Growing World Trade: Causes and Consequences," *Brookings Papers on Economic Activity* 1995, no. 1, 327-62.

Subramanian, Arvind and Kessler, Martin. 2013. "The Hyperglobalization of Trade and Its Future," Peterson Institute for International Economics Working Paper 13-6