Centre for International
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Trade, Inequality and Unravelling the Grand Bargain

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About the Global Economy Program

Addressing limitations in the ways nations tackle shared economic challenges, the Global Economy Program at CIGI strives to inform and guide policy debates through world-leading research and sustained stakeholder engagement.

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Through its research, collaboration and publications, the Global Economy Program informs decision makers, fosters dialogue and debate on policy-relevant ideas and strengthens multilateral responses to the most pressing international governance issues.

Executive Summary

This paper reviews the history of trade liberalization and the effects of freer trade on US labour market outcomes. It is motivated by the rise of economic nationalism, evident in the United States and elsewhere, which threatens the international "architecture" of trade, economic and financial arrangements that has been erected over the past 70 years. Populist policies reflect a backlash against trade liberalization, as many on both the left and the right of the political spectrum attribute the loss of well-paying manufacturing jobs and growing inequality to trade. The paper argues that these effects do not necessarily imply that trade went "too far." Trade liberalization is the source of efficiency gains and wealth generation. The problem may be that domestic policies to sustain full employment and to ensure the gains from trade liberalization are shared did not go far enough. In part, this problem reflects the interaction of trade liberalization and financial integration, which limits the ability of national governments to introduce policies consistent with this objective. Addressing the challenges posed by political populism and economic nationalism therefore requires a consensus on domestic policies and changes to the international architecture that facilitate this policy framework.

Introduction

The global financial crisis (2007–2009) was a truly momentous shock that traumatized millions around the world. Former Bank of England Governor Mervyn King has likened its effects to a world war or the Black Death.[1] Confronted with a shock of such magnitude, Group of Twenty (G20) policy makers moved quickly to strengthen financial regulations. Their response was warranted, given that the roots of the crisis lay in excessive risk-taking by large financial institutions, which inadequate regulatory supervision failed to check, and a policy failure to understand the dynamics of systemic shocks that highly integrated financial markets can transmit around the globe, as events in late 2008 demonstrated.

Central banks also responded. By providing liquidity to markets traumatized by a collapse of confidence, monetary authorities calmed financial panic and averted worldwide systemic economic collapse. Despite these efforts, the crisis had long-lasting effects in many advanced economies. The most significant legacy was the trauma of deep recessions and tepid recoveries that followed. A full decade after the onset of the crisis, most members of the "advanced countries" category of the International Monetary Fund (IMF) still operated below potential output.[2] Unemployment, which rose sharply during the crisis and remained high even as labour force participation rates were slow to return to pre-recession levels, has returned to pre-crisis levels. But the crisis and recession left a scar of economic insecurity on millions of workers pushed into lower-paying jobs with fewer benefits, including health care.

That sense of vulnerability provided fertile ground in which seeds of populism haven taken root in both the left and the right of the political spectrum. While many factors account for the rise of nativist sentiments, with economic considerations vying with a range of other explanations, trade and the global trading system have been the public

1 See Martin Wolf's interview of Mervyn King (Wolf 2013). One reader has rightly pointed out that it is nonsensical to compare the effects of the global financial crisis to the death toll, human suffering and physical destruction of, say, World War II. However, for millions around the globe, the crisis triggered a profound sense of economic insecurity analogous to the way in which war affects one's sense of physical security. That insecurity has long-lasting economic and political effects.

2 The slow pace of recovery in advanced economies might reflect other factors, including unfavourable demographics as aging baby boomers retire and exit the labour market. While this effect would account for slower long-term growth by reducing labour force growth, because it also reduces potential output, the output gaps that remained a decade after the crisis highlight the weakness of the recovery.

target of populist attacks.[3] This backlash is largely based on the claim that trade agreements have destroyed manufacturing jobs, replacing them with lower-wage service sector opportunities. A related indictment is that trade accounts for the growing inequality that has been observed in industrial countries in recent decades.

These developments motivate the question: *Did trade liberalization go too far?*

This paper addresses this question.[4] The focus is on the United States. In part, this is because the United States was the driving force behind the creation — and for seven decades, the leader — of efforts to promote open markets. But that focus also reflects the political reality that this leadership is now in question as the United States challenges the global order that it created. A better understanding of the forces behind this reality could help those who seek to preserve a liberal international economic and financial system.

The rest of the paper is organized in four sections. The next section reviews the political economy of free trade and charts the progress of trade liberalization over the past century. The discussion there highlights a key consideration: trade is but one element of the process of global integration. To understand the forces that animate economic nationalism, financial globalization must also be considered. Reasons for disenchantment with trade, and the critiques on which populist backlash to trade is based, are discussed in the third section. Because this backlash coincides with the re-entry of China into the global trading system, the paper briefly reviews the ongoing debate about whether manufacturing job losses are attributable to import competition or skill-biased technological change. It argues the debate is complicated by issues of causality and the long-lasting effects of bad policies. Regardless of their cause, inequality and economic insecurity have increased; both are key drivers of globalization angst. In this respect, financial integration may have contributed to the rise of economic nationalism by weakening the broad consensus on which postwar trade liberalization was based, in particular the implicit social contract by which governments undertook to maintain full employment. In such circumstances, the dislocation that trade entails may result in long-lasting harm *to individuals*, even as the benefits of freer trade that accrue *to society* are much greater. Given this outcome, the fourth section reviews the issue of compensation and measures governments can adopt to address the backlash to trade. Trade liberalization generates potential efficiency gains and generates wealth. But policies are needed to ensure that these benefits from globalization are shared, consistent with distributive norms. The fifth and final section concludes the paper with an answer to the question posed above: the problem is not that trade liberalization went too far; rather, domestic policies that were needed to make globalization work did not go far enough.

Free Trade in Theory and Practice

The Booth School of Business at the University of Chicago regularly surveys a panel of experts on a range of timely subjects. Five years ago, the expert panel was asked about the benefits of free trade.[5] The results revealed overwhelming support for the proposition that "freer trade improves productive efficiency and offers consumers better choices, and in the long run these gains are much larger

3 The tide of populism undoubtedly has many sources, including to some extent xenophobia and outright racism, but economic insecurity, which leads vulnerable groups such as unskilled workers to view immigrants and members of minority communities as competitors for available jobs, is surely a key factor. For the United States, evidence that economic factors explain the rise of Donald Trump has accumulated over time. One research team found that counties with greater trade exposure were more likely to vote Republican, which the authors contend "support[s] a political economy literature that connects adverse economic conditions to support for nativist or extreme politicians" (Autor et al. 2017). Preliminary analysis of Trump's support based on 2016 primary elections was inconclusive, with Trump supporters no more likely to be unemployed than were supporters of other candidates (Rothwell and Diego-Rosell 2017). However, primary voters are not representative of the population more broadly. The results of the November 2016 election provide stronger support for an economic explanation of the Trump victory. Jed Kolko (2016) found that Trump's support was highest in counties characterized by the highest degree of economic insecurity. For the United Kingdom, the evidence that globalization angst — proxied by membership in the UK Independence Party — was a decisive factor in the Brexit vote is, unsurprisingly, more robust (Becker, Fetzer and Novy 2016).

4 The question is not new. In the depths of the Great Depression of the 1930s, John Maynard Keynes (1933) famously made a case for limiting trade. He later recanted, acknowledging that trade would be a critical factor in postwar recovery and long-term growth if open markets were coupled with a framework for the orderly adjustment of international payments imbalances that allowed countries to pursue full employment. This combination of open markets and orderly adjustment was the basis of the Bretton Woods system.

5 See Initiative on Global Markets Forum (2012). Economists from seven of the top US economics departments currently comprise the expert panel.

than any effects on employment." Remarkably for a profession known for its equivocation, there was not a single dissenting voice.

This fealty to free trade likely reflects atavistic reverence of David Ricardo's principle of comparative advantage (see Rodrik 1994). Nobel laureate Paul Samuelson once quipped that comparative advantage is a curiosum in economics, in that it is both true and non-trivial (see Rogoff 2005). And while countless undergraduates have struggled with Ricardo's wine/cloth example, the underlying point — that specialization expands total production and creates welfare gains — is extremely powerful. Ricardo showed that it might be beneficial to Portugal to import cloth made in England in exchange for wine, even if Portugal produced cloth using fewer workers. In his example, Portugal had an absolute advantage in both cloth and wine, but a comparative advantage in wine. If, as Adam Smith observed, the division of labour is limited by the extent of the market, it follows that trade, which allows for greater specialization across national borders, should be mutually beneficial.[6] Anything that impedes exchange, such as tariffs or other trade barriers, ought to be resisted.[7]

This was the theory behind the success of post-World War II trade liberalization. In hindsight, the last quarter of the twentieth century (and more specifically the last decade of that century) may be regarded as the apotheosis of global free trade. It was not always so. In practice, governments have always sought to protect and expand domestic employment by encouraging exports and blocking imports. And domestic protection has long been available through the political process. It was thus that the disastrous Smoot-Hawley Act was enacted by the US Congress in 1930.

Timing is everything, and this piece of legislation was particularly ill-timed. The Smoot-Hawley Act raised tariffs across a broad swath of goods in an unrestrained orgy of protectionism as senators and congressmen vied with each other to secure protection for their constituents representing a growing list of industries. It is not surprising, therefore, that as banking crises in Europe and America triggered the Great Depression, country after country responded by erecting high tariff barriers in an unsuccessful attempt to insulate their economies from foreign disturbances. They failed. What their "beggar-thy-neighbour" policies did was to destroy the global trading system, wiping out the benefits associated with the gains from trade. Trade barriers also eroded the international cooperation needed to end worldwide depression; the global economy remained mired in stagnation.

Following the cataclysm of the Great Depression and global war, countries successively negotiated these tariffs down under the aegis of the General Agreement on Tariffs and Trade (GATT), which eventually morphed into the World Trade Organization (WTO). From the trade-crippling levels of the Great Depression, tariffs among industrial countries were reduced to under five percent by end of the last century. These were halcyon days for trade.

This period was not marked by true free trade, in the sense that tariffs and other barriers to trade were universally absent. But goods and services were probably freer than at any other time in modern history. It was also a time of spreading free trade agreements that joined a growing number of countries, encompassing a growing share of the global economy.

Lower tariffs do not eliminate the demand for protection that domestic interests seek, and which the political process will supply. As a result, as tariff levels came down over time, the nature of protectionism changed. Rather than ham-fisted tariffs, such as those imposed by the United States under the Smoot-Hawley Act, those harmed by foreign competition increasingly sought refuge in more subtle claims that foreign firms were dumping product (this refers to the practice of selling to export markets at a price below that charged in domestic markets, to benefit from economies of scale and capture a larger market share).

The point here is that the trade liberalization achieved by, say, 1985, was partly offset by non-tariff barriers and legal and administrative restrictions that replaced the more transparent protection provided by tariffs. This trend, in turn, spawned efforts to substitute tariffs for more opaque means of providing protection to domestic producers.

6 In Book I, chapter III, *The Wealth of Nations* (Smith 1776). The point here is that Ricardian gains from trade are derived from the underlying technical determinants of production costs, which reflect, *inter alia*, the division of labour.

7 That, at least, is the theory. Daniel Cohen (1998) notes that in practice the application of Ricardo's theory had dire consequences for some of the United Kingdom's trading partners.

This is not to say that tariff reduction was all for nought. The Kennedy Round of GATT negotiations in the 1960s, which roughly halved the average tariff level from its post-World War II high of about 40 percent, undoubtedly generated huge welfare gains. But halving that average tariff figure further, to 10 percent, led to much smaller gains. And the gains achieved by halving average tariffs yet again, to five percent, were minor by comparison to those generated by initial GATT rounds. In other words, there were diminishing returns from tariff reduction.[8]

By the 1990s it was clear that further gains from trade liberalization would have to come from a source other than tariffs: if all the low-hanging fruit from the trade liberalization tree had been harvested, efforts would have to focus on root and branch reforms. Teasing out those gains would entail mandate creep. Specifically, attention turned to trade in services and measures to address structural features in economies that constitute a barrier to imports. This shift in focus had clear benefits for advanced economies; the gains to others were less clear.

This expansion in negotiating mandates was justified by the "bicycle theory," which holds that trade negotiations must keep moving forward or collapse. Unfortunately, the theory has very little analytical support; indeed, it flies in the face of diminishing returns. In fact, expanding the scope of trade liberalization to include trade in services and structural reforms impinges on domestic legal and regulatory frameworks (as well as national sovereignty) in a way that tariff reductions never did. The perceived political costs of further liberalization were thus rising, while expected benefits were shrinking.[9]

The importance of this effect cannot be stressed too highly. To understand why this is the case, the effects of freer trade must be considered alongside other elements of integration. Along with trade liberalization, the last decade of the twentieth century featured a remarkable process of financial liberalization. Countries around the globe removed capital controls, seeking the benefits that access to global capital markets would provide. Financial integration freed countries from the constraint of domestic savings, allowing them to raise investment rates. And capital flows would, it was believed, smooth consumption for countries faced with temporary shocks to output.

The quid pro quo for these benefits is a constraint on domestic policy because, with free capital mobility, returns across countries are equalized — footloose foreign capital flows from low-return countries to countries offering high rates of return. Some see this effect as a beneficial and necessary discipline on otherwise erratic policy making that would reduce expected returns and retard growth.[10] Others view it as an impediment to domestic policies to address domestic economic and social challenges. Regardless, successive rounds of trade liberalization have exposed domestic sectors and factor payments (wages and returns on capital) to foreign factors (see Box 1).

This effect did not loom large in international policy debates so long as trade was largely between developed countries at similar levels of economic development — which it was through much of the last quarter century. Although wages and returns on capital were not perfectly equalized (as would be the case under complete free trade and the absence of transport costs), they were broadly comparable. And where foreign wages were below US levels, as when Japan was rebuilding after the devastation of World War II, the process of convergence was rapidly

8 In part, diminishing returns reflected the closed nature of these early trade liberalization rounds among the industrialized economies of Western Europe, North America and Japan. To realize larger gains from trade required opening the process to developing and emerging market economies. But these countries were reluctant to open their markets to competition from advanced economies with a "head start" on the development process without safeguards to protect their economies from excessive disruption. This fear of disruption accounts for the asymmetry in tariff levels between advanced and developing countries in which the latter's tariffs are multiples of the former's. While such discrepancies are justified as protections for developing countries, their continued use even after "graduation" from developing country status is today a critical issue and the source of calls for "reciprocal" trade arrangements.

9 See Rodrik (2018b) for a critical appraisal of recent trade agreements.

10 This benign view of capital flows may reflect the misapplication of the free cash flow theory of agency to capital account liberalization by a profession enthralled with the allure of financial markets (see Jensen 1986). The problem with this transfer of analytical frameworks is that there are bankruptcy regimes at the domestic level that lend credibility to the disciplining effect of short-term debt (and even then, the "theory" may not hold in the presence of moral hazard, imperfect or asymmetric information and other distortions). Such legal frameworks are absent at the international level for the case of short-term capital flows and sovereigns in debt distress. Moreover, IMF Board decisions in the 1970s (however justified at the time) to ignore article VI of the IMF's *Articles of Agreement* (1945), which prohibit the use of IMF resources to bail out private creditors, were short-sighted, in that they may have thwarted efforts to construct legal frameworks for sovereign bankruptcy.

Box 1: Factor Price Equalization

Factor prices — including wages — can converge over time under free trade, even if labour is immobile between countries. This powerful and possibly surprising result, known as factor price equalization, can be illustrated by way of a simple heuristic example. Assume that domestic and foreign goods prices are determined by unit cost functions derived from a shared technology:

$$c = c(w, r) = p$$

$$c^* = c(w^*, r^*) = p^*$$

where c (c*) represent a vector of domestic (foreign) unit cost functions for goods produced in both countries and w, r (w*, r*) are wage and the rental rate of capital to domestic (foreign) labour and capital, respectively; p (p*) are domestic (foreign) price vectors. Under free trade, goods market arbitrage will equalize goods prices, so that $p = p^*$. For simplicity, we assume that free capital mobility equalizes returns on capital, $r = r^*$. Provided the unit cost functions adhere to certain technical mathematical properties (global univalence), it follows that $c(w, r) = c(w^*, r)$. It must be the case therefore that $w = w^*$, or domestic and foreign wages are equalized. Factor price equalization was derived independently by Paul Samuelson and Abba Lerner. See Samuelson (1948) and Lerner (1952).

closing that gap.[11] In any event, most observers held a benign view of global trade up to the 1990s.

China, Technology and the Rust Belt Blues

China's return to the global economy after decades of autarkic isolation has fundamentally changed the international trading system. Most significantly, the addition of millions of low-skilled workers producing goods for export greatly expanded the global economy. The reduction in *global* poverty rates that resulted from this transformation represents a historic achievement.[12] But China's re-integration has also proven disruptive.

The impact of foreign competition on manufacturing employment — widely viewed as the victim of trading arrangements — has attracted the most attention. One research team has parsed the US data[13] and concludes: "Between 2000 and 2007, the economy gave back the considerable employment gains achieved during the 1990s, with a historic contraction in manufacturing employment being a prime contributor to the slump. We estimate that import competition from China, which surged after 2000, was a major force behind both recent reductions in US manufacturing employment and — through input-output linkages and other general equilibrium channels — weak overall US job growth. Our central estimates suggest job losses from rising Chinese import competition over 1999–2011 in the range of 2.0–2.4 million" (Acemoglu et al. 2016, S141).

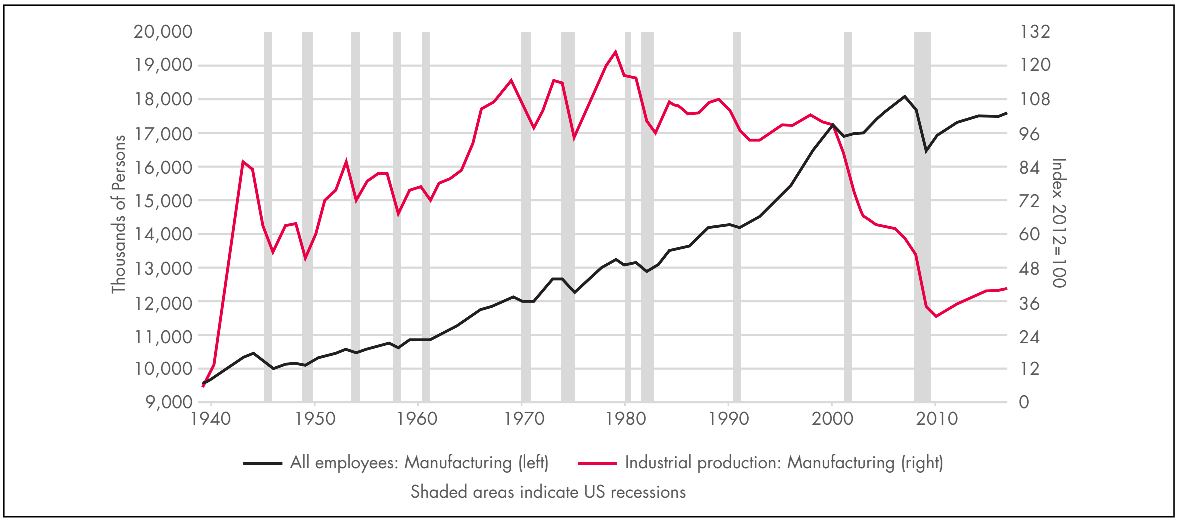
Trade with China surely had an impact on employment of unskilled and low-skilled labour. Yet, that does not necessarily imply that increased foreign competition is the most significant — or even a major — factor explaining the decline in the economic fortunes of unskilled

11 While attention has largely focused on trade liberalization and technology shocks in disrupting traditional manufacturing jobs in advanced economies, the remarkable decline in transport costs associated with the adoption of the now ubiquitous shipping container, along with other logistical innovations, should not be ignored (Levinson 2006). These developments facilitated the forging of value-added chains with low-value-added stages of production sourced in low-wage countries with high-value-added stages (for example, design, research and development) undertaken in high-wage countries. At the same time, trade liberalization, which expanded market size, rendered such production chains viable, consistent with Adam Smith's observation that the division of labour is limited by the extent of the market.

12 The decline in global poverty rates largely reflects higher living standards in China.

13 The approach in the analysis by Daron Acemoglu, David Autor, David Dorn, Gordon H. Hanson and Brendan Price (2016) is notable for its incorporation of the full range of direct and indirect effects from China's integration into the global economy, including the impact of lower employment on aggregate demand and thus employment in tertiary sectors without direct exposure to foreign competition.

Figure 1: US Manufacturing Employment and Industrial Production, 1940–2016



Data source: Federal Reserve Economic Research (FRED) database, Federal Reserve Bank of St. Louis, https://fred.stlouisfed.org/.

workers in the advanced economies.[14] Bradford DeLong (2017) argues that the main causes for the decline in US manufacturing employment are productivity growth and limited demand, which together reduced the share of non-farm employees in manufacturing from 30 percent in the 1960s to 12 percent in the 1980s. An injudicious mix of macroeconomic policies during Ronald Reagan's presidency led to a steep appreciation of the dollar, and loss of competitiveness further reduced that share to nine percent. The impact of trade with China and other trade agreements shrink in comparison to these effects.

These seemingly contradictory findings are something of a puzzle. In fact, they are easily reconciled. The most straightforward way of assessing the effects of technological change versus trade on manufacturing is by looking directly at manufacturing output and employment data. Martin Neil Baily and Barry P. Bosworth (2014, 3) do this, pointing out "two striking and somewhat contradictory features: 1) the growth of real output in the U.S. manufacturing sector, measured by real value added, has equaled or exceeded that of total GDP, keeping the manufacturing share of the economy constant in price-adjusted terms; and 2) there is a long-standing decline in the share of total employment attributable to manufacturing."

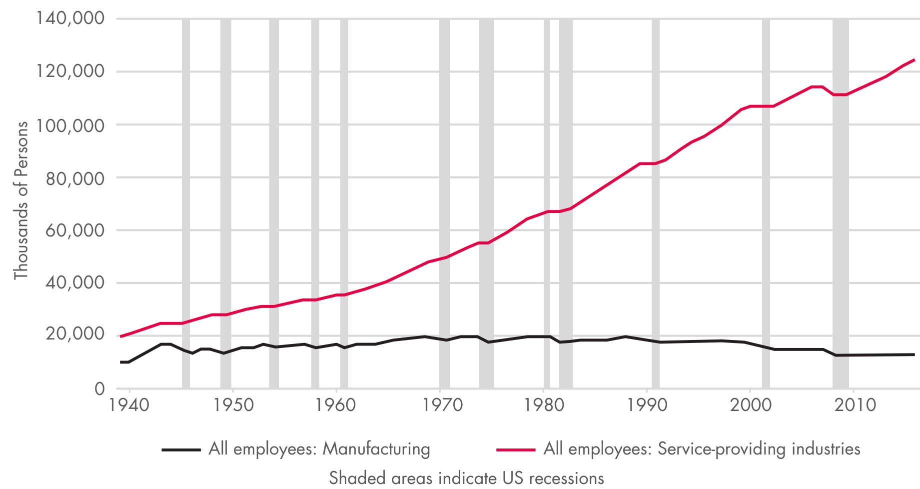
How did US industrial production in manufacturing remain stable as a share of GDP even as manufacturing employment was in secular decline? The answer is productivity.[15] From 1940 to the mid-1980s, higher manufacturing output was associated with increased employment (see Figure 1). For the past 40 years, in contrast, manufacturing output has grown as the number of workers has fallen. This would not be possible without an increase in productivity.

On this basis, pointing to the declining share of manufacturing employment as evidence of the deleterious effects of trade is misleading: there has been a huge increase in the share of services in consumer demand that is evident in the employment data (see Figure 2). Rust Belt workers facing long-term unemployment and diminished prospects should blame changing consumer demand and technology, not trade. This conclusion seems simple enough.

14 In the United States, while manufacturing employment in Rust Belt states was undoubtedly affected by foreign competition, agriculture has surely benefited from trade liberalization and helped farm states. The decline in coal production in Appalachia, meanwhile, has nothing at all to do with China; it reflects, instead, a decline in demand for coal, wrought from the decline in natural gas prices resulting from technological advances associated with fracking and a huge increase in natural gas production as well as low-cost strip mines in the US west.

15 Data from the Organisation for Economic Co-operation and Development (OECD) for Group of Seven countries shows declining shares of manufacturing value added over the past three decades: https://data.oecd.org/natincome/value-added-by-activity.htm.

Figure 2: US Employment in Manufacturing and Services, 1940–2016



Data source: FRED database, Federal Reserve Bank of St. Louis, https://fred.stlouisfed.org/.

In fact, the story is slightly more complicated. To begin, while technology has displaced workers, it has also raised the productivity of the workers who remain. Some of this increase in productivity should be reaped by those workers in the form of higher wages and benefits. This seems not to have been the case with respect to unskilled workers, many of whom move from high-wage manufacturing jobs with benefits to low-wage service sector jobs with no benefits. (As discussed more fully later, the issue of compensation is critical to understanding the effects of trade.) Moreover, as Baily and Bosworth (2014) note, manufacturing production numbers are distorted by the remarkable performance of just one sector — computers and electronics. Other manufacturing sectors have *declined* as a share of real GDP; they have also not matched the productivity achievements of computers and electronics. Real output estimates for this sector are subject to notorious data challenges, the most significant probably being hedonic price adjustments to capture quality improvements. Care must be taken, therefore, in evaluating the impact of trade on the aggregate manufacturing sector.

These caveats have important implications. Most significant, is the decline in absolute employment, which started in the 1980s but has accelerated since 2000. By itself, this is not particularly troubling — workers who lose their jobs in manufacturing find employment in the service sector.[16] However, as noted above, wages and benefits in the service sector are lower than those in the manufacturing sector and employment more irregular. Moreover, to the extent that manufacturing jobs provide significant external effects that service sector employment does not, the loss of manufacturing jobs could be potentially worrisome. Such external effects could include promotion ladders within firms by which employees' earnings rise over time. Promotion ladders can reflect the accumulation of firm-specific human capital that increases an individual's productivity, union seniority rules or some other factor. In any event, promotion ladders may help explain the post-World War II increase in US intergenerational mobility — the degree to which a child's future earnings are independent of those of the parents — through the 1970s. It is thus troubling that Miles Corak (2013) points to a more recent decline in US intergenerational mobility, evident in the

16 One reader has correctly pointed out a troubling structural problem in the transition from manufacturing employment to service sector employment. Employment losses are not distributed randomly; workers displaced from manufacturing are more likely to have been employed by marginal firms with outdated technology. Such individuals are confronted with difficult options: either they retrain, if they have the resources to do so, or they accept lower wages. Where the second effect dominates, wages for unskilled workers and productivity will continue to diverge, since firms that replace unskilled workers with technology will offer higher wages. At the same time, the growing pool of unskilled workers would tend to depress wages in service sectors and discourage other firms from adopting technology. I am indebted to the reader for this observation.

so-called "Great Gatsby curve" mapping the relationship between inequality and immobility.

This decline in mobility coincides with the increasing share of service sector employment and the widespread perception that trade is replacing "good" jobs with "bad" jobs. These effects can help explain the belief that foreign trade is the source of the ills that have befallen unskilled workers; in this respect, a better understanding of the relationships among trade, technology and employment can assist in the framing of policies to address the backlash against trade. In part, it is a question of methodology and causality.

Causality

There is a tendency in economics to look at a single factor (for example, trade) behind a phenomenon, search for its impact and — if one fails to find a significant effect — conclude that it was not causal. Consider auto sector jobs. Employment in the North American car industry would likely not have remained at the peak levels seen in the 1980s even if China had not been admitted to the WTO. The causes of employment declines in the auto sector may be difficult to identify with precision, but surely trade had an impact. Starting in the 1970s and 1980s, German and Japanese automakers grabbed huge market shares in North America, which contributed to problems in the sector and ultimately created the conditions for bankruptcies years later.

The precise extent to which this result is attributable to trade liberalization is unclear. Yet, the visible costs of freer trade — employment losses of North American automakers — are not inseparable from the benefits of stronger competition from foreign manufacturers, which trade liberalization promotes.[17] A world in which most North American consumers had little choice but to buy poor-performing, rust-prone, gas-guzzling domestic cars might have been beneficial for labour and the owners of capital in the auto sector, but it was detrimental to consumers. When offered a choice, North American consumers opted to purchase foreign vehicles. American automakers had to compete on quality and price to survive, which pushed them to innovate to raise quality and lower costs. It follows that a great deal of technological change has been driven by trade-related competition. In other words, while the proximate cause of manufacturing job losses might have been technological innovation, the chain of causality undoubtedly includes a trade link.[18]

Bad Policies and Hysteresis

Another factor that might mask the effect of freer trade on manufacturing employment is the lasting impact of bad policies, or hysteresis effects.[19] As noted earlier, DeLong (2017) identifies the loose fiscal policy/tight monetary policy mix of the 1980s as a critical contributor to manufacturing job losses. It was a long time ago, but that infelicitous policy mix may have had a lasting impact on American manufacturing. The steep appreciation of the US dollar associated with the Reagan years gave foreign manufacturers an opening to establish marketing networks and other sales infrastructure. Hitherto, the fixed costs of such operations might have been prohibitive. But once these sunk costs were incurred, foreign firms had a "beachhead" from which to expand market share. They protected this beachhead by narrowing (widening) profit margins through the vagaries of dollar appreciation (depreciation).[20] In this respect, the effects of the policy mix were long-lasting.[21] Similarly, the appreciation of the US dollar in the second half of the 1990s and early 2000s coincided with China's entry into the global trading system and the sharp drop in manufacturing employment (see Figure 1). These effects are found by Douglas

17 Although, it should be noted, employment losses among US automakers were partially offset by expanding employment in foreign-owned assembly plants.

18 Meanwhile, the response of North American auto manufacturers to foreign competition — opening assembly plants in Mexico to take advantage of the substantial wage differential between American (Canadian) auto workers and their Mexican counterparts — was facilitated by the North American Free Trade Agreement.

19 Hysteresis refers to the effects of shocks that persist long after the initial impact has passed.

20 See Baldwin (1988). Note that the argument here relies on a departure from competitive norms, consistent with the hypothesis that a significant share of trade is in differentiated products for which manufacturers have some degree of pricing power.

21 In a similar vein, the pre-2007 housing bubble also contributed to the loss of manufacturing jobs. For a brief and obviously unsustainable period, there was a huge increase in residential investment as a share of GDP. Construction workers employed to build the bubble had to come from somewhere. Perhaps there were some farmers and teachers who switched to carpentry, but there were probably far more people who quit manufacturing jobs to earn more in construction. The upward pressure (or downward rigidity) on manufacturing wages that this effect produced may have priced marginal manufacturers out of the market — permanently, if hysteresis is a significant factor. Even here, though, the question of causality clouds the issue; it is unclear, for example, if the housing price bubble reflected policy choices (at least to some extent) that sought to assist workers displaced by foreign trade.

Campbell and Lester Lusher (2016b), who noted that workers in sectors more exposed to trade were more likely to be unemployed or out of the labour force, and less likely to be employed a year later *during periods when the dollar is overvalued.*[22]

Inequality

Although causality and hysteresis effects might explain why trade can have an adverse impact on manufacturing employment even if the proximate cause is technological innovation, it remains that manufacturing jobs represent only a small fraction of the US labour market (see Figure 2). Provided displaced workers find employment in other sectors at the same, or higher wages, there is no reason to fear trade. After all, Ricardo's bucolic wine/cloth example showed that both countries benefit from trade, while "new" trade theory models predict that workers benefit from greater choice and lower prices (as in the auto sector).[23] The problem is that this condition seems not to have been met in practice — displaced workers are made worse off, and even unskilled workers who keep their jobs have suffered.

With China again integrated into the global economy, the gains from trade shifted from the gains of expanding intra-industry trade (increasing diversity of heterogenous goods), which characterized trade between developed economies for much of the postwar period, to gains from trade associated with earlier trade theory. This earlier theory is based on factor endowments, or the amount of capital and labour in an economy.[24] It predicts that labour-rich countries have an advantage in the production of labour-intensive goods, while capital-rich countries enjoy a competitive advantage in capital-intensive goods. An important corollary is that the opening of trade will have different effects on factor returns in the two countries. Wages in the high-wage, capital-rich country will fall, and returns to capital will increase, if the country imports relatively labour-intensive goods, meaning that it uses a higher ratio of labour to capital than the export sector. Meanwhile, wages in the low-wage, capital-scarce country will rise, and returns on capital will fall. Factor proportions theory therefore predicts that protection (or conversely, the move to freer trade) will have distributional consequences within economies.

This result is described by the Stolper-Samuelson Theorem.[25] Given the huge differences between Chinese and advanced economy wages, the theorem implies that distributional effects would be significant. In this respect, the integration of China meant that factor proportions became relevant to public policy analysis after being ignored for 40 years.[26] In brief, China's return to the global economy put downward pressure on unskilled labour in sectors facing direct competition from Chinese imports. Moreover, with capital free to move to China to exploit low-wage labour, the return on capital increased.

This analysis is consistent with results of Campbell and Lusher (2016b), who find that less-educated workers have fared poorly in recent years and that higher-wage workers, who by happy circumstance (or union bargaining power) held a high-wage job before the China shock, experienced a proportionally larger wage decline than similarly

22 See also Campbell (2016).

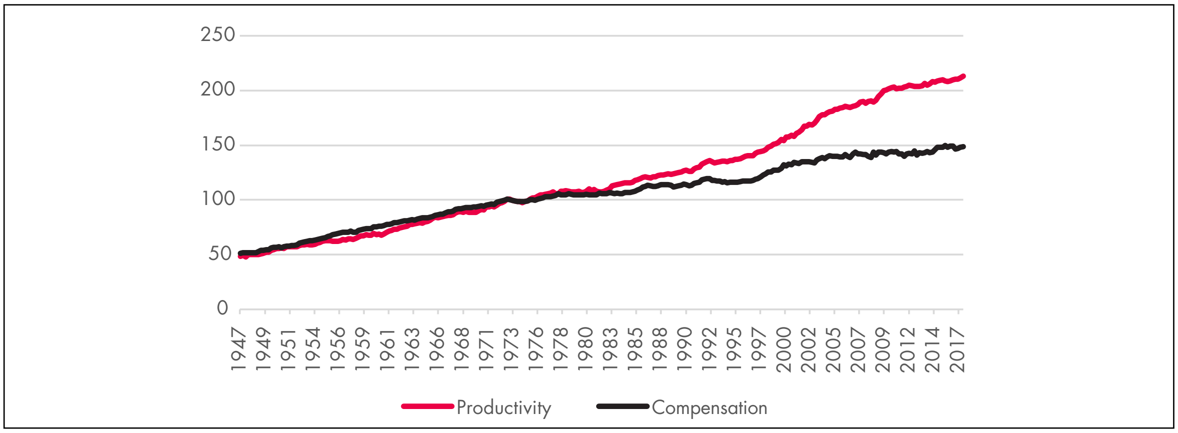
23 The gains from trade in "new" trade theories based on the exchange of heterogenous goods come from consumers' expanded choice set due to their access to differentiated products, which trade enables, and to higher productivity. In these models, trade allows the most productive firms to expand output and realize economies. Policy interventions thus focus on promoting trade (exports) rather than on limiting trade (imports).

24 Known as Heckscher-Ohlin after its founders, the theory compares pre-trade production costs determined by relative endowments of capital and labour. A country with ample labour has lower relative wages given the abundance of labour relative to capital; in contrast, a country endowed with an abundance of capital and few workers has low returns to capital and high wages. Gains from trade are a function of differences in wage and capital rental rates: exports of labour-abundant economies are relatively labour-intensive, while capital-rich countries will tend to export capital-intensive goods. Factor proportions trade theory is thus distinguished from Ricardian theory, in which the gains from trade reflect differences in technology. It is also referred to as the Heckscher-Ohlin-Samuelson theory, since Paul Samuelson extended the theory and developed many of its key implications.

25 See Wolfgang F. Stolper and Paul A. Samuelson (1941). It is in this sense that economic nationalists, who claim to be motivated by a desire to assist displaced workers, are correct in asserting that protectionist policies will benefit their supporters.

26 Why were these effects overlooked? One explanation is that economists preoccupied with "new" trade theory, which focuses on trade between oligopolistic industries characteristic of trade flows between developed countries, forgot about factor proportions. It might also be that the factor proportions theory was neglected because of an apparent paradox uncovered in the trade data. In the early 1950s, Wassily Leontief (1953) compared the labour share and the capital share of US trade with other countries and found the proportions to be the reverse of those predicted by the theory: the United States exported goods that were more labour intensive than those it imported. The result was troubling since, at the time, immediately following World War II, the United States was likely the most capital-rich country by a wide margin. The paradox is easily resolved by the fact that capital-intensive goods require skilled labour. Treating labour as heterogenous — allowing for "skilled" and "unskilled" labour — can account for the Leontief "paradox" and may help explain rising inequality (as reflected in the college premium — wages of college graduates relative to high school graduates — which reflects education, training and other investments in human capital).

Figure 3: Non-farm Business Productivity and Compensation, United States (1947–2017)



Data source: FRED database, Federal Reserve Bank of St. Louis, https://fred.stlouisfed.org/.

unskilled workers initially earning less. Citing their earlier work, Campbell and Lusher also find no evidence that initially more open sectors experienced any relative increases in inequality during periods of trade shocks, leading them to conclude that "China-competing sectors, as well, did not experience larger increases in inequality than other sectors after trade with China began to increase in the 1990s and 2000s. Offshoring, the rise of robots, and skill-biased technological change may be huge drivers of inequality in the minds of many economic theorists, but none of these factors appears to be very well correlated with changes in measured inequality at the sector level" (ibid., para. 5).

This finding is consistent with a trade-related effect — even if the authors dismiss the possibility — because the Stolper-Samuelson result predicts that unskilled wages *across* the US economy would be affected by trade with China. The finding that unskilled workers in different sectors — not just sectors competing against Chinese imports — were adversely affected is thus a data point supporting Stolper-Samuelson. As Cohen (1998, 41) thoughtfully observed 20 years ago: "If exports are profitable for skilled workers and detrimental to unskilled workers, we should not fear that trade will create a distortion in the ratio of wages to profits; rather, we should fear that it will result in greater disparities in wages."

That disparity in wages between skilled and unskilled workers has indeed been an empirical "stylized fact" in many economies.[27] Since the mid-1980s, however, it has become increasingly clear that the ratio of wages to profits has been distorted. This effect can be seen in productivity's growing divergence from compensation in the US non-farm business sector (Figure 3).[28] Through the first 30 years of the post-World War II period, productivity increases were closely mirrored in compensation, as theory based on competitive product and labour markets would predict. Since then, the relationship between the two has become progressively frayed. This effect contributes to rising inequality as the owners of capital reap the benefits of higher productivity.

This divergence does not necessarily reflect the effects of trade. Other factors, including declining union membership and an increase in monopoly power, could also affect the productivity/compensation nexus.[29] There is a long-standing debate on whether the deterioration in labour market outcomes for unskilled workers in advanced economies is attributable to trade or to

27 The US college premium increased by more than 25 percent between 1979 and 1995 (Acemoglu 2003, para. 1).

28 This phenomenon has been aptly dubbed the "Great Uncoupling" by Erick Brynjolfsson and Andrew McAfee (2012). See also Bivens and Mishel (2015).

29 Here, too, the issue of causality arises. Increased foreign competition combined with mobile capital may have diminished union power and increased local pricing power in differentiated goods as firms realized scale economies. As Dani Rodrik (1997a) presciently observed, globalization can upset social norms, such as fair employment practices that balance bargaining power. In this respect, "globalization upsets this balance by creating a different sort of asymmetry: Employers can move abroad, but employees cannot" (ibid., 29).

skill-biased technological change. Twenty years ago, economists who argued that the Stolper-Samuelson result accounts for growing inequality were challenged by those who attributed the widening gap between wages for unskilled and skilled work to skill-biased technological change. Note that the two explanations are not incompatible — both effects could be at work; moreover, the simple factor proportions theory is static, with technology assumed constant. Regardless, at the time there was a "reassuring consensus that trade has only modest effects on income distribution," as Paul Krugman (2008, 104) suggested.[30] However, two decades of expanding trade, during which the openness of the US economy roughly doubled — from 16 percent in 1990 to 30 percent in 2010 — has led to a renewed focus on trade as a source of inequality.[31]

This growing appreciation of the effects of liberalization on inequality may reflect the correlation between openness and inequality experienced by advanced economies over the past four decades (see Table 1).

Table 1: Correlation between Openness and Inequality (1973–2010)*

	Correlation
Canada	0.95
France	0.86
Germany	0.83
Japan	0.34
Italy	0.96
United Kingdom	0.95
United States	0.98

Data source: FRED database, Federal Reserve Bank of St. Louis, https://fred.stlouisfed.org/.
* The measure for openness is exports and imports as a share of GDP; inequality is measured by share of pre-tax national income of the top one percent.

Correlation does not prove causality. Nevertheless, this simple indicator suggests that, whatever the cause, most advanced economies have experienced an increase in inequality as their economies have become more open. Moreover, to the extent that inequality — whatever its source — is attributed to trade, it fuels the backlash against open markets and the liberal trading regime.

Policies to Sustain Open Markets

Defending a liberal trade system requires a range of policies to address inequality and ensure that the benefits of freer trade are equitably shared.[32] This concern is not new; it was evident in the late 1990s, when policy makers recognized the threat to the prevailing policy consensus posed by the financial crises that were ravaging emerging market economies.[33] Moreover, measures to share the benefits of trade are rooted in the "architecture" of international institutions and arrangements designed to expand global output through trade liberalization. But because trade necessarily entails disruption, as some sectors contract while others expand, governments committed — explicitly or implicitly — to maintain full employment.[34] This was the grand bargain of the postwar period. It reflected the reaction to the economic trauma of the Great Depression and the pervasive sense of insecurity that afflicted millions. The grand bargain was encapsulated in the IMF *Articles of*

30 This consensus was not accepted by all; for example, see Leamer (1994). The dispute largely revolves around whether trade volumes were sufficiently large to account for the wage inequalities showing up in the data (Krugman 2000).

31 As Krugman (2008) points out, identifying the impact of trade on wages is complicated by the dissection of production, and the distribution of specific components of production, through global supply chains. This process, which supports Smith's contention that the division of labour is limited by the extent of the market, makes it difficult to infer from the data the relative impact of different effects.

32 See Anna Stansbury and Lawrence Summers' comprehensive review (2017) of the productivity/compensation relationship.

33 Former Canadian Finance Minister (and later prime minister) Paul Martin was a forceful advocate of the need for policies to make globalization "work." His early call for measures to alleviate the costs of financial crises through the introduction of collective action clauses and a "road map" for capital account liberalization that would tie liberalization to the strengthening of domestic financial institutions and prudential regulatory standards, together with his call for internationally sanctioned standstills on debt servicing in the event of severe financial distress, set the agenda for subsequent international policy discussions. See Martin (1998; 1999).

34 That dislocation is the price of the efficiency gains and increased wealth that economists have long extolled. The question is how those benefits are shared. If there is full employment, workers who lose their jobs in one sector to trade liberalization will find employment in expanding sectors. In a world in which the earnings of those workers are the same or higher, the welfare effects of trade liberalization are unambiguously positive. However, the problem is that workers displaced by trade can find themselves just as clearly worse off.

Agreement, which mandate the IMF "to facilitate the expansion and balanced growth of international trade, and to contribute thereby to the promotion and maintenance of high levels of employment and real income and to the development of the productive resources of all members as primary objectives of economic policy."[35]

Fulfilling this bargain required agreements on international monetary and financial arrangements as well as trade liberalization. This is because trade is all about efficiency gains, not jobs. If the economy is working the way it should, full employment would prevail with or without trade.[36] The nature of these jobs may differ greatly, and the postwar promise was that trade-related productivity gains would be reflected in *better* jobs. In the early years of the postwar period, that promise was kept as the relationship between productivity and compensation shows. To ensure this felicitous outcome, aggregate demand must be in rough balance with the economy's productive capacity — aggregate supply. Achieving this balance would have been exceedingly difficult if the international monetary disorder that prevailed before World War II (and which propagated the economic stagnation of the 1930s) returned. The Bretton Woods agreement (1944) therefore bound countries to clearly defined obligations with respect to exchange rates and current account convertibility and condoned the use of capital controls.

The Bretton Woods system was designed to promote orderly adjustment of international payments imbalances and full employment. And while that system is now widely regarded as anachronistic, for much of the past 70 years governments sought to meet these objectives. Until recently.

Unravelling the Grand Bargain

In October 2017, a full decade after the onset of the global financial crisis (2007–2009), the IMF's twice-yearly World Economic Outlook survey showed most members of its "advanced countries" category still operating below potential output.[37] Unemployment, which rose sharply in the crisis, and remained high as labour force participation rates were slow to rebound, has returned to pre-crisis levels.[38] But the crisis and recession left a scar of economic insecurity on millions of workers pushed into lower-paying jobs with fewer benefits, including health care. Poor labour market conditions provided fertile ground for the spread of populism and the polarization of politics. Many on both the left and the right of the political spectrum espousing economic nationalism ostensibly seek to curb the reach of globalization, which, they argue, has weakened national economies and curtailed the power of sovereign states to assist workers displaced by international trade.[39]

The question is, why the failure to honour the postwar commitment to full employment, the commitment by which liberal democracies had maintained their legitimacy in the postwar period? To put it mildly, this issue is contentious. Carmen Reinhart and Kenneth Rogoff (2010) argued that

35 See IMF (1945, article I(ii)). In the United States, the commitment to full employment was enshrined in the Employment Act of 1946, which assigned responsibility for maintaining "maximum" employment to the federal government. This legislation was subsequently amended by the Humphrey-Hawkins Act of 1978, which instructs the US Federal Reserve to pursue maximum employment, stable prices and moderate long-term interest rates. In the United Kingdom, the foundations for full employment policy were laid by Sir William Beveridge's report in 1942 on social insurance and allied services, which looked ahead to postwar social policy and was largely implemented by the Labour Party following the 1945 elections. His report was influential in shaping postwar policies in several Commonwealth countries, including Canada, Australia and New Zealand. Meanwhile, full employment became the underlying objective of economic cooperation advanced through the OECD and other international organizations.

36 In practice, various frictions prevent the continuous clearing of the labour market, which is best characterized by heterogenous workers and firm-specific skills contrary to elementary textbooks that assume labour is homogenous. With less-than-perfectly flexible wages, involuntary unemployment becomes a possibility. James A. Haley (1990) surveys sticky-wage models.

37 Of large economies, only Germany was operating above potential. The recovery in Europe may have been impaired by monetary arrangements that exacerbated the adjustment challenges of countries with high public debts. Of the 17 members of the euro zone, only Germany and a group of much smaller countries (Czech Republic, Ireland, Luxemburg and Malta) were operating above potential in 2016. See IMF (2017). Data for 2016 is from figure 1.10 database, available online at www.imf.org/en/Publications/WEO/Issues/2017/09/19/world-economic-outlook-october-2017.

38 At the time this paper was written in early 2018, "headline" US unemployment was 4.1 percent. However, a much broader measure of labour market conditions, one including discouraged workers, marginally attached and those employed part-time for economic reasons (the Bureau of Labor Statistics' U6 measure), was 8.1 percent. This is down significantly from its level at the nadir of the recession of almost 17 percent. Such numbers presumably account for the "forgotten millions" that then-candidate Donald Trump spoke of in the 2016 presidential campaign and the appeal that economic nationalism, if not outright nativism, holds for those affected.

39 The Brookings Institution's Hutchins Center on Fiscal and Monetary Policy has created and compiles the Fiscal Impact Measure (FIM) (see www.brookings.edu/interactives/hutchins-center-fiscal-impact-measure/). The FIM gauges the contribution of US federal, state and local fiscal policy to near-term changes in the GDP. It shows that the fiscal impact was negative for the period 2011–2014, indicating a restraint on growth.

the anemic recovery from the global financial crisis reflects the inevitable period of adjustment and balance-sheet rebuilding that follows periods of financial imbalance. Efforts by highly indebted governments to expand aggregate demand through fiscal stimulus, they warned, could threaten long-term growth. In contrast, Bradford DeLong and Lawrence Summers (2012) demonstrated that, with US interest rates at historically low levels and ample excess capacity, fiscal stimulus would pay for itself through the growth it would unleash as full employment is restored. While the latter view is widely accepted today, the narrative that stimulus could be harmful provided intellectual justification for those determined to pursue fiscal austerity in the deepest recession since the Great Depression.[40] In any event, an opportunity to close output gaps and restore full employment sooner was undoubtedly missed.

That missed opportunity is especially unfortunate, coming on the heels of the China shock. As Acemoglu et al. (2016, S184) note, a careful analysis of the data suggests that "the trade shocks of the prior decade cast a long shadow over US manufacturing, even when trade pressure eased temporarily....Thus, trade pressure appears to have contributed to the US employment sag not just before but also during the Great Recession, despite the temporary drop-off of international trading activity during this period."

The prolonged departure from full employment that characterized the past decade and the destruction of high-wage, good-benefits manufacturing jobs have damaged labour market outcomes for millions of American workers. Workers' wages and benefits stagnated. The result has been a backlash against trade liberalization that, arguably, is manifested in resurgent nationalist movements around the globe.[41] But it is important not to exaggerate the effect of trade on growing inequality and the disruption that has affected low-skilled workers in the United States. Other policies — or their absence — are also to blame. In hindsight, when the China shock hit, the United States was unprepared for, or perhaps unwilling to address, the corrosive effects that it could have. Paradoxically, the harm to unskilled workers that ostensibly motivates economic nationalists may not reflect the effects of trade, but rather the myopic and tribal political response that failed to assist workers who would bear the burden of trade-related dislocation.[42]

Why Was More Not Done?

All of this begs the question: *why was there not more done to assist workers?* This is a complex question. Addressing it requires careful consideration of the factors driving inequality across and within countries; deep understanding of existing policies to assist workers and their shortcomings; and analysis of economic, social and political economy factors that curtailed more robust policy responses. An authoritative answer lies outside the scope of this paper. Providing such an answer should rank high on research agendas of academia, governments and international institutions.

40 In the United States, fiscal austerity resulting from sequestration might have reflected the increasingly dysfunctional nature of Congress as Republicans sought to thwart the initiatives of Barack Obama's administration for political — or other — reasons, although, it must be acknowledged, at least one prominent member of the administration also embraced the "debt is dangerous" narrative. (See Mann and Orenstein 2012 on congressional dysfunction.) In the United Kingdom, rejection of fiscal stimulus may have stemmed from the cynical adoption of austerity as an ideological marker to differentiate Oxonian Tories from New Labour. These episodes beg the counterfactual of whether the election of Donald Trump and the Brexit vote would have occurred had full employment been restored more quickly, which might have led to wage growth as firms competed for labour.

41 Jeffrey Friedan (2017, 4) examines two factors polarizing debate: "On the economic front, economic integration has had adverse effects on many communities, and compensatory mechanisms often have not addressed these effects effectively; there has been a *failure of compensation*. On the political front, large groups in the population have been alienated from mainstream political institutions, finding it hard to have their concerns heard and taken seriously by existing political institutions: there has been a *failure of representation*."

42 Governments intent on preserving open markets should provide an insurance function to protect workers against the vagaries of sudden shifts in terms of trade or other shocks. This admonition follows from risk aversion: individuals are generally not indifferent to variability of income streams. Consider an individual with the prospect of earning $100 with certainty under autarky or, alternatively, a free trade outcome in which she is equally likely to earn either $50 or $150. The expected value of both opportunities is the same. But, unless she were pathologically risk-neutral, she would prefer to remain in autarky. The reason why is not difficult to fathom, particularly if she has a mortgage or is saving for her children's education. If trade liberalization increases the variability of future income, it follows that countries more exposed to global forces should have larger governments to provide such insurance. Rodrik has explored these issues in a series of thoughtful papers (1997b; 1998).

Work has begun; in this respect, it is possible to sketch out some key contours of the issues.[43]

Compensation

Joseph Stiglitz (2018) notes that Paul Samuelson, who largely developed the key propositions of factor proportions theory, acknowledged that, in principle, trade could benefit the country but leave unskilled workers worse off unless compensation is paid. The problem in practice is that compensation has generally not been paid. And even where support is provided, such as the US Trade Adjustment Assistance program, which provides additional unemployment benefits, training and relocation assistance, comparatively few workers benefit.[44]

This neglect of compensation may reflect economists' proclivity to eschew normative issues involving distribution in the pursuit of positive analysis. Redistribution, it is argued in reference to fundamental theorems of welfare economics, will lead to deadweight losses, unless it is done through lump-sum transfers.[45] Moreover, because of diminishing gains from liberalization (discussed above), potential distortions introduced by redistribution grow relative to the benefits.[46] Meanwhile, some rule out such transfers even if they were feasible, on the grounds that it is difficult to identify specific "winners" and "losers" of liberalization.

These arguments are unpersuasive. Redistribution or compensation schemes may undoubtedly have negative effects on efficiency — particularly if they are poorly designed or corruptly administered. But distribution can likewise have adverse consequences on efficiency. Growing inequality could contribute to a decline in trust and lead to a polarization of society that raises transactions costs for disparate individuals, reducing efficient contracting.[47] More generally, the assumptions on which the fundamental theorems of welfare economics rest do not hold in practice (Stiglitz 2018). The world is not first-best; policy recommendations based on the assumption that it is can be misleading. Moreover, single-minded avoidance of normative issues in the pursuit of purely positive analysis may be tantamount to the "grass is greener" fallacy (Demsetz 1969). To misquote Keynes, it could be argued that "economists set themselves too easy, too useless a task if they merely focus on the positive and ignore the normative."[48]

In any event, the question is how to ensure that most individuals can benefit from globalization, regardless of the sector in which they are employed. This objective function suggests that economy-wide assistance should be provided, to insure against bad outcomes that result from liberalization, as well as measures to facilitate mobility across sectors, to assist workers' move from declining to expanding sectors.[49]

Financial Globalization and Fiscal Constraints

While much of the focus on growing inequality centres on trade, financial liberalization has also played a role. However, while the benefits of freer trade are well defined (even if they are not

43 The literature is too vast to survey here. Adrian Wood (1998) provides a good, albeit now dated, overview of the issues. Rodrik (2000a) reviews the institutional, political and social trade-offs globalization may entail. Andrew Berg and Anne Krueger (2003) and Machiko Nissanke and Erik Thorbeke (2005) survey the linkages among trade, growth and inequality. The effect of globalization in constraining domestic policy and its political consequences is discussed by Rodrik (2000b), Kyle Bagwell and Robert Staiger (2001) and Anne-Marie Slaughter (1997).

44 See US Government Accountability Office (GAO) (2012). The limited resources allocated to trade assistance are only part of the problem. It is difficult to ascribe dislocation to trade rather than to, say, domestic competition.

45 The theorems state that, under certain conditions, every competitive equilibrium is a Pareto optimum, and conversely, every Pareto optimum is a competitive equilibrium.

46 As Rodrik (2018a) notes, this result creates a feasibility bias against compensation just when it might be needed most.

47 See, for example, the discussion in Berg and Ostry (2017); Ostry, Berg and Tsangarides (2014); and Ostry, Berg and Kothari (2018).

48 The original passage is: "But this long run is a misleading guide to current affairs. In the long run we are all dead. Economists set themselves too easy, too useless a task if in tempestuous seasons they can only tell us that when the storm is long past the ocean is flat again" (Keynes 1936).

49 The difficulty of disentangling the disruptive effects of trade from other factors militates for the development of economy-wide policies to aid adjustment, regardless of the source. The OECD (2012) presents evidence that differences in policies and institutions at the national level are critical determinants of how labour markets respond to shocks that could increase inequality. Some policies to address freer trade's effects on inequality may seem truly visionary. One such proposal is Kaushik Basu's (2006) suggestion to give all workers a claim to a fraction of corporate equity income (*all* corporate equity — not just profit sharing within a specific firm — to insure against idiosyncratic or sectoral risks). While this proposal seems impractical at first glance, in effect, it simply describes corporate income taxation, with revenues used to protect workers adversely affected by trade or financial shocks. Access to such taxation for insurance purposes should be a significant consideration in debates about tax reform. This was not the case with respect to recent US tax cuts, which are skewed to the wealthy or permanent tax cuts for the corporate sector, while middle-income personal tax cuts are more modest and temporary.

shared equitably), the benefits of capital account liberalization are more difficult to identify in the data. These issues are examined by Davide Furceri, Prakash Loungani and Jonathan D. Ostry (2017, 5) who find that "while liberalization episodes increase output in countries with high financial depth, the effects on inequality are magnified in countries with low financial depth and inclusion. Similarly, capital account liberalizations episodes lead to significant output contractions and increases in inequality when followed by financial crises, while these adverse effects are greatly reduced when they are not followed by crises." Further, "steps to develop domestic financial institutions and depth and inclusion are clearly important in this connection. Fiscal redistribution can also help to mitigate the adverse distributional consequences of financial globalization, and do so without much of a hit to economic efficiency unless such redistribution is extreme....Policies could be designed to mitigate some of the anticipated effects in advance — for instance, through increased spending on education and training (so-called predistribution policies), in order to foster greater equality of opportunity" (ibid., 22).

One implication of this result is that it is important to ensure that domestic institutions and regulatory frameworks are strengthened before financial globalization — in other words, it is important to follow a road map for capital account liberalization, as Martin (1998) proposed 20 years ago. And as Furceri, Loungani and Ostry (2017) note, fiscal redistributions and broader educational and training policies also have a role to play.[50]

The problem governments confront is that financial globalization may not only exacerbate the problem of inequality but impose fiscal constraints on efforts to alleviate its effects. Since the onset of financial globalization 30 years ago, emerging market economies have been subject to periodic bouts of large capital inflows, followed by panicked episodes of sudden capital flight. These fickle private capital flows introduce procyclicality to fiscal policy — in good times, when private capital flows are positive, fiscal policy is expansionary; when the tap of private capital is turned off, however, fiscal policy turns to austerity. The legacy of these capital flow reversals is high debt burdens that limit possible efforts to assist workers affected by trade liberalization or financial globalization.

These effects are a serious concern to emerging markets and developing countries with contingent access to global capital markets that can only issue debt denominated in foreign currencies. They are less relevant to mature advanced economies that issue debt denominated in their own currencies. There is, however, another channel through which financial globalization is implicated. Vito Tanzi (2001) has long warned of the dangers of fiscal "termites" eating away at fiscal foundations in advanced economies — a reference to the inability or unwillingness to tax international mobile financial capital in the process of tax competition and in fear of capital flight and asset migration, which has contributed to erosion of the capacity of governments to raise revenues for redistribution.

But these impediments are not insurmountable. Most advanced economies pursue policies broadly consistent with the Lagarde (2016) program. These measures include universal health care, retraining programs for workers displaced by the effects of trade and tax, and transfer policies that redistribute income to the least advantaged. In fact, while all developed countries redistribute income, Peter Lindhert (2017) shows that the United States stands out as having both a high degree of inequality and less redistribution than other developed countries. Moreover, since the late 1970s (when the wave of trade liberalization was reaching its crest), governments permitted "a mission drift away from investing in lower-income children and working-age adults, while concentrating social insurance on the elderly" (ibid.).

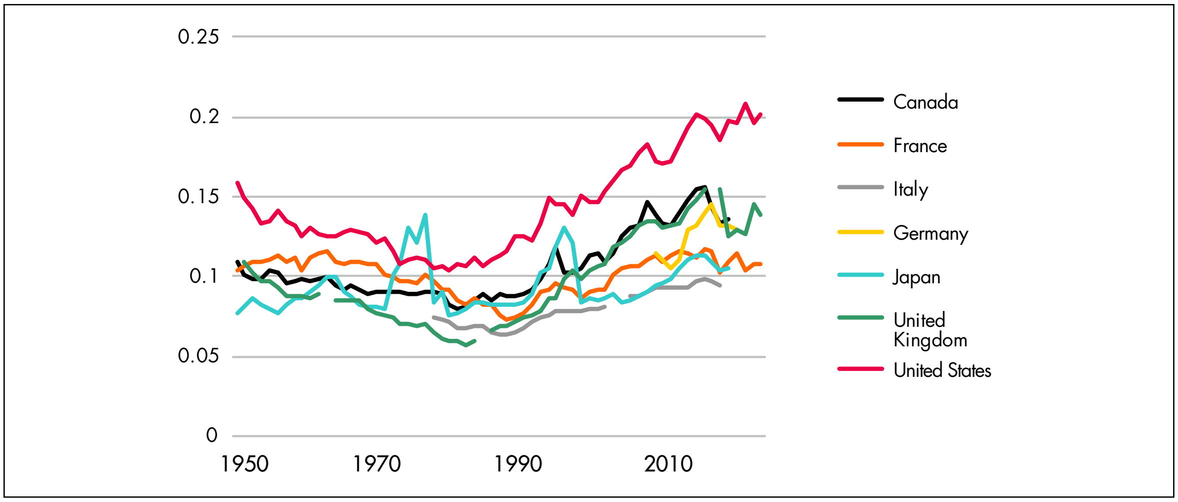
The effects of these changes are clearly discernible in the share of income earned by the top one percent (see Figure 4). A marked increase in inequality in the United States is evident.[51] This movement highlights a key concern raised by Thomas Piketty (2014) and his collaborators.[52]

50 The managing director of the IMF, Christine Lagarde (2016), has proposed a three-step approach to dealing with the problem: first, enhance support for lower-skilled workers, including through education, retraining and facilitating occupational and geographic mobility; second, strengthen social safety nets by providing appropriate unemployment insurance, health benefits and portable pensions, and through tax and income policies; third, boost "fairness" through competition policies and by preventing tax evasion and abuse of shifting profits to low-tax jurisdictions.

51 What Figure 4 does not show, however, is an earlier decline in inequality starting in the post-World War II period. A chart of the full postwar period reveals an unmistakable "U" in the data.

52 Piketty's principal research colleagues include, among many others, Emmanuel Saez of University of California, Berkeley and Anthony Atkinson of the University of Oxford. Together, they have amassed an impressive body of cross-country analytical work on the question of distribution.

Figure 4: Pre-tax National Income Earned by Top One Percent, 1950–2014*



Data source: World Inequality Database, http://wid.world/data/.
*Graph reflects gaps in underlying data series.

Their work focuses on the forces of capital accumulation, which tend to lead to greater concentration of wealth. Changes to tax systems that reflect political ideology or the perceived need to placate internationally mobile capital have important effects on inequality.

The impact of taxes on inequality is consistent with the results of Campbell and Lusher (2016b), who examine what happens to the overall distribution of income as trade is opened to poorer, developing countries. Their cross-country results confirm Piketty's analysis, "with a slight twist," in that trade effects are evident in the data, but so too are effects of taxes: "Thus, the answer seems to be that trade shocks, which certainly had a large impact on the labour market in the early 2000s, are not responsible for all of society's ills. The dramatic rise in inequality experienced in the US since 1980 can be traced to the Reagan tax cuts, not to trade" (ibid.).

So, just as the need for measures to help distribute the gains from trade liberalization was greatest, US policies turned from such objectives. It is little wonder that Trump's dystopian vision of the damage wrought by "unfair" foreign trade practices resonated with many Americans.

Conclusion

Two decades ago, Rodrik (1997a, 34-35) assessed possible long-term implications of Patrick Buchanan's unsuccessful populist-inspired campaign for president:

> Perhaps future Buchanans will ultimately be defeated, as Buchanan himself was, by the public's common sense. Even so, a second and perhaps more serious danger remains: The accumulation of globalization's side effects could lead to a new set of class divisions — between those who prosper in the globalized economy and those who do not; between those who share its values and those who would rather not; and between those who can diversify away its risk and those who cannot. This is not a pleasing prospect even for individuals on the winning side of the globalization divide: The deepening of social fissures harms us all.
>
> National policymakers must not retreat behind protectionist walls. Protectionism would be of limited help, and it would create its own social tensions. Policymakers ought instead to complement the external strategy of liberalization with an internal strategy of compensation, training, and social insurance for those groups who are most at risk.

Today, Rodrik's words echo, eerily prophetic. Regrettably, he was ignored. While protectionism was not widely adopted, neither were safety nets for those harmed by globalization strengthened. As a result, "side effects" were allowed to accumulate. It took a financial crisis and the worst recession since the Great Depression, but a "future Buchanan" was eventually elected.[53] In 2016, Trump rode a wave of populism to the White House.

He is not alone. Around the world, many on both the left and the right of the political spectrum espousing economic nationalism ostensibly seek to curb the reach of globalization. Some demagogues employ language and project an air of authoritarianism that harken back to the fragmentation of politics and policy frameworks associated with the Great Depression of the 1930s.[54] If left unchecked, political polarization and economic nationalism could foster a divergence of policy frameworks that would undermine the international institutions and arrangements that have promoted international financial stability and global growth for seven decades.

These institutions and arrangements were constructed in the wake of economic stagnation and global war to promote shared prosperity and secure world peace. In this context, we should acknowledge Mervyn King's observation (quoted in Wolf 2013) that the shock of the global financial crisis was tantamount to world war and recognize the damage it has done to the social consensus on which the trade and financial integration of the past was built.

The way forward is not to repeat the mistakes of the past. Protectionism is not the answer. But neither is a childlike belief in the power of markets to achieve socially desirable outcomes or share the benefits of globalization. Markets are imperfect, and policy frameworks are needed to ensure that they generate outcomes that benefit society at large. In the United States, policies enacted under the New Deal and later through the Great Society programs suppressed the forces within the capitalist system that promote inequality and provided opportunities for upward mobility. Those opportunities are receding in the face of ideological culture wars. The danger going forward is that further dismantling of those policies would lead to greater inequality. The widening of social fissures, as Rodrik (1997a) observed, would harm us all.

To defeat the forces of protectionism and nativism, the costs of globalization, as well as its benefits, must be acknowledged. Failure to recognize that trade and financial integration have negative consequences would make it difficult to mobilize the support needed to enact policies to support workers. As Stiglitz (2018, 1) argues, "The answer to those concerned with the adverse distributional consequences of globalization is not protectionism, but a new social contract, one that embraces the consequences both of changes in technology and globalization, and entails active government policies to ensure that individuals can more easily move from declining to expanding sectors, aggressive full employment policies, to ensure that job destruction does not outpace job creation, and social protection, that ensures that individuals are protected, in the interim between losing their old job and acquiring a new one."

Getting domestic policies right is not enough. Global governance structures are needed, to give national governments the flexibility to deliver their policies. Such was the objective of the grand bargain implicit in the Bretton Woods agreement that allowed governments to finesse the policy constraints imposed by the international trilemma (Haley 2014). Globalization flourished just as the locus of obligations embodied in the Bretton Woods system unravelled. That is no coincidence.

This discussion suggests that an answer to the question posed in this paper's title might be: The problem is not that trade liberalization went too far; rather, policies needed to make globalization work did not go far enough. In this respect, the question is incomplete. It should be expanded to include: *Or why was it not supported? And what are democratic governments going to do about it?* The answers to these questions, reflected in the governance arrangements and obligations that sovereign states embrace, will determine how the global economy will evolve in the years ahead.

53 Other factors were also at play in the intervening two decades, including the spread of social media, which, arguably, has increased the public's susceptibility to emotional rather than intellectual arguments, impairing the public's common sense. However controversial, this effect is distinct from alleged Russian interference in the 2016 US presidential election through the exploitation of social media.

54 Douglas Irwin and Kevin O'Rourke (2011) decompose stressors of the multilateral trading system to "shocks" (financial crises) and "shifts" (long-term shifts in comparative advantage or the geopolitical equilibrium). Using their terminology, the 2007–2009 financial crisis was clearly a "shock," while the trend toward greater inequality is a "shift." At the time of their writing, they were guardedly optimistic that the shock absorber provided by social safety nets would prevent the collapse of the multilateral system, in contrast to the experience of the 1930s.

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