Appendix to
What is Globalization?
And how has the global economy shaped the United States?

A.1. History of Globalization
Source : *Peterson Institute for International Economics*
(https://piie.com/microsites/globalization/what-is-globalization.html)

A.2. Globalization in Charts: A European Perspective
Source : UNCTAD, World Bank, French Customs

A.3. Is Trade Deficit a Problem ?

- A.3.1 Addressing global imbalances requires cooperation

Source : *Vox-EU*

- A.3.2 Five Reasons Why the Focus on Trade Deficits is Misleading

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A.4. The Cost of Leaving the Multilateral System
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A.5. Impact of Chinese import competition on the local structure of employment and wages in France
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A.6 Intra vs international income inequalities

- A.6.1 Global inequality and international trade

Ajit Ghose
Source : *Cambridge Journal of Economics*, 2004

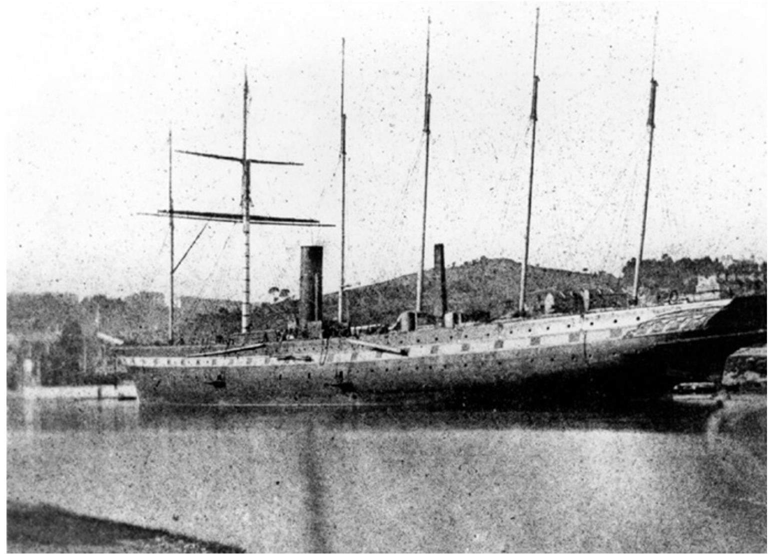
- A.6.2 An Overview of Growing Income Inequalities in OECD Countries : Main Findings

Source : *OECD*

A.7 Global Value Chains
Source: UNCTAD

Appendix A.1
History of Globalization

1800-1899
Technology Breakthroughs and Industrialisation
Steamships, railroads, and the telegraph accelerate global commerce, along with industrialization and mass production. Rapid population growth increases demand for goods and services. England becomes first country to formally adopt gold standard – meaning currencies are convertible to a specific amount of gold – creating stability in exchange rates and facilitating trade and investment. Most developed nations follow suit. Western nations capitalize on natural resources provided by colonies and foreign markets, use force and economic pressure to open China and Japan.



1900-1950
Rise of Automobiles and Airplanes
New modes of transportation further link economies. The first transatlantic flight from Berlin lands in New York in 1938.

1914-1918
World War I Ignited by Nationalist Conflict
The war wreaks havoc on global economies and trade. Defeated Germany is forced to make massive reparation payments to Britain and France.

1920-1929
Gold Standard and Economic Boom
The United States and other countries adopt the gold standard along with protectionist policies. The US economy booms, spurred by a stock market bubble and mass production. Germany struggles to pay reparations and prints money to pay war debts, igniting hyperinflation. Countries retaliate against German manufacturing for delayed reparation payments.

1929-1939
Great Depression and Protectionism

The 1929 US stock market crash ushers in the Great Depression. Many countries leave the gold standard and devalue their currencies to try to gain trade advantage. The United States adopt the Smoot-Hawley Tariff Act in 1930; other countries retaliate with their own tariffs on US goods, deepening the global economic downturn. Deteriorating Germany economy fuels rise of Nazi party. Regional trade blocs form, excluding Germany, Italy, and Japan. Axis powers launch imperialist conquests in Manchuria, Ethiopia, Austria, and Czechoslovakia. Britain and France declare war against Germany.

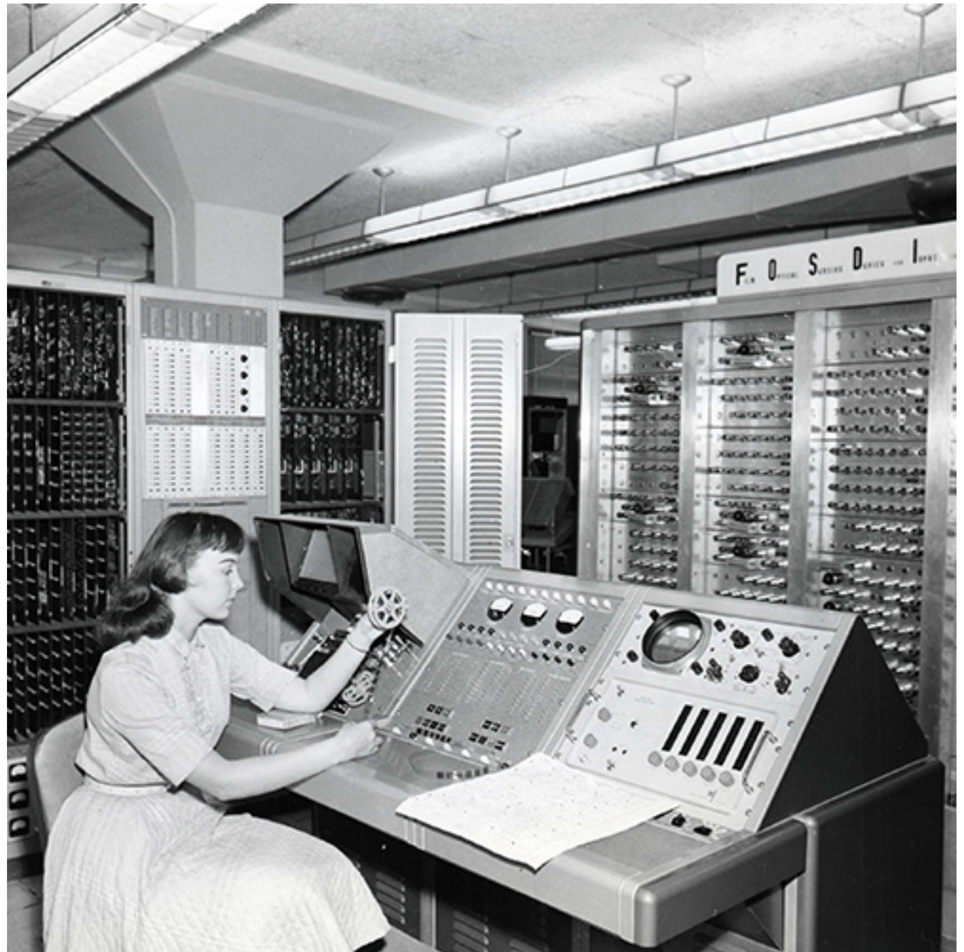
1939-1945
World War II Mobilizes Allies Against Axis Powers

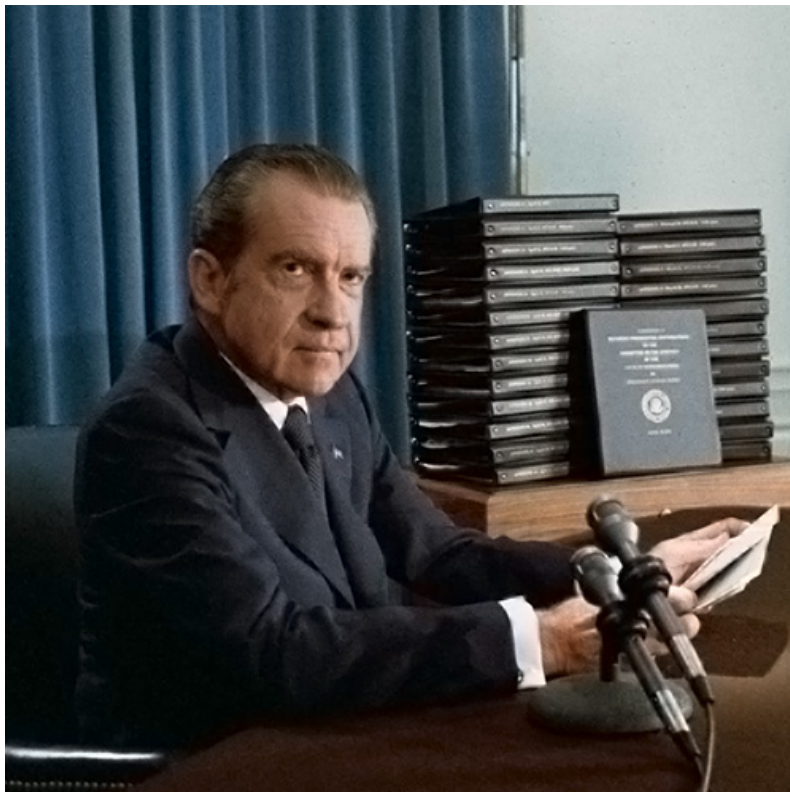
The United States, Britain, the Soviet Union, China, and other wage war against fascism and Nazism.

1944
Bretton Woods Conference Seeks Order
The United States and soon-to-be victorious Allies host parley, setting new postwar rules and institutions to liberalize trade and revive economic growth. The dollar and its peg to gold dominates the new global currency framework. The Soviet Union does not ratify the agreement. The Cold War (1945-91) deepens Russian isolation from the Western trade order.

1948
General Agreement on Tariffs and Trade (GATT)
The first worldwide multilateral trade agreement ushers in postwar era of more open trade.

1950-1969
Computers and Kennedy Round
Computers pave way for new commercial breakthroughs. "Kennedy Round" of the GATT talks accelerates trade liberalization.



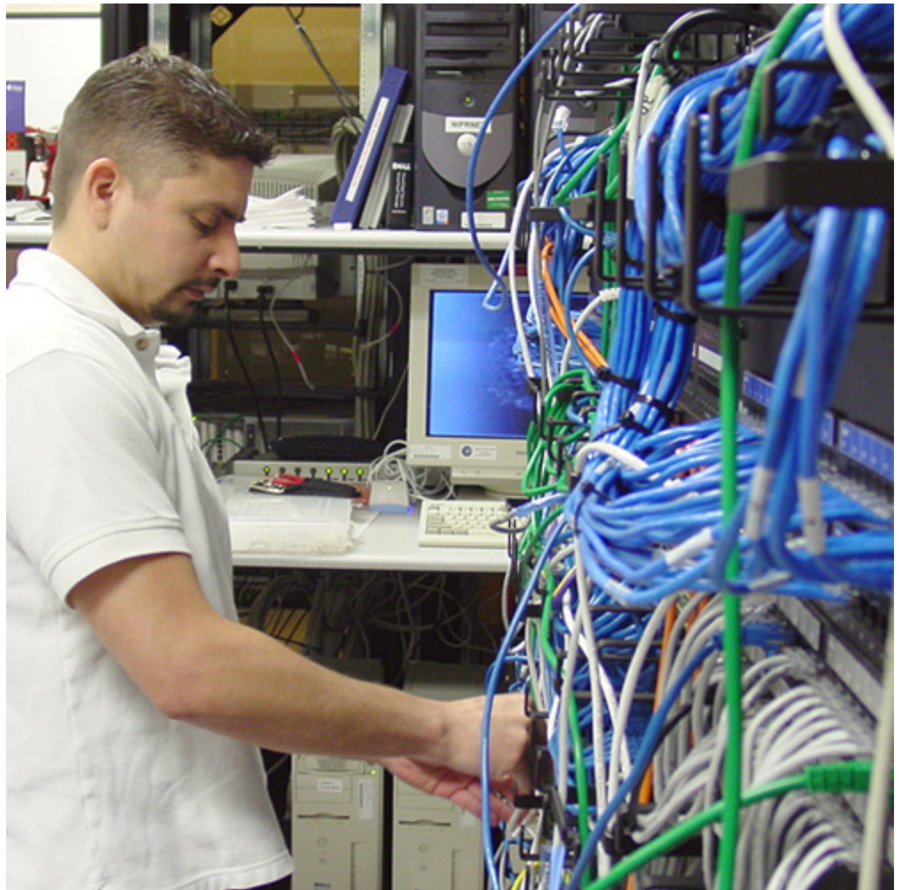


1970-1979
End of Fixed Exchange Rates
Energy prices spike, set by the Organization of the Petroleum Exporting Countries (OPEC), triggering high inflation and unemployment throughout global economy. US inflation and trade imbalances compel Nixon administration to end dollar convertibility to gold for foreign governments. Most currencies eventually float in value.

1980-1989
Debt Crisis, Free Market Economics, and Plaza Accord
The international Monetary Fund (IMF) and other institutions impose strict austerity and free market rules on Latin American countries in return for aid, causing blacklash. President Ronald Reagan and UK Prime Minister Margaret Thatcher embrace free market economics. Wall Street and financial globalization rapidly rise. Rising US trade deficits, especially with Japan, lead to Plaza Accord, a major concerted foreign exchange intervention.

1989-1991
End of the Cold War
The collapse of the Soviet Union produces greater cooperation in international institutions, increasing trade and financial integration.

1990-1999
Internet Connects World
The internet begins its meteoric rise transforming global commerce. Powerful multinational corporations dominate the global economy.



1993
European Union Links Continent
The formation of the European Union solidifies the single market that began developing in the 1950s, leading to the creation of the euro currency in 1999.

1994
North American Free Trade Agreement (NAFTA)
The first trade agreement between a rich country (the United States) and a poor country (Mexico) goes into force after bitter US debate. Canada is also a party to NAFTA.

1995
World Trade Organization (WTO)
The modern trade system governed by rules is established, replacing the GATT.

1997
East Asian Financial Crisis
Declines in Asian currencies spark crisis in the region, forcing austerity measures that revive hostility toward the IMF.

2001
China and the WTO
China joins the WTO and becomes the world's largest developing economy.

2008
Global Financial Crisis Ignites Blacklash
An international banking crash along with a European debt crisis results in the worst global recession since the Great Depression. The Group of Twenty (G-20) nations serve as a steering committee for efforts to counter crisis effects, but their role produces blacklash against globalization and US leadership.

Referendum on the United Kingdom's membership of the European Union

Vote only once by putting a cross ☒ in the box next to your choice

Should the United Kingdom remain a member of the European Union or leave the European Union?

Remain a member of the European Union	☐
Leave the European Union	☐

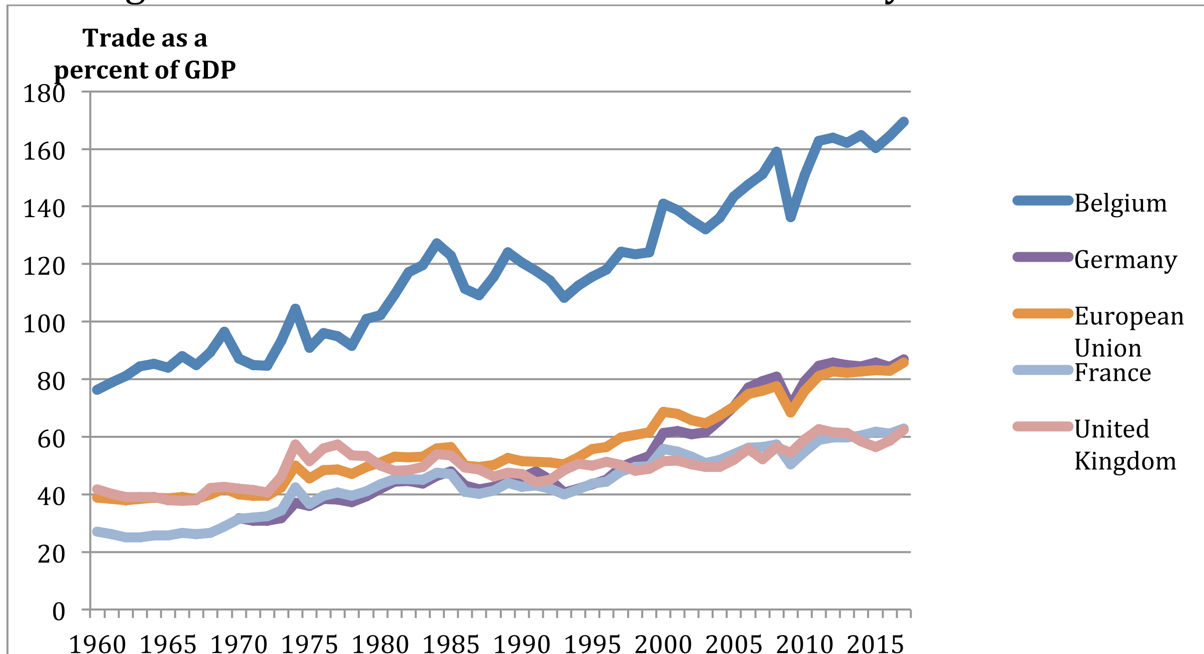
2016
Brexit
The United Kingdom votes to leave the European Union, which will complicates cross-border movement and trade.

2017-2018 President Donald Trump Repudiates Trading System

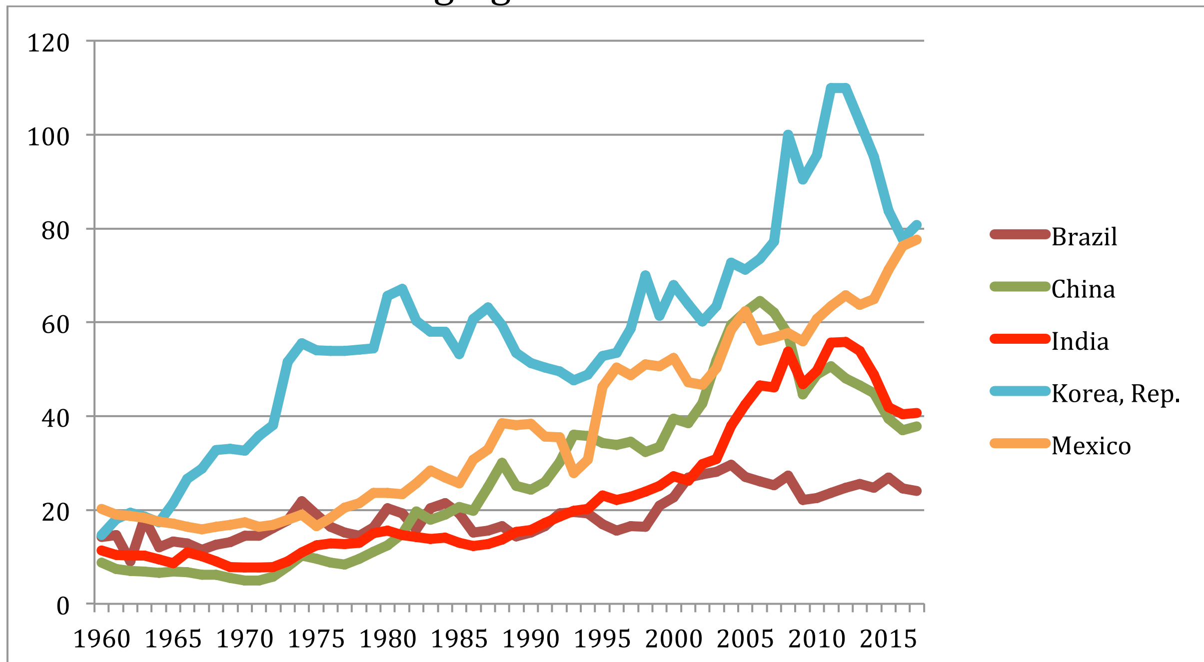
Trump withdraws from the Trans-Pacific Partnership (TPP), threatens to abandon NAFTA (then later negotiates a preliminary deal that adds new restrictions), and criticizes WTO rules as unfair to the United States. His administration imposes tariffs against China and US allies, which escalates into a tit-for-tat trade war.

Appendix A.2
Globalization in Charts:
A European perspective

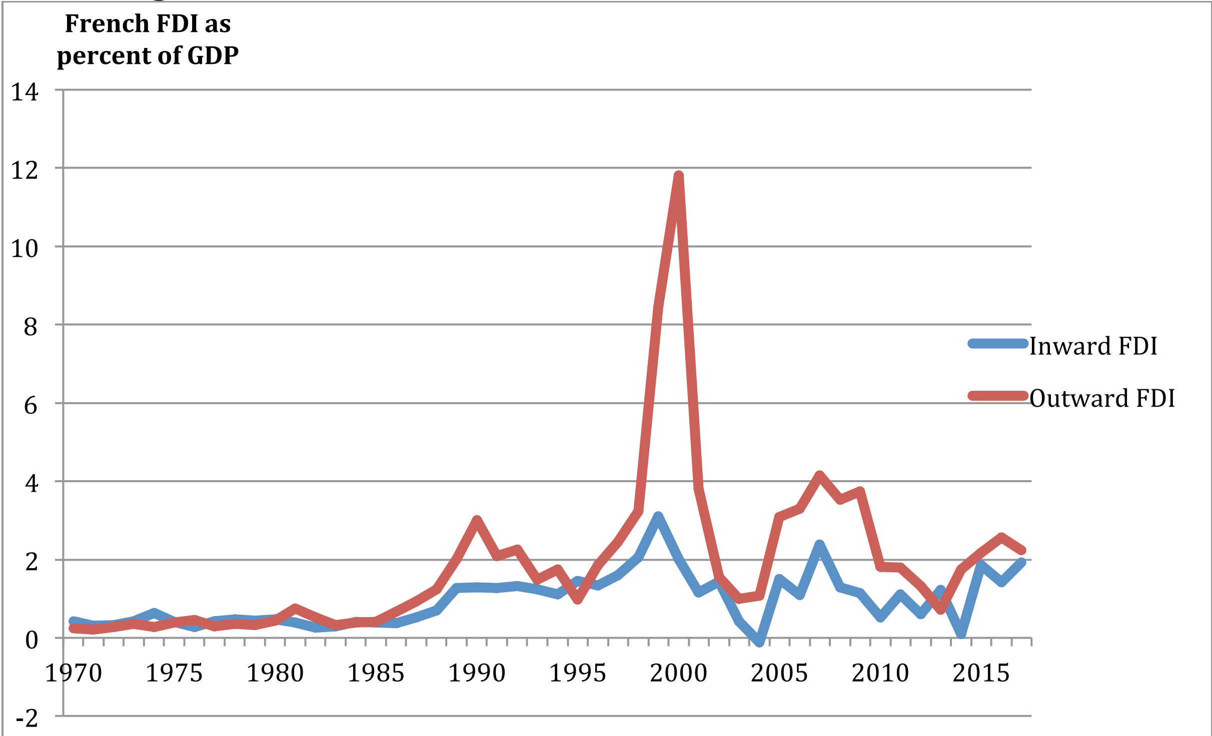
Trade grew to more than 80% of the EU economy…



and about 50% in emerging countries

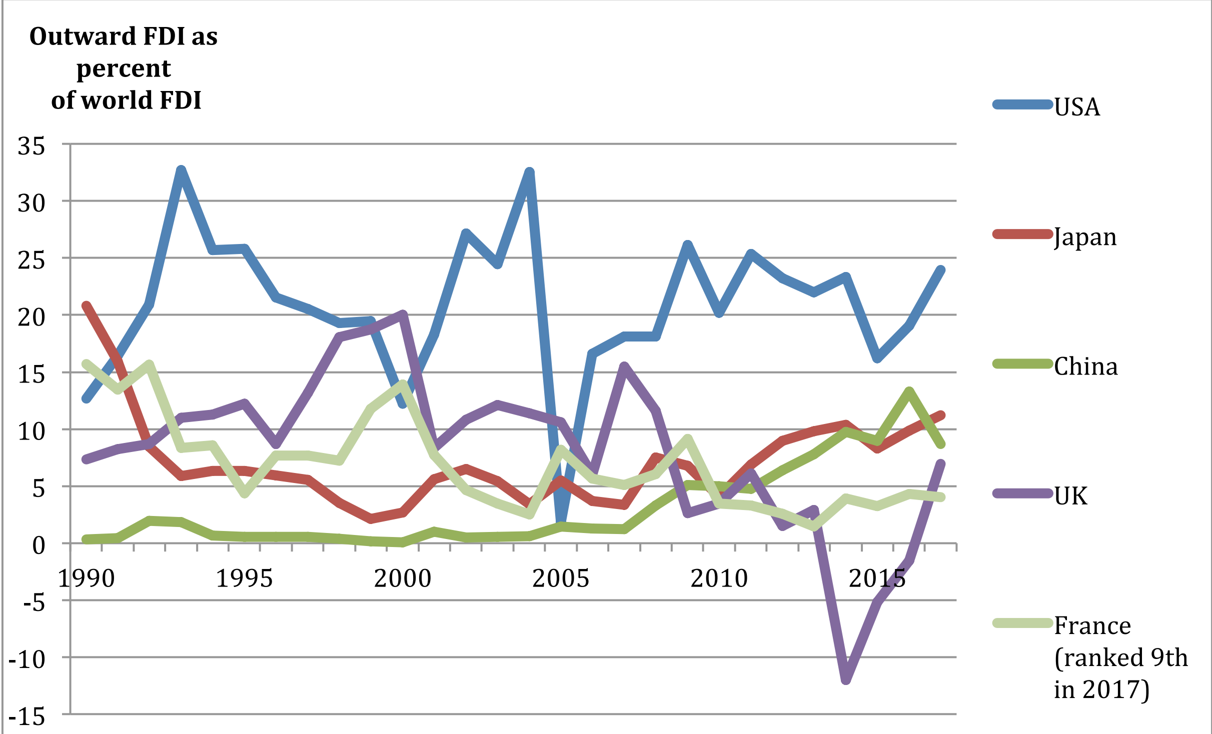


FDI has grown in France as well

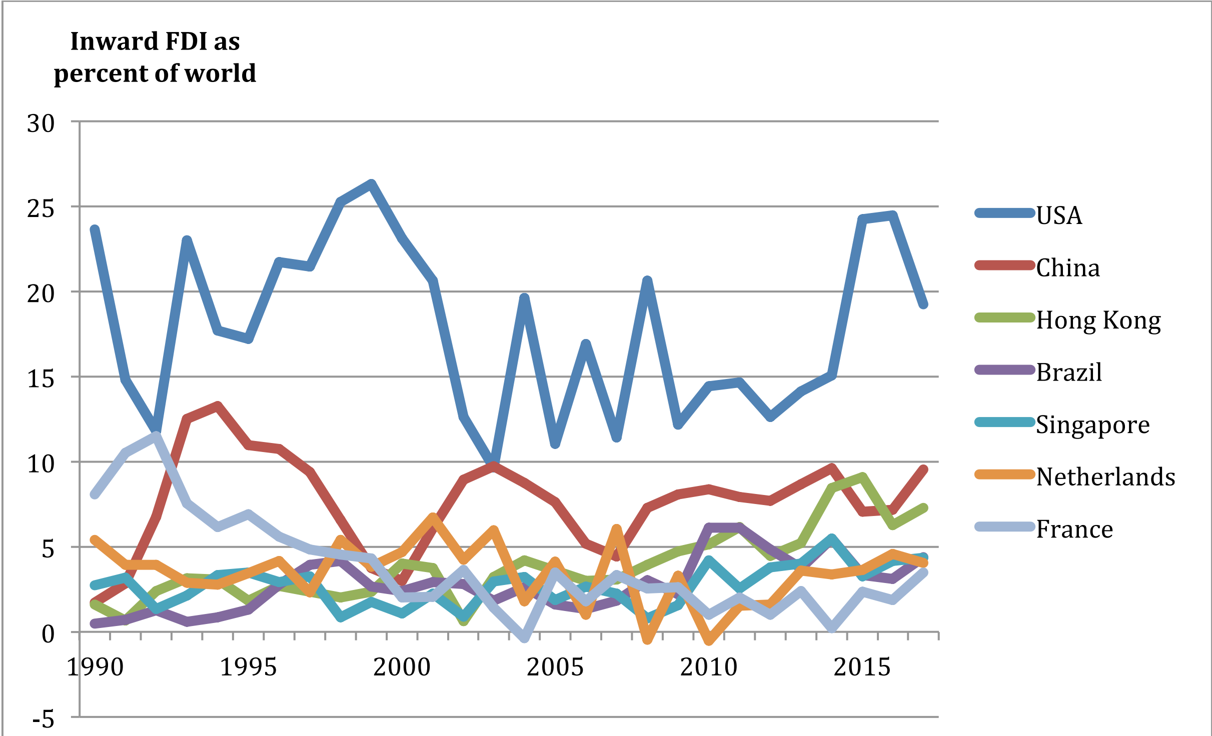


Source: UNCTAD Statistics

The US, France and China are large investors *and* recipients of foreign investment



Note: Sample limited to the top 4 sources of FDI in 2017, plus France. Source UNCTAD Statistics



Note: Sample limited to the top 7 destinations of FDI in 2017. UK was in the top 7 destinations before Brexit. Source UNCTAD Statistics

Appendix A.3
Addressing global imbalances requires cooperation

Maurice Obstfeld
Source: Vox-EU, 10 August 2018

The IMF's 2018 External Sector Report assesses the current account balances for the 30 largest economies. In this post, Maurice Obstfeld outlines the key findings of the report.

The IMF has just released the latest assessments of the current account balances for the 30 largest economies in our 2018 External Sector Report (ESR). These assessments are a key aspect of the IMF's mandate to promote international monetary cooperation and help countries build and maintain strong economies. They try to answer the difficult and often contentious question of when current account surpluses and deficits are appropriate or when they signal risks. Before jumping into the results, a bit of background is useful.

To start, surpluses and deficits in and of themselves need not be problematic and may well be appropriate and beneficial. For example, young, fast-growing economies need to invest to grow – so they often tap external resources by importing more than they export and borrowing to cover the implied deficit. In contrast, rich, aging countries may need to save to prepare for when workers retire – so they run surpluses and lend to deficit countries.

Current account balances can, however, become *excessive*, that is, larger than warranted by the economy's fundamentals and appropriate economic policies. Excessive external imbalances – both deficits and surpluses – pose risks for individual countries, and for the global economy.

Just as over-indebted households can lose access to credit, economies that borrow too much from abroad by running current account deficits that are too large may

become vulnerable to sudden stops in capital flows that can be destabilizing not only at country level, but also globally, as proven by the long history of financial crises. Countries with excessive surpluses face different challenges – for example, the risk of investing their saving abroad when domestic investments could offer higher social returns. In addition – and importantly – they may become targets for protectionist measures by trading partners.

The analysis of external imbalances is inherently complex, including because it needs to be globally consistent – excess deficits must be matched by excess surpluses. The ESR focuses on each country's overall current account balance and not its bilateral trade balances with various trading partners, as the latter mainly reflect the international division of labour rather than macroeconomic factors. Our objective is to alert the membership to the potential risks from these imbalances, and highlight countries' shared responsibility to address them in an appropriate manner. This goal is most relevant in the current conjuncture.

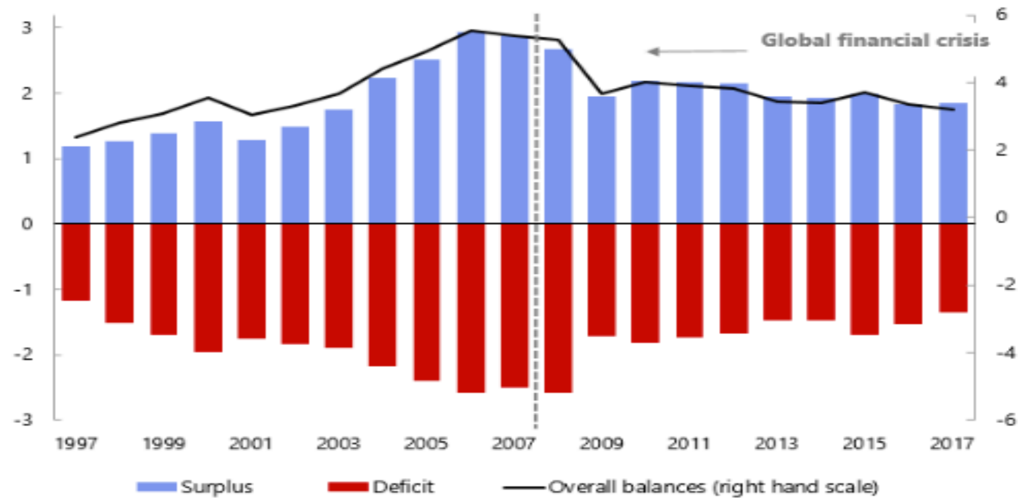
Key findings on excessive imbalances

After narrowing in the aftermath of the global financial crisis, global current account surpluses and deficits have remained relatively unchanged over the past five years at about 3¼ percent of global GDP. Our analysis indicates that about 40 to 50 percent of these global balances are *excessive*, and increasingly concentrated in advanced economies.

Higher-than-desirable current account balances prevail in northern Europe – in countries such as Germany, the Netherlands, and Sweden – as well as in parts of Asia – in economies like China, Korea, and Singapore. Lower-than-desirable balances remain largely concentrated in the United States and the United Kingdom.

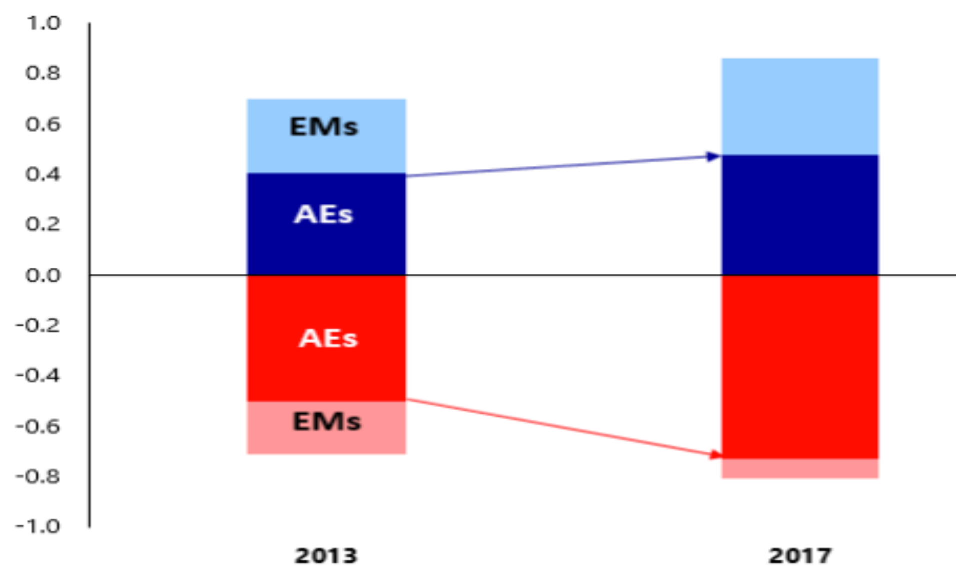
The persistence of global imbalances and mounting perceptions of an uneven playing field for trade are fuelling protectionist sentiment. These impulses are misguided. An escalation of protectionist policies would mainly hurt domestic and global growth, without much of an effect on current account imbalances, as this year's report also finds.

Current Account Balances, 1997-2017
Global imbalances have narrowed since the crisis, but remain large.
(percent of global GDP)



Sources: *World Economic Outlook*, International Financial Statistics, and IMF staff calculations.
Note: Overall balance is the absolute sum of global surpluses and deficits.

Global excess imbalances, 2013 vs. 2017
Excess imbalances have become more concentrated in advanced economies.
(percent of global GDP)



Sources: IMF staff estimates and assessments.

Risks down the road

While the current configuration of global excess imbalances does not pose an imminent danger, we project that, under planned policies, these imbalances will grow over the medium term, eventually posing a risk to global stability.

The planned fiscal expansion in the United States will likely increase the country's current account deficit – with mirror-image larger surpluses in the rest of the world – and result in a faster pace of US monetary policy normalisation. The ensuing tightening of global financial conditions could prove disruptive to emerging and developing economies, especially the more vulnerable ones who have already been subject to some pressure.

At the same time, limited actions by surplus countries to tackle their imbalances suggest their surpluses will linger. Against the backdrop of continued concentration of deficits in debtor countries and sustained surpluses in creditor countries, net foreign asset stock positions will continue diverging, increasing the likelihood of disruptive currency and asset price adjustments down the road in indebted countries. Such developments would diminish global growth, also harming the surplus economies.

Because of the risk that foreign lending dries up, deficit countries face greater pressure to balance their international accounts than surplus countries do to balance theirs. But when the adjustment comes, both debtor and creditor countries lose. The adjustment in the aftermath of the global financial crisis is a not-too-distant reminder of that.

That's why both surplus and deficit countries must work together to reduce excess global imbalances in a manner supportive of global growth and stability.

How to tackle imbalances?

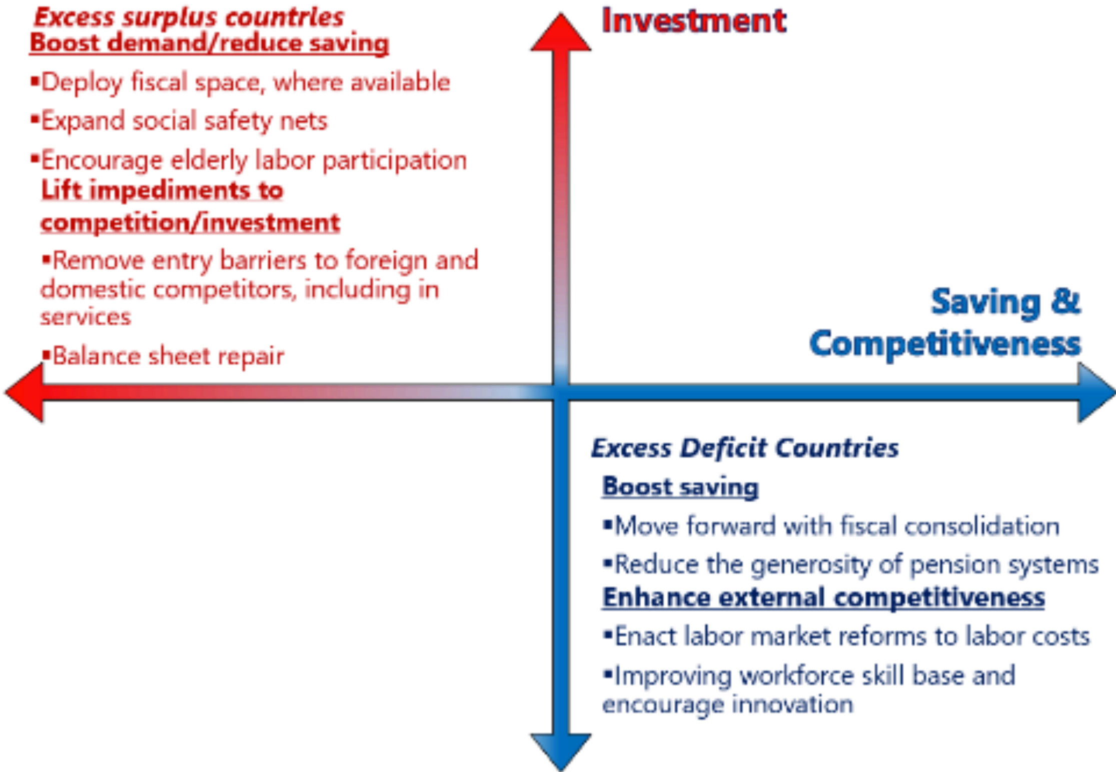
In the current conjuncture where many countries are near full employment and have more limited room to manoeuvre in their public budgets, governments need to carefully calibrate their policies to achieve domestic and external objectives, while rebuilding monetary and fiscal policy buffers. In particular:

- Countries with lower-than-warranted external current account balances should reduce fiscal deficits and encourage household saving, while monetary normalisation proceeds gradually.
- Where current account balances are higher than warranted, the use of fiscal space, if available, may be appropriate to reduce excess surpluses.
- Well-tailored structural policies should play a more prominent role in tackling external imbalances, while boosting domestic potential growth. In general, reforms that encourage investment and discourage excessive saving – through the removal of entry barriers or stronger social safety nets – could support external rebalancing in excess surplus countries, while reforms that improve productivity and workers' skill base are appropriate in countries with excess external deficits.

Finally, all countries should work toward reviving trade liberalization efforts while modernising the multilateral trading system – for example, to promote trade in

services, where gains from trade liberalization could be substantial. Such efforts may have small effects on excess current account imbalances, but they can have big positive effects on productivity and welfare, while reducing the risk that current account imbalances trigger counterproductive protectionist responses.

Broad-based policy approach to reduce excess imbalances



PIIE PETERSON INSTITUTE FOR INTERNATIONAL ECONOMICS

POLICY BRIEF

18-6 Five Reasons Why the Focus on Trade Deficits Is Misleading

Robert Z. Lawrence
March 2018

Robert Z. Lawrence is nonresident senior fellow at the Peterson Institute for International Economics and Albert L. William Professor of International Trade and Investment at the Harvard Kennedy School.

Author's Note: This Policy Brief draws heavily on the *Strategic Brief on Misconceptions around Trade Balances* that I wrote with Yeling Tan, Princeton University, for the Global Future Council on International Trade and Investment of the World Economic Forum. I am indebted to the staff and members of the Council and my colleagues at the Peterson Institute: Olivier Blanchard, Joe Gagnon, Mary Lovely, Ted Moran, Adam Posen, Sherman Robinson, and Ted Truman, for their very helpful comments; Steve Weisman for his guidance and editorial assistance; and Helen Hillebrand for copyediting.

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In his criticism of trade agreements and policies that have guided his predecessors over many decades, President Donald Trump has asserted that trade balances are a key measure of a nation's commercial success and that large US trade deficits prove that past trade approaches have been flawed. "The jobs and wealth have been stripped from our country year after year, decade after decade, trade deficit upon trade deficit,"[1] he has said. Using the trade deficit between the United States and Mexico as a metric, the president called the North American Free Trade Agreement (NAFTA) "the worst trade deal ever"[2] and excoriated the Korea-US Free Trade agreement (KORUS) on similar grounds. He has told the Chinese president Xi Jinping that America's large trade deficit with China was "not sustainable."

Trump also argues that the United States has signed bad trade agreements that have opened the US market and encouraged US firms to move offshore while allowing foreigners to maintain high trade barriers and engage in unfair trade practices. According to him, this deeply flawed approach has resulted in the loss of millions of US manufacturing jobs due to offshoring and imports flooding the US market.

Accordingly, the president and his trade advisors believe that the aim of US trade policy should be to reduce these trade deficits and, ideally, turn them into surpluses. In pursuit of that objective, the administration has canceled American participation in the Trans-Pacific Partnership (TPP), demanded a renegotiation of NAFTA and KORUS, while raising tariffs to protect US industries that produce washing machines, solar panels, aluminum, and steel. Additionally, the administration has launched a campaign against the dispute settlement system of the World Trade Organization (WTO), claiming that it is has failed to deal with the unfair trade practices of countries such as China.

But trade deficits are not in fact a good measure of how well a country is doing with respect to its trade policies. Many of the assumptions on which the administration's beliefs rest are not supported by the evidence. This Policy Brief argues that trade deficits are not necessarily bad, do not necessarily cost jobs or reduce growth, and are not a measure of whether foreign trade policies or agreements with other countries are fair or unfair. Efforts to use trade policy and agreements to reduce either bilateral or overall trade deficits are also unlikely to produce the effects the administration claims they will. Such efforts could prove counterproductive and lead to friction with US trading partners, harming the people the policies claim to help. The United States benefits both from importing and from exporting; to raise US living standards, therefore, trade policies should aim to reduce trade and investment barriers at home and open markets for US products abroad.

In its criticism of past trade policies, the administration has cited the $752.5 billion deficit in goods in 2016, which was 4 percent of GDP. But this focus on trade in goods alone is too narrow. This Brief uses the broader definition

1. Quoted by Eduardo Porter, *New York Times*, October 17, 2017.

2. In 2016 the US trade deficit with Mexico was $70.5 billion and $63 billion for goods and goods and services, respectively.

of the trade balance that includes trade in *services*—financial services, tourism, consulting, and the like—which makes up more than a third of US trade. Trade in services also provides employment, generates US income, and enhances US welfare. The United States had a $247.7 billion surplus in services trade in 2016, bringing the total trade deficit in goods and services down to about $500 billion. In assessing trade balances, it is more appropriate to consider goods, services, and indeed the net earnings of Americans from investing and working abroad. This Policy Brief will therefore focus on the trade balance that includes all these elements and that is more commonly defined as the current account, which was 2.4 percent of US GDP in 2016.

Trade deficits are not a good measure of how well a country is doing with respect to its trade policies.

MISCONCEPTION 1: TRADE DEFICITS ARE BAD

Are trade deficits good or bad? They could be either. Although people often characterize movement towards a larger trade deficit as "worsening," this terminology is flawed. There are two ways to look at the trade deficit. The most straightforward is as the difference between exports and imports. The Trump view is basically that exports are good—they are like revenues—and imports are bad—they are like costs. And the size of the surplus is like the score in an international competition. Thus, in this view, the bigger the difference between exports and imports, the more beneficial the trade, and as Trump has asserted, trade wars are easy to win,[3] because all the nation needs to do is reduce imports. But this view reflects a failure to appreciate that both imports and exports are beneficial. On the one hand, by buying goods and services more cheaply than it costs to produce them at home, the nation benefits from imports; and on the other hand, by selling goods and services in world markets, it can enjoy higher prices for them than it could earn by selling only at home. Thus, a trade deficit that is associated with large volumes of both imports and exports could actually be more beneficial than a trade surplus in which trade volumes are low. And reducing imports could prove very costly.

A second way to understand trade deficits is to recognize that they reflect the fact that the United States is borrowing from the rest of the world, and as with all borrowing, determining whether the borrowing is good or bad all depends on what you do with the money. If the United States as a whole spends more on imports than it earns from exports, it will need to borrow from the rest of the world to make up the difference. Conversely, running trade surpluses means accumulating claims on the rest of the world.[4] This means that the trade balance reflects not only what is happening in the markets for exports and imports but simultaneously the net international flows of capital that are used to make up the difference between national saving and national investment. In a closed economy, if participants wish to invest in plant and equipment, they have to rely on their own savings to fully finance the investment. But an open economy can also obtain savings from abroad and thus invest more than domestic savings by running a trade deficit and borrowing from the rest of the world. Alternatively, it can lend to the rest of the world by running a trade surplus and thus saving more than it invests at home.

The perspective that trade balances reflect the difference between national saving and investment can help determine whether trade deficits are good or bad. A deficit could be undesirable if it indicates borrowing for spending on consumption rather than investment and if it occurs in amounts that are unsustainable and likely to lead to a crisis. But a deficit could also enhance societal welfare if the borrowing is used to finance productive investments that will eventually help the economy to repay the money with a profit. Similarly, a surplus could be desirable if it generates higher returns than are available on domestic investments but could be undesirable if it comes at the expense of needed domestic production and investments. All told, without identifying the causes of the trade balance, we cannot say if it is good or bad.

MISCONCEPTION 2: TRADE BALANCES REFLECT TRADE POLICIES

President Trump blames US trade policies for America's trade deficits, and his administration believes that new trade policies and agreements that increase specific exports or protect particular industries at home will boost the trade balance. The head of the White House National Trade Council, Peter Navarro, has claimed that reducing a trade deficit through "tough, smart negotiations" is the way to increase net exports.[5] But, surprisingly perhaps, most economists would not place trade policies high on the list of why countries run trade deficits or surpluses over long periods of time. For trade agreements to affect net exports, they must necessarily either increase total US saving and/or reduce overall US investment. While trade policies can play an important role in increasing

3. Trump tweets: 'Trade wars are good, and easy to win'," Reuters, March 2, 2018.

4. Deficits could also reflect reductions in net foreign assets, and surpluses could involve repaying foreign debts.

5. Peter Navarro, "Why the White House Worries About Trade Deficits," *Wall Street Journal*, March 6, 2017.

the volume of trade, it is not sufficient to argue that trade negotiations and other trade policies will affect trade flows but also necessary to explain how they will change saving and investment.

Over the long run, however, the influence of trade policies on the trade balance is likely to be overshadowed by the more fundamental determinants of saving and investment.[6] These more fundamental determinants include income, wealth, demographics, and expected future income and interest rates in the case of private saving; tax revenues and government spending in the case of government saving; and

Over the long run, the influence of trade policies on the trade balance is likely to be overshadowed by the more fundamental determinants of saving and investment.

expectations about future profits and the costs of borrowing in the case of investment. However, the administration's trade narrative ignores the role of US private and public saving and investment in driving trade deficits in the past and fails to take account of the likely impact of its own tax and spending policies on the trade balance in the future.

Would a high trade barrier in a foreign market affect the US trade balance? Consider for example what happens when an unfair foreign competitor imposes a restrictive quota on imports of sugar. If binding, the quota could certainly reduce the quantity of sugar imported, but if foreign residents do not alter their saving or investment behavior—and it is not obvious why a sugar quota would induce such a change—in the long run the foreign country's trade balance would not be affected.[7] Rather than a smaller overall trade deficit, with no change in saving and investment, the quota would result in larger deficits in other components of the trade balance. One mechanism by which this would operate is through the exchange rate. If the country imports less sugar, its demand for foreign currency is likely to be reduced. This, in turn, is likely to strengthen its exchange rate, thereby making its exports more expensive in foreign markets and other imports relatively cheap at home. Therefore, in addition to reducing sugar imports, the quota could also reduce exports and increase its imports of other products.

While this example examines a trade restriction on just one product, it would still apply if, as the administration claims, foreigners adopted many such restrictions. As this example illustrates, while foreign trade policies such as domestic protection and export subsidies may well change the composition of US exports and imports unless saving and investment are altered, the potential impact on the trade balance is likely to be offset by changes in relative prices and exchange rates.

Nonetheless, the possibility that trade policies could affect the trade balance should not be totally ruled out, especially in the short run. If an economy has high levels of unemployment, for example, trade policies that increase exports or reduce imports *can* increase domestic employment and income. As long as this increased income boosts saving by more than it boosts investment, net exports could rise. But this is not a channel that would operate if the economy is at full employment—as is probably currently the case with the United States—and thus unable to meet the increased demand for exports or replace imports with additional domestic production. It is similarly possible that the trade balance could increase because of trade policy if the revenues from higher tariffs are saved or if trade policies or weaker exchange rates increase the profits and thus the savings of domestic firms by more than they stimulate investment.[8]

While the chain of causation that runs from the determinants of trade to saving and investment need to be considered, therefore, over the long run, saving and investment are more likely to reflect more fundamental determinants of spending than trade policies. In the case of the United States, determinants of spending have played an important role in trade deficits.

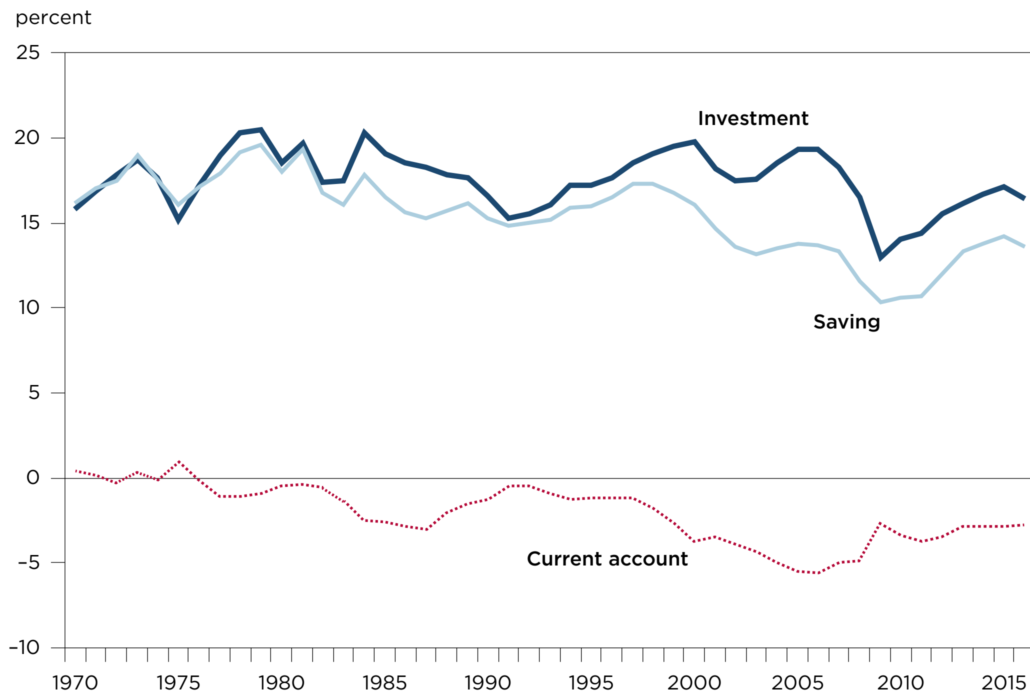
Figure 1 presents the data for US investment and saving and their difference (the trade balance, or current account) over the period 1970 to 2016. It shows that since the early 1970s, US domestic investment has been greater than domestic saving, and as a result the trade balance has been in deficit. In part fluctuations in the trade balance have reflected fluctuations in US investment, with net exports increasing and investment slumping in the recessions in the early 1980s, the early 2000s, and the financial crisis of 2008. But overall, investment has remained between 15 and 20 percent of GDP. By contrast, between 1982 and the financial crisis in 2008, while domestic saving has also fluctuated, it had a strong downward trend. In part the national saving declines resulted from the large federal budget deficits asso-

6. For more on the theory of why trade policies are unlikely to change the long-run trade balance, see Mankiw 2017, chapter 6.

7. Indeed, if the quota actually increased investment in the sugar industry, it could lead to larger rather than smaller trade deficits.

8. For a comprehensive survey of the current account from an intertemporal view, see Obstfeld and Rogoff (1995).

Figure 1 US current account balance, gross saving, and gross investment as a share of GDP: 1970–2016



Source: Table 1.1.10 US National Income Accounts, Bureau of Economic Analysis.

ciated with the tax cuts during the Reagan and the second Bush administrations and the budget deficits brought about by the financial crisis. While such policies have clearly had a major impact on the US trade balance, they surely have little to do with unfair foreign trade practices. In addition, the deficits reflect the long-run decline in the saving of US households from around 10 percent of GDP in the 1970s to around 5 percent in the mid-2000s—again, behavior that has little to do with US trade agreements.[9] All told, therefore, a host of developments that cannot be ascribed to US trade policies have had powerful impacts on the US trade balance.

In an economy close to or at full employment, negotiating new trade agreements is thus unlikely to increase net exports in the absence of other policies that increase US saving and/or reduce US investment. While the administration is trying to reduce the US trade deficit through its trade policies, it is especially ironic that rather than implementing policies that would increase private or public saving, the administration's other policies are likely to lead to larger trade deficits. These include tax cuts that are likely to reduce government saving and increase corporate and infrastructure investment. Unless American households become thriftier or the government runs smaller budget deficits, the United States could be better off borrowing from the rest of the world to fund profitable domestic investments, rather than run smaller trade deficits that require forgoing these opportunities.

This reasoning is particular relevant in the case of the current policy of renegotiating NAFTA to increase net exports. Peter Navarro has claimed that if America successfully negotiates bilateral trade deals these would reduce the overall US trade deficit, but he offers no explanation for how such negotiations would increase US saving or *reduce* US investment. Trying to reduce the aggregate trade deficit by reducing bilateral trade deficits without changing saving and investment is like squeezing the air in one part of a balloon. While the squeezing could create a dent in one place, it would simply redistribute the air to other parts of the balloon. If the United States maintains the same level of saving and investment, by definition the trade balance will not change.

The administration is seeking to renegotiate NAFTA because in 2016 the United States ran a $63 billion deficit in its trade with Mexico.[10] But suppose a new agreement could actually achieve balanced trade with Mexico. With no increase in US saving or decrease in domestic investment, buying fewer goods and services from Mexico will simply

9. For a comprehensive analysis of the decline in US saving see Bosworth (2012).

10. Bureau of Economic Analysis, https://bea.gov/international/index.htm (accessed March 8, 2018).

mean buying more goods and services from other trading partners. Similarly, with the US economy at full employment, selling more good and services to Mexico will simply mean selling fewer goods and services to the rest of the world. Moreover, if by discouraging offshoring, the new agreement actually increased investment in the United States as the administration claims it would, the result would be a larger rather than a smaller current account deficit.

Moreover, while renegotiating NAFTA is unlikely to affect the overall US trade balance in the long run, it could be very disruptive and cause considerable dislocation and job loss in the short run. It is well known that a tax on imported inputs can reduce exports. For example, placing tariffs on imported fabric will make clothing exports more expensive. As research by the Organization for Economic Cooperation and Development (OECD) and the WTO has underscored, products are "made in the world" using global value chains rather than manufactured entirely in just one country. Complex supply chains have evolved in North America between the United States and Mexico in products such as automobiles, aircraft, electronics, and clothing, with components often crossing the border many times as value is added in the production process. Indeed, over 60 percent of US merchandise imports are capital goods or components and parts rather than finished goods. New barriers to trade as advocated by the administration could therefore disrupt production and reduce rather than increase domestic employment in both the protected industries and those that use its outputs. The result could therefore be more rather than fewer US manufacturing workers losing their jobs.

MISCONCEPTION 3: TRADE DEFICITS ALWAYS LEAD TO JOB LOSS AND SLOWER GROWTH

Navarro has also claimed that an increase in net exports will by definition increase US growth.[11] But trade balances are outcomes—or what economists call endogenous variables—not causes. Outcomes can occur for a variety of reasons, and without identifying these basic reasons, it is impossible to infer what trade balances mean for either employment or growth.

Without knowing why imports are growing, for example, it is impossible to know the impact on domestic production and employment. Imports could increase (and net exports could decline) either because (a) there is an increase in domestic income, thereby increasing demand all round; or (b) the price of foreign products falls relative to domestic products. But these two example causes for increased imports will affect employment very differently. If the cause is higher domestic income, there will be more spending on both domestic and foreign products, and thus increased imports and a larger trade deficit will be positively associated with employment and growth. However, if the cause is a decline in the price of imported products relative to domestic products, increased imports *could* lead to fewer sales of domestic products, slower growth, and a decline in domestic employment.

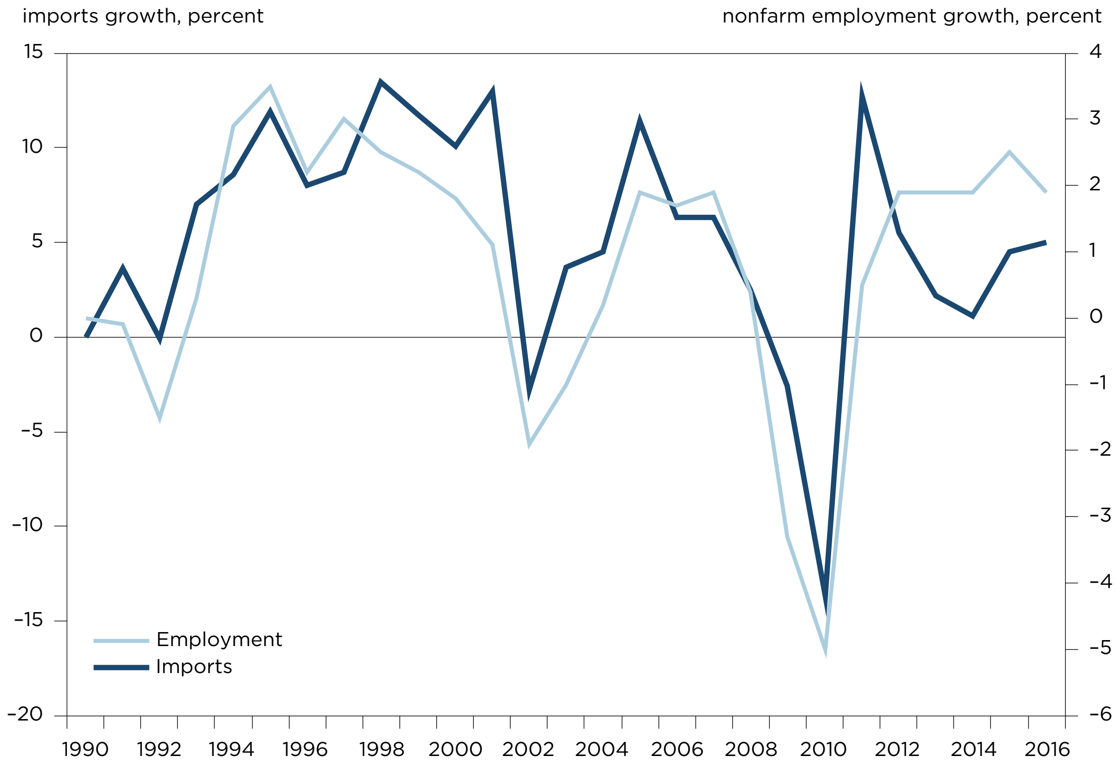
The automatic links between trade deficits, job loss, and slow growth presumed by Navarro are certainly not evident in the data. Figure 2 suggests that changes in income in the United States have dominated import growth, and so the association between imports and total domestic employment has been overwhelmingly positive. Similarly, figure 3 shows that, especially before 2009, smaller trade balances (i.e. larger deficits) were associated with faster US economic growth. While in theory the relationship between imports, trade deficits, and employment and growth could be positive or negative, in practice rapid import growth and larger trade deficits have generally been associated with faster employment growth and larger GDP gains in the United States.

As this discussion suggests, careful estimates of the impact of trade on employment should separate changes in import growth attributable to improved foreign competitiveness from changes due to increased domestic spending and production. It is however common practice for some analysts to simply add the domestic employment content of exports and subtract the domestic employment equivalence of imports. This faulty method has been used to estimate jobs lost and gained as a result of both the aggregate trade balance and bilateral balances with individual trading (see Scott 2017).

But these calculations can be highly misleading. For example, the United States currently has a trade deficit of over $500 billion. Yet as evidenced by the fact that the Federal Reserve is raising US interest rates, even taking discouraged workers into account, the economy is viewed as close to full employment. If this is the case, it is actually not possible to replace the deficit with domestic production, and thus the deficit is clearly a poor indicator of jobs that have actually been lost because of trade. Instead, the deficit simply indicates that Americans are buying more goods and services than the economy is able to produce at home, and the jobs being "lost" are not actual jobs, but jobs that would hypothetically be filled if the US spending rate were maintained and the domestic economy were able to produce more than it currently can.

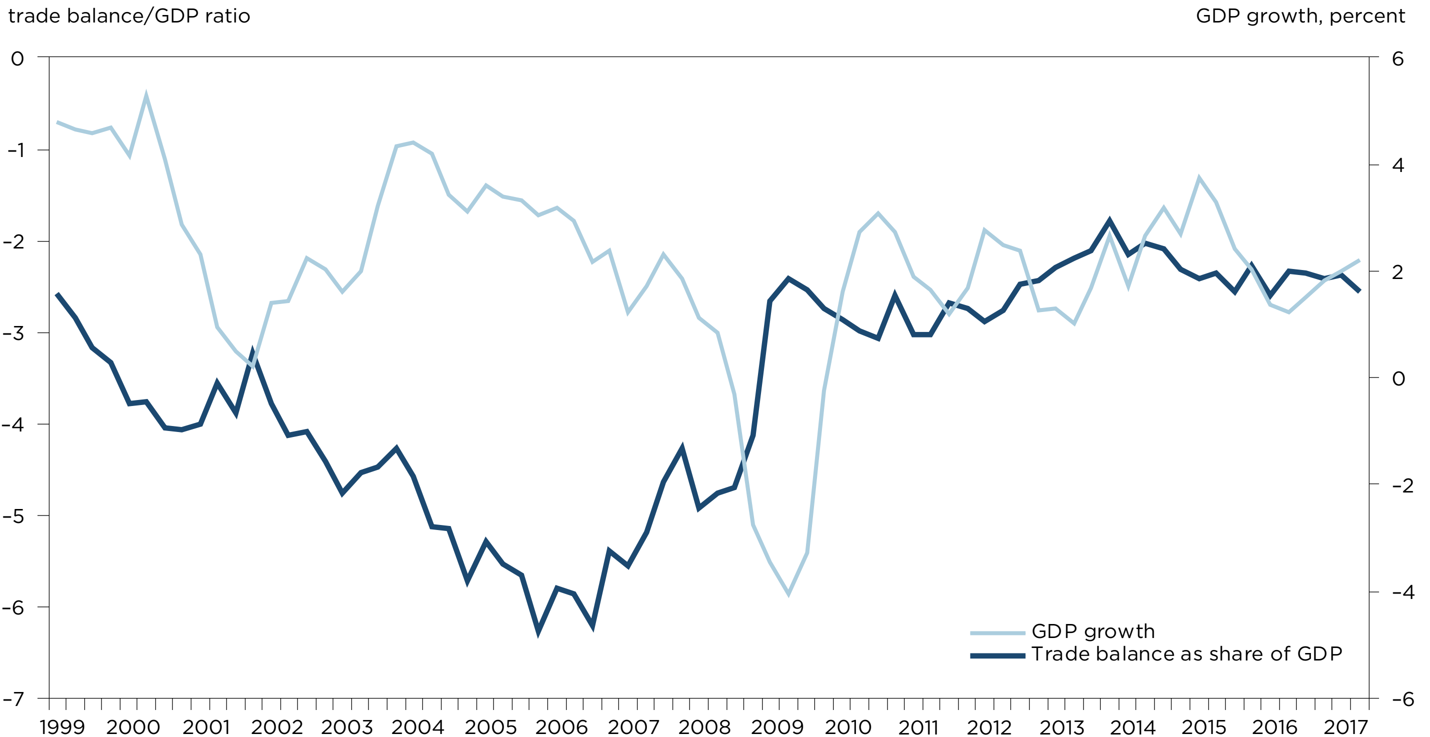
11. Peter Navarro, "Why the White House Worries About Trade Deficits," *Wall Street Journal*, March 6, 2017.

Figure 2 Relationship between US employment and imports (1990–2016)



Source: Bureau of Economic Analysis.

Figure 3 Relationship between US GDP growth and trade balance as a share of GDP (1999–2017)



Source: Bureau of Economic Analysis.

MISCONCEPTION 4: TRADE PERFORMANCE IS THE MOST IMPORTANT REASON FOR THE LONG-RUN DECLINE IN US EMPLOYMENT IN MANUFACTURING

In the Trump narrative the US trade deficit in international trade in manufactured goods is responsible for the decline in manufacturing employment experienced in recent decades. In his inaugural address Trump spoke about the "ravages of other countries making our products, stealing our companies, and destroying our jobs."

Distinguishing the causes of import growth is however crucial for understanding the role played by international trade in the decline in manufacturing employment. While undoubtedly trade has played a role in the painful loss of jobs that has devastated US communities in the Midwest and elsewhere, the evidence suggests it has been a much less important factor than Trump suggests.

A careful study by Acemoglu et al. (2016) separates determinants of import growth and, rather than claiming that all imports cause job loss, carefully estimates only the effects of increases in Chinese competitiveness on US manufacturing employment. The authors find that from 1999 to 2011, when US manufacturing employment declined by 5.5 million, the loss of manufacturing jobs attributable to imports from China amounted to about 1 million. This is a substantial impact, but their analysis also implies other factors have accounted for more than 80 percent of the job loss in manufacturing over the past decade.[12]

It is noteworthy that the share of US employment in manufacturing began declining in the 1960s, long before the economy was heavily exposed to trade, and that the declines in the share of manufacturing employment in industrial countries with large surpluses in manufacturing trade, such as Germany, Italy, and Japan, has been similar to the declines in the share of manufacturing employment in the United States and other countries with trade deficits.

This evidence suggests that most of the declining share of employment in US manufacturing reflects factors other than the trade deficit. The share of manufacturing employment in all major industrial countries, including those with large trade surpluses, has declined since the early 1970s. The primary reason for these declining shares has been rapid productivity growth coupled with demand that is relatively unresponsive to lower goods prices and higher incomes (Lawrence 2017). What has happened to employment in manufacturing is therefore quite similar to what happened earlier to employment in agriculture. Despite its trade surplus in agriculture, the United States employs far fewer farmers because demand for food has not kept pace with increased farm productivity.

MISCONCEPTION 5: BILATERAL TRADE BETWEEN COUNTRIES SHOULD BE BALANCED

One of the benefits of trade is it provides countries with the ability to buy from some partners and sell to others. The preference for balancing bilateral trade, as reflected in the Trump administration's perspective that having a trade deficit with Mexico is unfair, is as misplaced as would be a preference for an economy based on barter rather than on money. A monetary economy is superior to a barter economy because it does not require that both parties have exactly what the other wants, or "a double coincidence of wants." It allows individuals to specialize and earn money by running surpluses with their employers and then spending money on goods and services that meet their needs by running deficits with everyone else. By analogy, in not balancing trade bilaterally, a country reaps gains from trade by exporting to those nations that need the products in which it specializes, and then importing from other nations that produce the products best suited to its needs. If a bilateral free trade agreement allows a country to meet more of its needs by importing at lower costs from a particular partner, it will benefit, even if the value of these increased imports exceeds the value of the exports that it sells to that partner. In particular, US trade agreements with Mexico or Korea could be a success if they allow US consumers to buy goods at lower prices and/or higher quality than from other trading partners, even if the value of these goods is greater than US exports to these countries.

Judging the success or failure of a trade negotiation (e.g., NAFTA renegotiation) in terms of whether it will create a net trade surplus or a net trade deficit for the United States is simply wrongheaded. First of all, a trade agreement like NAFTA *cannot logically lead to a net trade surplus for all of the parties*. Some parties will find themselves with a resulting net trade deficit vis-à-vis other partners to the agreement. What if NAFTA renegotiation does not reduce or eliminate the US bilateral trade deficit with Mexico and/or Canada? Does this mean that they did not negotiate hard enough, or should have not participated in the trade pact? No, because the *objective of a trade pact is to allow all parties to use their resources more efficiently*, not to change the bilateral trade balances. Of course the United States should be forceful in trade negotiations to remove obstacles to the penetration of US goods and services, but this is because the United States would benefit if the economy operates as efficiently as possible, not because it will affect bilateral trade deficits.

12. In 2011, for example, US employment in manufacturing was 11.7 million. If the United States had replaced the manufacturing value added in its trade deficit with domestic value added, its manufacturing sector would have been 8.4 percent larger—translating to about 1.2 million jobs. This calculation relies on value-added data available from the OECD Trade in Value Added (TiVA) database (available at https://stats.oecd.org/index.aspx?queryid=75537, accessed March 6, 2018).

CONCLUSION: WHAT GOOD TRADE SHOULD FOCUS ON

The chain of causation posited by the Trump administration that runs from unfair trade and bad trade agreements, to large trade deficits, employment declines, and reductions in welfare and growth reflects flawed thinking. Over the long run, trade policies are not the most important cause of fluctuations in the trade balance; changes in the determinants of national saving and investment are. Moreover, the state of a nation's trade balance per se tells us very little about the health of its economy. Trying to achieve balanced trade (or surpluses) with individual trading partners will only generate distortions and constrain the diversity of goods for purchase while raising prices, with little or no benefit to national welfare.

Even though trade policies are unlikely to change the long-run trade balance, they are not unimportant. Americans will be better off if the United States can use trade negotiations to open foreign markets for its exports, not because more exports will increase the US trade surplus, but rather because US incomes will be higher if more US workers can be employed in the most efficient US firms that pay high wages, and if those firms can sell more exports at higher prices. Similarly, US living standards will be higher if the United States reduces its trade barriers at home because this will give consumers access to cheaper imports and make the economy more efficient. Ultimately, therefore, the goal of US trade policies should not be focused on trade balances but instead on eliminating trade barriers at home and abroad.

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Appendix A.4 The Cost of Leaving the Multilateral System

The Post-American World Economy

Globalization in the Trump Era

By Adam S. Posen for Foreign Affairs
March/April 2018 Issue

In the aftermath of World War II, the United States set about building a global, rules-based economic order. At the heart of that order, it put the liberal values of free trade and the rule of law. Over the next seven decades, the order, backed by U.S. power and bolstered by its growing legitimacy among other countries, prevented most economic disputes from escalating into mutually destructive trade wars, let alone military conflict. That allowed even the smallest and poorest countries to develop their social and economic potential without having to worry about predation by stronger neighbors. By taking much of the fear out of the global economy, the U.S.-led order allowed market decisions to be driven by business, not bullying.

Today, that order is under threat. U.S. President Donald Trump has rejected the idea that the world's economies all benefit when they play by the rules. Instead, he has decided that putting "America first" means withdrawing from supposedly bad deals, on which he believes the system is based. So far, Trump has failed to follow through on his most destructive ideas. But the damage has already begun to show. His administration has hobbled the World Trade Organization, encouraged China and other autocratic regimes to lean on their smaller neighbors for economic loyalty, undercut agreements on tax evasion and climate change, and pushed even major U.S. allies to negotiate free-trade and cross-border investment deals without the United States.

If the United States continues its retreat from economic leadership, it will impose serious pain on the rest of the world—and on itself. Unless the Trump administration chooses to launch a full-blown trade war, the consequences will not come immediately. But a sustained U.S. withdrawal will inevitably make economic growth slower and less certain. The resulting disorder will make the economic well-being of people around the world more vulnerable to political predation and conflict than it has been in decades.

WELCOME TO THE CLUB

One of the great lessons of economic history is that bullying is bad for prosperity. Good institutions—the rule of law, clear property rights, stable means of exchange, efficient tax collection, the provision of public goods, checks on official corruption—are the fundamental prerequisites for sustained economic growth. The benefits of such institutions should not be oversold. They do not lead inexorably to prosperity or

democratic freedom. But without them, long-term saving and investment, which form the backbone of growth, cannot be maintained.
The U.S.-led postwar order extended these kinds of institutions to the international economic sphere, at least in part. The best way to think about the rules-based order is as a club that promotes a common set of beliefs to which its members adhere: the ability to export to, import from, and invest in markets around the world should not be determined by military power or alliance structures; other countries' economic growth should be welcomed, not treated as a threat; property rights should be secure from invasion, expropriation, or theft; and technical knowledge should flow freely, subject to the enforcement of patents and trademarks. Together, these values provide the basis for sustained investment and business relationships, as well as household income growth.
The club offers some shared facilities, for which dues are collected. These start with the institutions founded at the Bretton Woods Conference in 1944—the International Monetary Fund (IMF), the World Bank, and what became the World Trade Organization (WTO)—but go far beyond them. The order maintains common systems for settling transactions, converting currencies, invoicing in widely accepted units, and applying tariffs and customs rules. It also establishes forums where experts can meet to discuss specialized topics and groups that set international standards, such as ICANN (the Internet Corporation for Assigned Names and Numbers). Critically, the club's facilities now include frameworks for settling international commercial disputes.
The club includes some mutual insurance against both man-made and natural disasters. In part, this takes the form of development assistance and emergency aid, which flow disproportionately to poorer members. But it also involves cooperation in the face of financial crises or economic depression, both of which can spread if the entire community does not work together to fix problems, even if they initially affect only one member. The liquidity provided by the U.S. Federal Reserve in emergencies is essential to such financial firefighting.
The club analogy is not perfect. Although the members are nation-states, underlying each state are millions of people, households, and businesses. These, not the states' rulers, are the ultimate beneficiaries of the global economic order. That is what gives the liberal order its ethical weight.

LEADING FROM THE MIDDLE

All these attributes are in large part the result of U.S. leadership. But if the United States chairs the club, that does not mean it can issue commands or demand loyalty. Washington cannot force a state to become a member; it can only make membership more attractive than remaining outside the club. Nor can it easily restrict what a member government does within its own country or in areas outside of the order's agreed values, short of issuing a credible threat to kick that country out of the system. But if such threats come too often or seem too arbitrary, then other members will fear for their own status and band together to resist U.S. pressure. Finally, the United States can collect club dues only to the degree that members think that membership is worth it and that others are paying roughly their fair share.
This reality contradicts the widespread but misguided belief that the United States provides global public goods while others free-ride, let alone Trump's view that the global system has played American voters for fools. In reality, the United States supplies by itself only two essential aspects of the economic order. First, Washington extends an umbrella of security guarantees and nuclear deterrence over U.S. allies. Second, the U.S. military ensures free navigation of the seas and airspace for

commerce, subject to some international rules that are largely set by the United States. Both of these are classic public goods in that one actor, the United States, provides them, and can do so essentially on its own, and every country benefits, whether or not it contributes.
In fact, when it comes to the rest of the order's institutions and benefits, the United States has often been the one free-riding in recent years. It has frequently failed to pay its dues to international organizations on time, as others do. It has spent a far smaller share of its GDP on aid than other wealthy countries. It has failed to respond adequately to climate change, even as other countries have begun to shift toward greener growth. It has behaved irresponsibly by excessively deregulating its financial system and its mortgage market, despite pressuring other countries to curtail their own growth for the sake of stability.
This reality is the opposite of the concern voiced by Trump's "America first" slogan. The United States has been given a pass on many responsibilities precisely because it leads the system and other countries want it to keep doing so.
So far, the benefits of U.S. leadership have been large enough that other countries are willing to ignore a certain amount of hypocrisy. But at some point, if the United States goes from occasional free-riding to ostentatiously violating the rules, the system itself will be imperiled. The United States has to want to lead, and the other members have to want it to do so.
Thus, U.S. leadership is not the inevitable result of the relative size of the U.S. economy and the U.S. military. Over the last 70 years, it has persisted even as the share of the world economy made up by the U.S. economy has shrunk from 50 percent to 25 percent. Policymakers should not fear that China or the EU will replace Washington as the global economic leader as their economies surpass that of the United States. So long as the U.S. economy remains very large (which it will) and at the technological frontier (which it probably will), and the United States maintains its commitment to globally attractive values, the country will be capable of remaining the leader.
It is a tribute to the appeal of the liberal rules-based order—and to Washington's ability to position itself as at least better than the alternative—that U.S. leadership has retained such indulgent support.

DO THEY REALLY MEAN IT ?

Washington's retreat will not immediately send the world into recession. Unless the Trump administration decides to mount an actual trade war with China or Mexico, it may not even do any obvious harm over the next year or two. This is partly because even major economic policies take time to affect economies as a whole. It is also because the global economy is in the midst of an extremely broad and balanced recovery. That breadth makes the current expansion the most resilient of any since at least the 1980s. All the engines of the world economy are running well, mostly without overreliance on debt in either the private or the public sector.
Other countries are also mostly taking a wait-and-see approach to Trump's threats to the global economic system. The administration's National Security Strategy, which was released in December, challenges almost all the fundamental aspects of the United States' global role and the values that the country has professed for the last 70 years. It breaks down the wall between economics and national security and explicitly commits the U.S. government to bilateral bullying instead of enforcing and obeying the rules. Advancing what it calls "principled realism," the strategy promises to "integrate all elements of America's national power—political, economic, and

military.” The United States will “pursue bilateral trade agreements” rather than broad ones, a recipe for economic coercion rather than cooperation.

Some skepticism over the Trump administration’s course is justified, since past administrations have rarely followed any stated strategy consistently. What is more, even if the document does reflect Trump’s intentions, a number of factors—the midterm elections later this year, unexpected developments from the ongoing investigations into possible coordination between the Trump campaign and the Russian government, pushback from Congress, even reasoned persuasion by the president’s economic advisers and world leaders—could stop the administration from following this mistaken path.

If that strategy really does guide U.S. policy, however, then it will do serious harm. The United States would restrict access to its market in a variety of arbitrary ways, by blocking foreign investment, withdrawing from trade agreements, imposing “buy American” restrictions on government purchases, and politicizing financial supervision and access to international payments systems. Inevitably, given greater political discretion over the economy, some U.S. politicians will demand payments, perhaps even bribes, from companies for proceeding with normal commercial transactions. All but the last already occur to some limited degree, but successive U.S. administrations since World War II have pushed against these tendencies at home and abroad. Reversing that approach would hurt the United States’ economic productivity and its citizens’ purchasing power. At least as important, it wouldn’t stop there. Adopting such policies would encourage autocrats to follow suit and even democratic allies to retaliate in kind.

Finally, the extent of the damage will depend on how willing and able other governments are to uphold the values and structures of the current system: China and the EU, primarily, but also other major economies that have long supported the rules-based order, such as Australia, Canada, Japan, and Mexico. In all likelihood, there will be no immediate disaster, because the system offers benefits to members who voluntarily comply with its rules. Even without the United States, almost all the other members of the order still publicly subscribe to its stated values: open markets, equal treatment of all members for economic purposes, and the peaceful settlement of disputes.

Some of the shift away from U.S. economic leadership predates the Trump administration. Since the global financial crisis, widespread disdain has emerged for the excesses of turbocharged Anglo-American financialized capitalism, especially its unfettered speculative flows and unchecked accumulation of private wealth. In many countries, this backlash has led to greater tolerance for state-owned enterprises (reinforced by China’s example of state-led growth), the protection of special interests from trade competition, and the promotion of companies with their headquarters in their home country as national champions. All of these can have positive effects in moderation, but the current trend is likely to go too far without the restraint that comes when the United States enforces the rules. Even under the Obama administration, the United States was slow to put new issues, such as women’s empowerment, refugee resettlement, Internet privacy, and environmental concerns, on the international agenda. Yet the best way to deal with these issues would be to bring other countries’ concerns about the United States’ errors to a discussion at the G-20. For other countries to give up on U.S. leadership, let alone for the United States itself to abandon the system, would only worsen these problems.

The most immediate response to the Trump administration’s retreat has come on trade. The prospect of the United States’ withdrawal from the global trading system has spurred several large economies to conclude bilateral or regional trade

agreements. In the past year, the EU has all but concluded substantive trade deals with Canada, Japan, Singapore, and Vietnam, and it has accelerated negotiations with Mexico and the South American trading bloc Mercosur. With surprising speed, the 11 nations remaining in the Trans-Pacific Partnership after the United States withdrew in early 2017 have moved forward with much of the agreement, with Australia and Japan taking the lead. Regional trade talks in Asia and Africa involving China and negotiations among Latin American countries have also gained pace; although these types of negotiations tend to result in lower-quality agreements that would allow only limited liberalization and resolve few regulatory issues, they will divert trade from elsewhere, including the United States.

The Trump administration has begun attacking international institutions from NATO to the UN. By blocking the appointment of new trade-dispute judges to sit on the WTO's seven-member appellate body, the administration is preventing the WTO from functioning normally. Here, the rest of the world has been slower to respond. A few world leaders, such as Argentine President Mauricio Macri, who defended the WTO at the organization's biennial meeting in December, have spoken out. Canada has filed a WTO case against the many unilateral trade measures the Trump administration is pursuing, which may set a precedent for action by other countries. But most have remained silent, possibly because they do not wish to provoke Trump into directly withdrawing from or further attacking the organization.

Some nontrade aspects of the liberal rules-based order can continue to function in the absence of U.S. leadership. Most institutions and forums will not work as well, or as consistently, or as adaptably, but they will persist. The systems that allow international financial cooperation have been largely spared from attack so far, in part because of the Federal Reserve's legal independence. Yet without U.S. leadership, even these regimes will be vulnerable to future economic shocks. In the event of a major downturn, large countries will likely fail to act together if the United States does not contribute. The system is not designed to withstand a full-on assault by Washington. If Trump wants to tear down the order, it will be difficult for other countries to limit the damage.

BEGGAR-THY-NEIGHBOR

Left-wing critics of the U.S.-led liberal economic order often argue that the system encourages countries to race to the bottom, exploiting poorer populations along the way. This criticism has particular merit when it comes to environmental protections and labor rights, areas in which the United States does not do enough domestically and so lowers global standards. But until recently, a combination of peer pressure and formal agreements encouraged by the United States had increasingly limited the extent to which countries undercut one another. Over the last decade, international efforts, led in part by the Obama administration working through the G-20, had begun to rein in two of the most pernicious beggar-thy-neighbor policies, currency manipulation and the creation of tax havens.

If the U.S. government walks away from its leadership role, this picture will change dramatically. Today, tax competition largely takes the form of constructive pressure to bring rates and coverage somewhat in line with those of comparable economies. The United States, along with some other countries, is disadvantaged under the current system, but only international cooperation has a hope of plugging the holes rather than just driving every country's revenues down. If the United States tries unilaterally to use its tax code to attract corporate headquarters away from other countries, the incentives to race to the bottom by allowing tax evasion will strengthen. The tax bill signed by Trump in December has many complex provisions,

but overall, it appears to privilege domestic production in a way likely to both reduce economic efficiency and promote tax conflict internationally.
More broadly, either opportunistic multinational companies will pit countries against one another as governments compete to attract jobs or countries will designate national champions that will demand protection and subsidies. Either way, companies' shareholders will capture more of national incomes, shifting resources away from individual taxpayers and workers and shrinking governments' abilities to deal with social issues and invest in long-term projects. Beggar-thy-neighbor policies will beggar everyone.
Another goal of the postwar liberal order was to give the governments of developing countries a voice. Global governance has never been truly equal; the United States and other major countries have always played a dominant role. And deadlock often stymies institutions in which all member countries have an equal vote, such as at the WTO. But the IMF, the World Bank, and other multilateral development institutions have generally applied consistent criteria across countries when apportioning lending and aid, authorized by their collective membership.
In contrast, in a world in which national security links and bilateral relationships displace general rules and multilateral institutions, aid and crisis financing will grow increasingly politicized. Whether a developing country gets access to financing might come to depend on whether it sits inside a major country's sphere of influence and is willing to accept (or unable to resist) political domination by that country. The IMF and the World Bank will remain, but without backing from rich countries, they will likely not be able to counterbalance this kind of politicization in large parts of the world.
To avoid facing such political pressures, many emerging-market countries will make renewed attempts to hedge against situations in which they need assistance by keeping larger currency reserves, even if that comes at the cost of domestic investment. They will also try to secure patrons who will promise them relatively unconditional assistance when it is needed. With those promises in hand, countries will have less need of help from international institutions and thus will be more willing to keep international monitors out of their decisions. This combination will make financial crises more frequent and, by interfering with international cleanup efforts, more likely to do lasting political and economic damage. The division between middle-income countries and countries that remain poor will grow even starker as inconsistencies in the system will hurt the poorest and smallest countries the most.

THE POST-REALITY ECONOMY

Less obvious but no less destructive effects of the U.S. withdrawal from economic leadership will come on the macroeconomic side. These have begun with recent efforts to compromise economic statistics. The United States has always taken pride in the fact that it relies on independent agencies to report data about its economy. That has allowed it to press other countries to disclose information properly and promptly, given rise to a set of definitions and techniques to help them do so, and created the basis for formal agreements on economic surveillance among technocrats. Objective, standardized economic data allow policymakers to adjust their policies based on more than gut feelings or salesmanship. The Organization for Economic Cooperation and Development and the IMF, with strong support from the United States, help develop and maintain this statistical regime; their regular reports on member countries' policies and performance give voters and investors independent expert assessments to consider.

Yet over the past year, British and U.S. politicians have begun to disparage their own technocrats' findings. In London, government ministers have dismissed official agencies' skeptical analyses of Brexit, and in Washington, Republican members of Congress have rejected legally required assessments of legislation by the Congressional Budget Office and the Joint Committee on Taxation. In some cases, they have even attempted to prevent analyses and data from being released to the public. Politicians will always present numbers in a rosy light and push back against criticism, often with some justification. But when they demand loyalty over objectivity and suppress findings they do not like, they legitimate tactics that were once the preserve of autocrats. Other self-interested politicians will follow this lead. It is impossible to put a number on the damage this could do by allowing wrong-headed policies, distorting and deterring investment by raising uncertainty, and reducing the ability of publics to hold their governments accountable.

As the United States turns away from the liberal rules-based order and economic decisions grow more intertwined with political power, uncertainty will rise and returns on investment will fall. Governments will work to trap investment at home, either to create domestic jobs or to fund a corrupt political system. Those efforts will always come at an economic cost. If they did not, governments would not have to prevent money from flowing abroad. Policies that restrict foreigners' ability to invest in a particular country are more of a mixed bag. Limits on some kinds of foreign investment can help prevent destabilizing surges of capital into and out of economies. But such policies can easily go too far since foreign direct investment brings a wide range of benefits for advanced and developing economies alike.

If governments begin to restrict capital flows, investors will find it harder to diversify their investments across the global economy. That will expose households and businesses to greater losses from volatility within their particular country or region. Laws that make it more difficult for households to get their savings into or out of an economy will reduce the level of investment and shift it toward more liquid assets, such as cash and government bonds. Worthwhile business ventures will struggle to raise capital.

Wealthy but aging societies in Europe, North America, and Northeast Asia need to invest in growing emerging-market countries to sustain their retirement incomes. Emerging economies need investment from wealthier countries to build roads, bridges, and hospitals; develop Internet and other communications networks; and train doctors, teachers, and other professionals. But if politicians and national security threats interfere with investment between countries or among different sectors of the economy, that win-win exchange will become more tenuous, leaving both retirees and workers around the world worse off.

TRADE ON

The international free-trade regime forms the most visible—and the most reviled—aspect of the postwar economic order. But it is here that U.S. withdrawal might actually do the least harm. The United States is more dispensable to the rules-based trading regime than it is in other economic spheres, and the other major trading countries are responding to U.S. withdrawal by deepening their own trade agreements. International trade has persisted throughout recorded human history, even when some global economies have left the system (as China did from the mid-fifteenth century to the mid-eighteenth century, Japan did from the mid-seventeenth century to the mid-nineteenth century, and the Soviet Union did throughout its existence). Trade can be limited, but never completely squelched.

U.S. withdrawal will still hurt. Countries have already begun to shift their trade flows, supply chains, and business relations away from the U.S. market. This process will only accelerate as the United States retreats. Although the U.S. economy's sheer size will make it impossible for other countries to completely divert trade around it, that size will also worsen the global economic losses from the United States' withdrawal.

If the United States entirely abandons the global free-trade system, the result will be a massive reduction in the size of global markets. That would leave consumers with less variety and worse quality in the products they buy, leave companies less able to take advantage of economies of scale, and leave countries more likely to diverge from the common technologies and standards that make modern life possible. Global competition would wither. The United States itself would suffer as companies pursued opportunities in places where new trade deals expanded markets and the politics were more favorable. Among the biggest losers would be Americans themselves, as they would soon pay more than they do now for almost everything and miss out on the new jobs and growth that would otherwise have come from the rise of developing economies.

As the leader of the global economic order, the United States has, albeit insufficiently, pushed to enshrine tougher standards for anticorruption, environmental protection, and human rights in major trade deals such as the Trans-Pacific Partnership. There is still room for improvement, but trade deals without the United States, especially those that include China but not the EU, will likely score far worse on all these counts. Even the EU may compromise more readily than before when it becomes the leading high-income economy in the global trading system. Without the United States to counterbalance it, Brussels will be tempted to sell out its values for economic gain. It may restrict the spread of biotechnologies and agricultural innovations, as many EU countries have an anti-science opposition to them; attempt to split up the Internet in order to advantage European companies in search, shopping, and social networking; and acquiesce to demands from Beijing to transfer militarily useful technology or recognize its territorial claims in return for preferential access to Chinese markets. The United States has sometimes failed to stand on principle on these matters, but U.S. leadership with European support remains the only way to make any progress on such issues. Otherwise, the incentives for each major economy will be to pander and compromise.

THE HOUSE THAT WE BUILT

The United States has at times failed to live up to its ideals as the leader of the liberal economic system. That failure has grown more frequent since 9/11, as many Americans have felt threatened by the growth of terrorism and the economic rise of China. That trend also reflects a recurrent nativism in the U.S. electorate and Congress that predates—and contributed to—Trump's election. The United States has played too dominant a role in some areas of global economic discussion and been reluctant to allow other countries to help set the agenda, partly in an effort to pander to domestic nationalists by maintaining the symbolism of dominance. But far worse than a lackluster leader is one that abandons its role altogether or even works actively to subvert the system's values. A return to bullying would only harm economic growth.

The United States' motivation for building the postwar economic system was as much preventing conflict as promoting growth. In setting out the rules by which all members would conduct business, the architects of the system hoped to separate economic from military competition. U.S. withdrawal need not result in economic or physical wars, but it will raise the risk of stumbling into conflict by accident. Without

agreed-on rules, even minor economic disputes have the potential to set off escalating counterattacks. If the norm of separation between economic and military confrontations breaks down, economic frictions, such as Chinese theft of intellectual property or restrictions on trade with a nuclear Iran or North Korea, could turn into outright conflict.

It is plausible that as the United States retreats and thereby weakens its economy, the Trump administration will blame the economic damage not on its own actions but on foreign governments, creating a self-perpetuating cycle of anger. When other major countries step forward to preserve the open economic order, or defend themselves against U.S. economic aggression, Washington may interpret that as an attack on U.S. primacy. The Trump administration might even misinterpret the current forbearance by China or the EU as a sign of weakness and an invitation to escalate confrontations.

Today, a smaller share of the world's population than ever lives in poverty, and a larger share than ever lives a middle-class existence. This is not solely the result of China's astonishing rise. In Chile, Ethiopia, India, Indonesia, South Korea, Vietnam, and the countries of the former Soviet Union, economic growth has brought hundreds of millions of people out of what amounted to subsistence or little better. This miracle took place without conquest or even much conflict, and with greater protections for private property and human rights than ever before. The liberal order constructed and led by the United States made such progress possible by giving countries, businesses, and individuals the opportunity to build their economic lives without fear of a foreign power taking away what they had made. That U.S. leadership has not, as some have charged, hurt the United States. The country's rampant inequality and wage stagnation are largely the result of domestic political choices and failures. A world in which the United States ceases to lead—or, worse still, attacks—the system it built will be poorer, nastier, less fair, and more dangerous for everyone.

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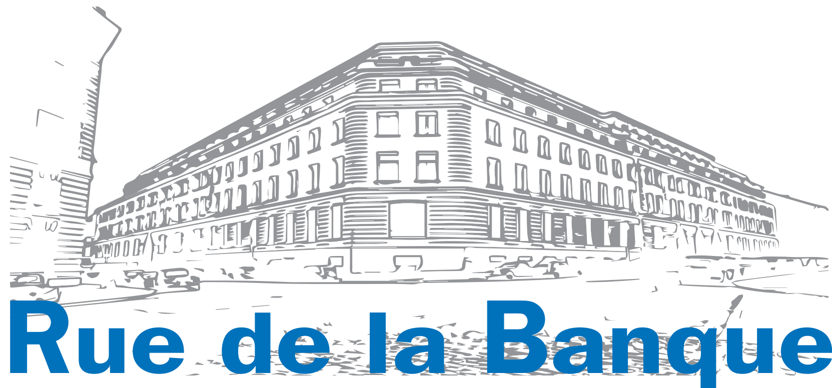

Rue de la Banque
No. 57 ■ February 2018

The impact of Chinese import competition on the local structure of employment and wages in France

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How has competition from Chinese exports affected the French labour market? This article aims to answer this question by exploiting the variation in exposure to competition from China across employment zones. The results suggest that around 13% of the decline in manufacturing employment in France from 2001 to 2007 is due to Chinese competition. The adverse effect on hourly wages is uniform along the wage distribution in the manufacturing sector, and concentrated in the middle of the distribution in the other sectors. The impact on the lowest wages is small, probably as a result of the lower limit set by the statutory minimum wage. The estimated impacts, albeit negative, do not necessarily imply that trade with China has not been generally beneficial. An assessment in terms of welfare would require the measurement of gains to consumers and firms that use imported intermediate goods – and whose productivity gains also ultimately benefit consumers.

This Rue de la Banque *presents the findings of research carried out at the Banque de France. The views expressed in this post are those of the authors and do not necessarily reflect the position of the Banque de France. Any errors or omissions are the responsibility of the authors.*

The emergence of China as an industrial and trading power

The impact of heightened import competition from low-wage countries on manufacturing sector employment and wage inequalities is subject to intense debate in developed countries; and China is a key player among emerging countries. In the space of a decade (1998-2008), it increased its share of global exports from 3.3% to 9.5%. Chart 1 shows France's imports and balance of trade vis-à-vis China and a range of low-cost countries. The particular nature of trade relations between France and China not only results from the high growth rate of Chinese exports to France (see Chart 1a) but also from a substantial deficit in France's balance of trade (see Chart 1b).[1]

Assessing the local impacts of a global shock

The aim of this *Rue de la Banque*, which is derived from Malgouyres (2016), is to estimate the effect of the huge surge in Chinese import competition on the local structure of employment and wage inequalities in employment zones in France.[2] It follows the same empirical strategy as that applied by Autor et al. (2013) but also draws on the wealth of French data to assess the impact of this shock not only on employment and the average wage but also the impact along the wage distributions and on the type of jobs affected.

The empirical strategy consists in exploiting the fact that (i) changes in productivity and Chinese exports are highly heterogeneous across industries within the

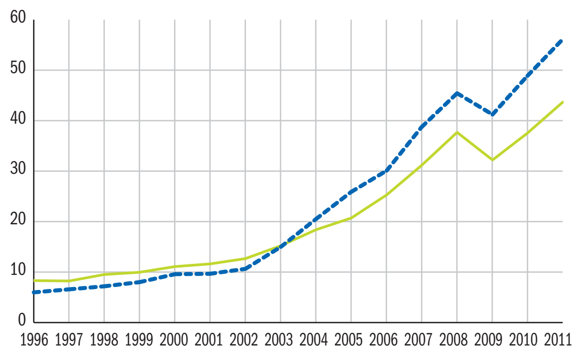
1 We can also see a clear acceleration from 2001 when China joined the World Trade Organization.

2 An employment zone is a geographical area within which most of the labour force lives and works and firms can find the majority of the workforce needed to fill the jobs on offer. Dividing France into employment zones provides a suitable breakdown for the analysis of the local functioning of the labour market.

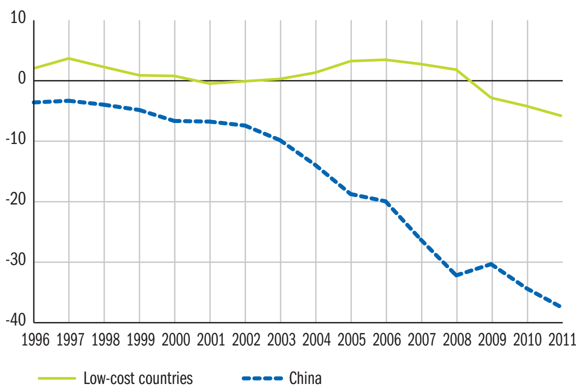
C1 France's imports and balance of trade vis-à-vis China and other low-cost countries

(in current USD billions)

a) Imports



b) Balance of trade

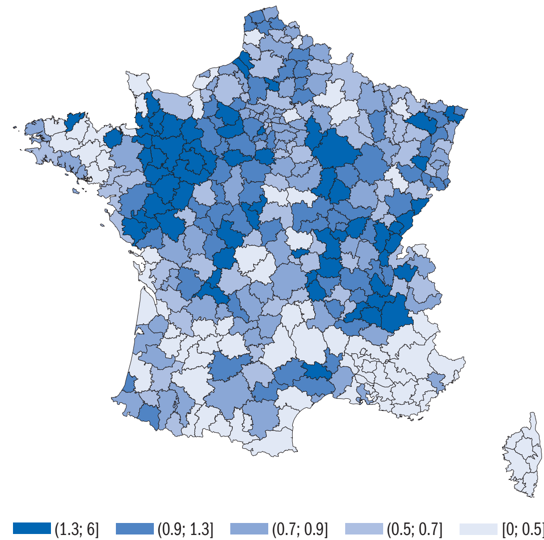


Source: Malgouyres (2016).

manufacturing sector[3] and (ii) there is a significant variation in manufacturing specialisation between different employment zones in France. As a result, the rapid surge in Chinese competition will affect employment zones differently depending on their initial specialisation.

By interacting the initial industrial composition at the local level with sectoral imports at the national level, we calculate an index of exposure to Chinese import competition. This index captures the value of imports per worker that each employment zone faces. It varies depending on the initial share and the local specialisation of the manufacturing sector. Chart 2 shows the share of the change in this index during the 2001 to 2007 period, which is attributable to differences in specialisation within the manufacturing sector of each employment zone for the whole of metropolitan France. We find that the changes are highly heterogeneous between employment zones. We will use this geographical variation to assess the effect of Chinese competition on local labour market outcomes.

C2 Development of exposure to Chinese import competition in the different employment zones (2001 to 2007)



Source: Malgouyres (2016).
Note: The employment zones are classified into five categories by shades of blue, with zones where Chinese competition was most intense between 2001 and 2007 represented by the deepest blue (max. [1.3, 6] = USD 1,300 to USD 6,000 per job in the manufacturing sector).

Significant effects on manufacturing employment

We first consider the effects on local employment. Chart 3 shows the relationship between local employment growth (y-axis) and changes in the index of exposure to Chinese import competition (x-axis) between 1995 and 2007. We find a strong negative relationship in regard to manufacturing sector employment (see Chart 3a). We also find a negative, albeit weaker, relationship between growth in non-manufacturing sector employment and changes in the index of exposure to Chinese import competition (see Chart 3b).

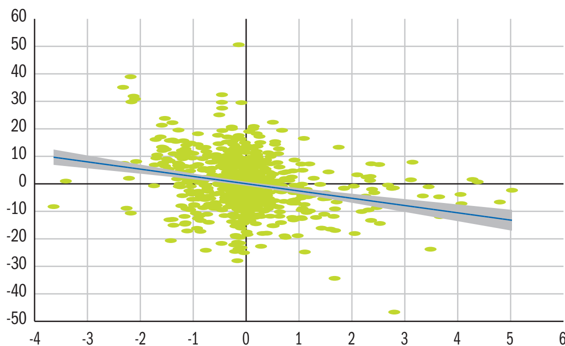
The econometric analysis confirms the negative correlation illustrated in Chart 3. The results for the manufacturing sector suggest that the average increase in import competition between 2001 and 2007 – of approximately USD 1,000 per worker – caused a drop in local employment growth of around 6 percentage points.

3 *For example, growth in Chinese exports has been particularly strong in the textile and clothing industries, as well as in toy manufacturing, but has been relatively limited in the chemical, pharmaceutical and food products industries.*

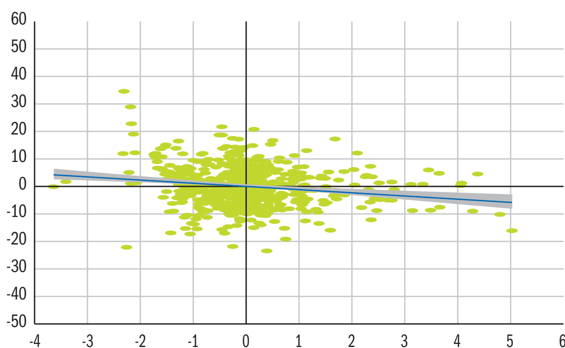
C3 Relationship between local employment and Chinese import competition (1995 to 2007)

(x-axis : change in index of exposure to Chinese import competition; y-axis : employment growth rate in %)

a) Manufacturing sector



b) Non-tradable sector



Source: Malgouyres (2016).
Note: Each point corresponds to an employment zone for a given period (1995 to 2001 and 2001 to 2007). Variables are expressed as deviations from the period average. The non-tradable sector excludes public and parapublic-sector employment.

The presence of multiplier effects

The effects on the non-manufacturing sector are less pronounced but they are nonetheless far from negligible and are statistically significant. The average increase in Chinese competition from 2001 to 2007 was associated with a 3.5 percentage-point decrease in local, non-manufacturing sector employment. These adverse effects on a category of jobs often considered to be sheltered from international competition confirm the presence of significant "local multiplier" effects (Moretti, 2010).

The non-manufacturing sector is largely made up of businesses whose production is not exportable and that depend heavily on local demand. In simplified terms, the negative shock to the manufacturing sector caused by the increase in Chinese competition propagates to the local non-export sector through at least two channels. First, the shock results in a drop in local demand, which should exert downward pressure on employment in the non-export sector. Second, the decline in manufacturing employment at the local level – in the absence of perfect spatial mobility of the workforce – should lead to a positive labour supply shock to the non-export sector. The estimated impact results from the combined effects of these two channels. Our results suggest that over a horizon of six years, for every ten jobs destroyed in the manufacturing sector, around six are lost in the non-tradable sector.

What is the aggregate impact on employment in France?

Assessing the aggregate impact of trade with China on employment in France using estimates based on local variation across employment zones is problematic. Indeed, the estimated impacts are relative: the decline in manufacturing employment has been faster in the most exposed employment zones than in the least exposed zones. But it is possible that through general equilibrium effects, the less exposed zones have benefited from the other zones' exposure. A potentially significant general equilibrium channel is the reallocation of workers between employment zones. If, for example, the contraction of the manufacturing sector in a badly affected employment zone leads to the out-migration of the workforce from that zone to another, it is possible that the estimated local impacts are more severe than the aggregate impact.[4] Chinese competition, in a borderline case, would have therefore simply led to the redistribution of jobs between zones, with no aggregate impact. Nevertheless, this adjustment margin plausibly implies a drop in the population of the areas directly affected by heightened Chinese competition, which is not observed.

We perform a simple quantification exercise based on the assumption that the general equilibrium effects between zones cancel out in order to isolate the share of the growth in Chinese exports to France that is due to the expansion of Chinese competition rather than changes in French demand. It is estimated that between 2001 and 2007, 90,000 jobs were lost in the manufacturing sector and a further 190,000 jobs were lost in the non-manufacturing sector as a result of Chinese competition. This represents around 13% of the decline in manufacturing-sector employment over the same period. This is lower than

4 It should also be noted that the growth in exports to China has created jobs in other sectors, even though additional results based on net trade suggest that this effect is probably small in scale.

the figure calculated by Autor et al. (2013) for the United States, where the impact was estimated at around 50%, but significantly higher than in other European countries, particularly Germany, whose industrial base counts a smaller proportion of sectors in which China's comparative advantage most rapidly took hold (Dauth et al., 2013).

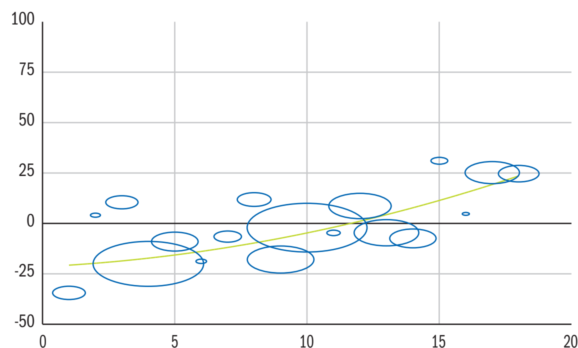
Job polarisation

In addition to its impact on the number of jobs, how does Chinese competition affect the employment structure? The French labour market, like the labour markets of other advanced economies, has undergone a process of job polarisation (Goos et al., 2014). "Polarisation" refers to the disproportionate growth in jobs within occupations that are traditionally at either extreme of the wage distribution, relative to jobs situated in the middle. Chart 4 shows that job polarisation between 1995 and 2007 mainly took place in the non-manufacturing sector whereas in the manufacturing sector, we can see a decreasing monotonic relationship between the reverse initial wage rank and employment growth of an occupation.

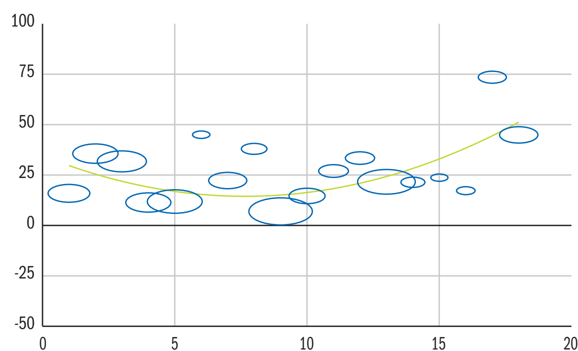
C4 Labour market polarisation in France from 1995 to 2007

(x-axis : reversed ranking of occupation based on average wages in 1995; y-axis : employment growth rate in %)

a) Manufacturing sector



b) Non-tradable sector



Source: Malgouyres (2016).
Note: Each point corresponds to an occupation. The size of the circle is proportional to the total number of jobs within an occupation in 1995.

By tailoring the method developed by Juhn et al. (1993), we find that in contrast to the aggregate trends observed, the surge in Chinese competition has contributed to polarising employment within the manufacturing sector, but not in the non-tradable sector.

Adverse – though differentiated – effects on wages

The theoretical literature on the effects of international trade on the relative remuneration of factors of production is extensive and long-standing. The standard models show that although international trade generates aggregate gains, trade openness does not generally lead to a Pareto improvement. Heckscher-Ohlin-Samuelson (HOS) type models, for example, predict that trade openness increases the remuneration for the relatively abundant factors in each country at the expense of relatively scarce factors of production. In a country where skilled labour is relatively abundant such as France, this therefore implies an inegalitarian effect that would result in a rise in the relative wages of the skilled workforce. More recent research – both theoretical and empirical – shows that where in the presence of firm heterogeneity, trade is likely to amplify residual inequalities, i.e. inequalities that are not explained by observable variables such as education or occupational status.[5]

Chart 5 shows the estimated impact on hourly wages for different percentiles of the wage distribution. We observe an average negative impact in the manufacturing sector. This finding conflicts with the results of Autor et al. (2013), who concluded that wages in this sector were unaffected.[6] The effect is relatively uniform along the wage distribution in the manufacturing sector. In the non-tradable sector, the average impact is weaker and wage effects are concentrated in the middle of the wage distribution.

Consequently, we find that the shock at the local level is associated with an increase in inequalities at the upper end of the wage distribution – the ratio of the

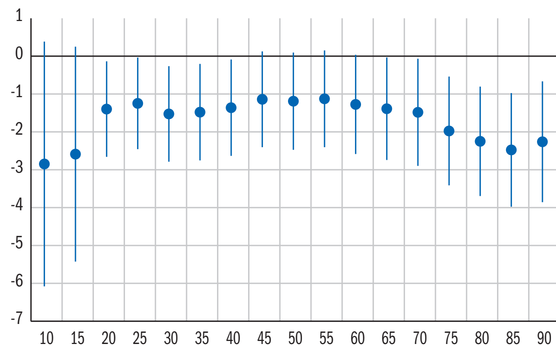
5 *For example, Amiti and Davis (2012) show that trade liberalisation in Indonesia magnified wage dispersion by generating salary increases for workers at exporting and importing firms while reducing salaries in firms that only operated in the domestic market. See Harrison et al. (2011) for a recent review of the relationship between globalisation and inequality.*

6 *It should be noted that the estimated negative impact is not incompatible with the existence of downward wage rigidities in that it can simply be due to a smaller, though nevertheless positive, increase in wages or a cut in starting salaries.*

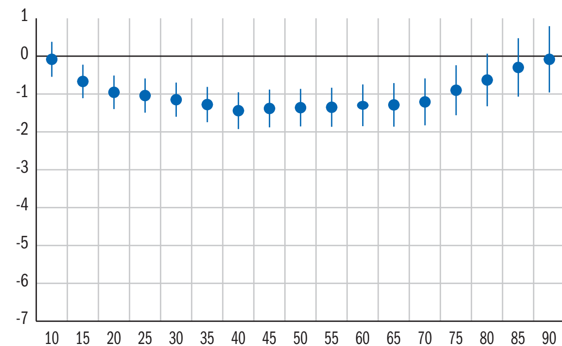
C5 The impact of Chinese competition along the wage distribution

(x-axis : percentile; y-axis : estimated impact on growth in hourly wages)

a) Manufacturing sector



b) Non-tradable sector



Source: Malgouyres (2016).
Note: Each point corresponds to the estimated impact on growth over a six-year period of the percentile shown on the x-axis. For example, at the 20th percentile (the wage level at which 20% of employees in an employment zone earn a lower wage and 80% are paid a higher wage) the impact represents a reduction of 1.4 percentage points in the manufacturing sector and 0.7 percentage point in the non-traded sector (vertical line: 95% confidence interval).

85th percentile relative to the median wage rises – and a decrease at the lower end – the ratio of the median wage relative to the 15th percentile falls. As a result of these two opposing movements, the ratio between the 85th and 15th percentiles – an overall measure of wage inequality – remains unchanged. However, a supplementary analysis demonstrates that Chinese competition is linked to an increase in this ratio in employment zones where minimum wage coverage is low.

With regards to the adjustment margin, the negative impact of the shock on total labour earnings is due in large part (70%) to a reduction in working hours and to a lesser extent (30%) to a decrease in the average hourly wage.

Conclusion

The negative impact of Chinese import competition on jobs and wages does not necessarily mean that trade with China has not been generally beneficial from France's point of view. An overall assessment of the impact of trade with China and other emerging countries on aggregate welfare in France would notably require the measurement of gains to consumers, which are assessed as being relatively favourable to low-income households (Fajgelbaum and Khandelwal, 2016).[7] It would also be advisable to include firms that use imported intermediate goods – and whose productivity gains also benefit consumers.

Nevertheless, given the substantial local multiplier effects and the limited sectoral and spatial mobility of the workforce, the negative estimated impacts are likely to be long-lasting in the most affected employment zones.

7 As well as the potential positive impacts on exports, notably via access to inputs with lower quality-adjusted prices.

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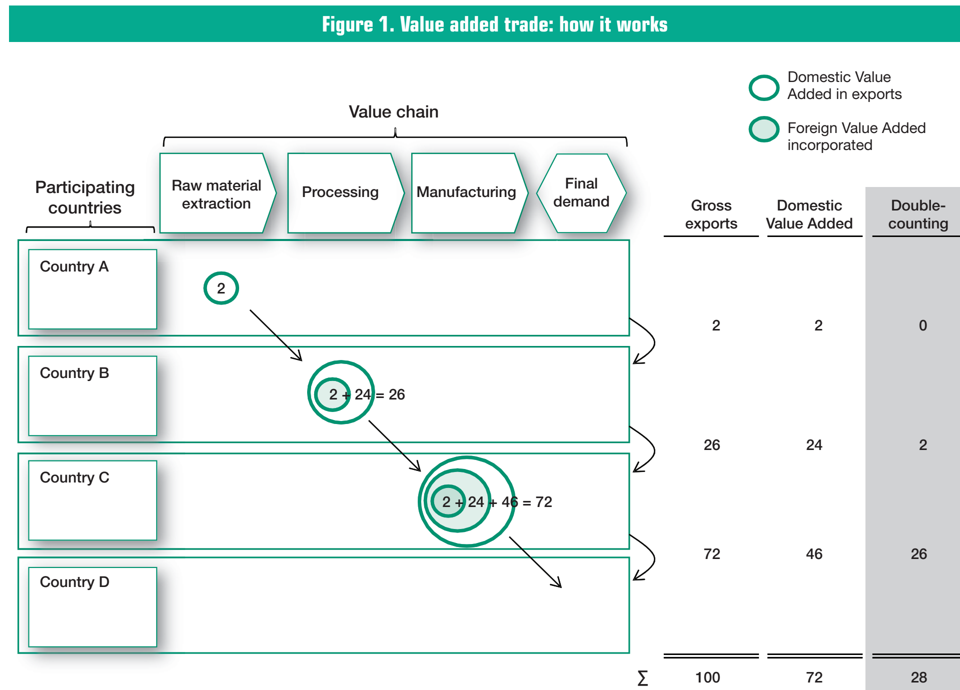
Investment and trade are increasingly entwined via GVCs, report says
27 February 2013

Goods and services increasingly cross international borders multiple times as they become finished products. These "value chains" usually involve transnational corporations, a new UNCTAD study notes.

- Source : unctad.org
- Publication: Global Value Chains and Development: Investment and Value Added Trade in the Global Economy
- Press release: 80% of trade takes place in "value chains" linked to transnational corporations, UNCTAD report says

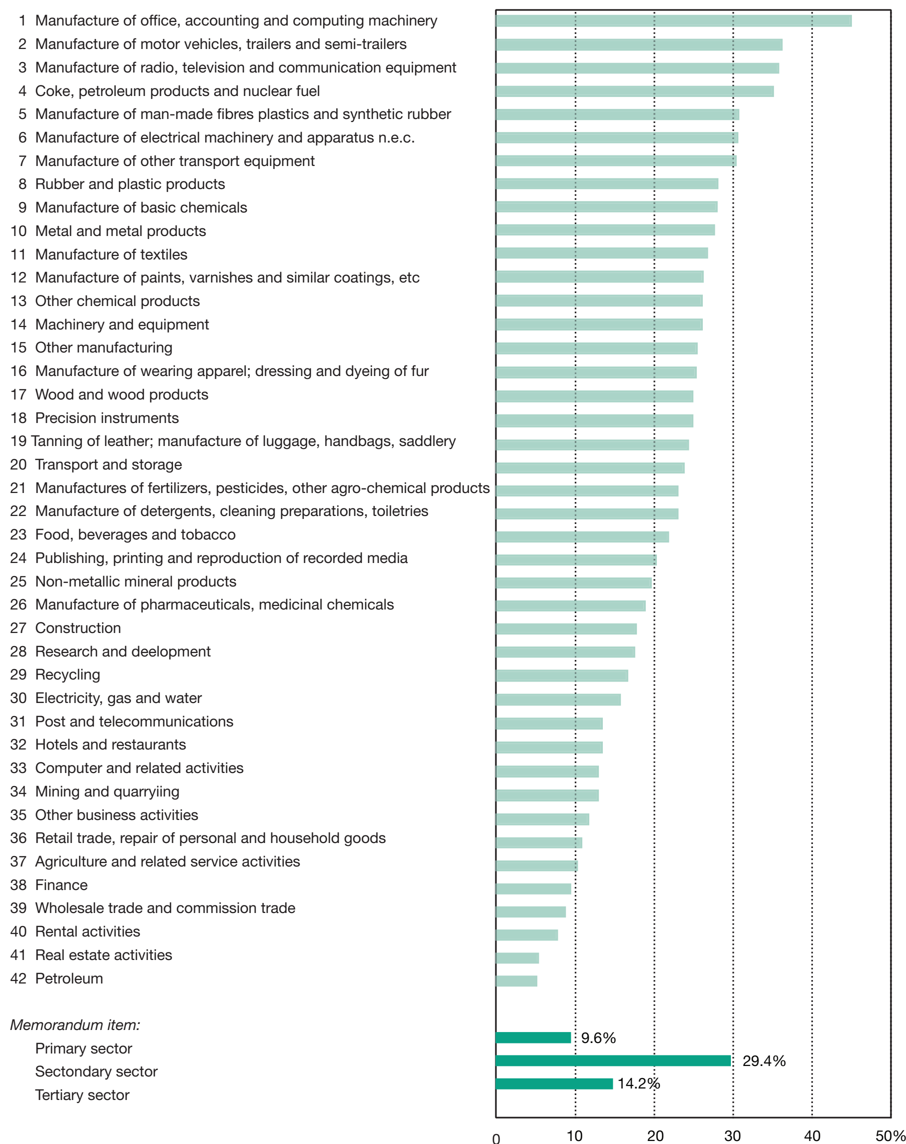
The ever-more complicated webs of investment and trade, by which raw materials extracted in one country may be exported to a second country for processing, then exported again to a manufacturing plant in a third country, which may then export to a fourth country for final consumption, are the topic of the UNCTAD report entitled "Global Value Chains and Development: Investment and Value Added Trade in the Global Economy".
Among other things, this increasing complexity means that statistics on trade are significantly distorted, the report says. *Figure 1 illustrates the statistical issue.*



The relentless international zigzagging of goods and services as they are upgraded means that some 28 per cent of the value of this trade - or about 5 trillion USD - is overstated

through double counting. The export value of copper ore extracted in one country, for example, counts once as a contribution to that nation's gross domestic product (GDP), but then is counted again - as many as several times - as it progresses from raw to upgraded to finished goods as it is exported after processing by other countries.
The report estimates that the value chains administered in various ways by transnational corporations (TNCs) now account for 80 per cent of global trade. *The extent of vertical fragmentation is shown to vary across industries, as illustrated in Figure 2.*

Figure 2. Share of foreign value added in exports, selected industries, 2010



Source: UNCTAD-Eora GVC Database.

Note: illustrative list of industries selected based on significance in GVCs, at various levels of industry classification.

Among the key findings of the report:

- Global investment and trade are thoroughly entwined in international production

networks. This is especially true of TNCs investing in productive assets worldwide.

- GVCs are responsible for significant and growing instances of double counting in global trade figures. The new data shows that some 5 trillion USD out of the 19 trillion USD of recorded global gross exports in 2010 was actually double-counted.

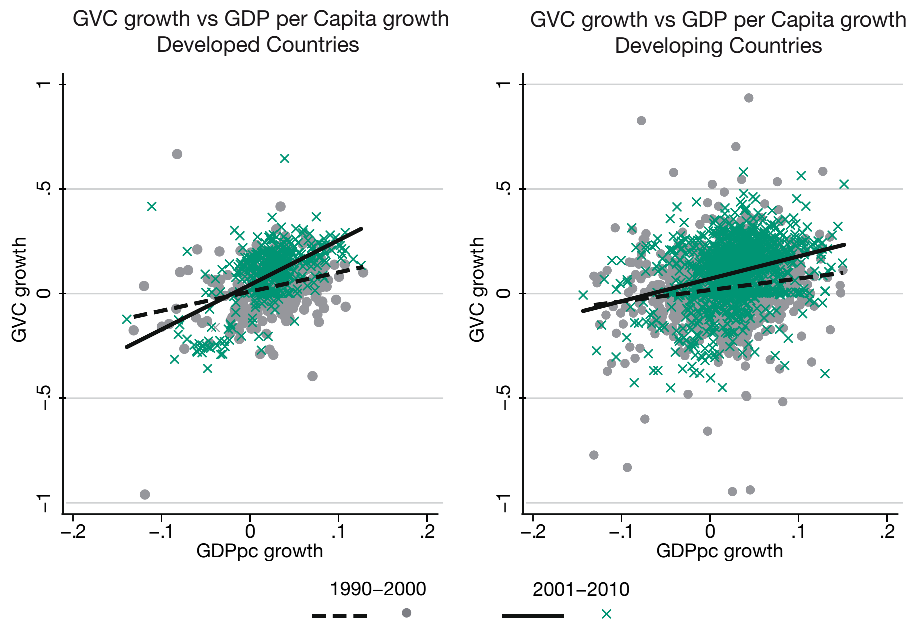
- GVCs make extensive use of services. While the share of services in gross exports worldwide is only around 20 per cent, almost half (46 per cent) of value added inputs to exports is contributed by services sector activities, as most manufacturing exports require services (such as engineering work, software development, and marketing) for their production

- The majority of developing countries, including the poorest, are increasingly participating in GVCs. The developing-country share in global value-added trade increased from 20 per cent in 1990 to 30 per cent in 2000, and is over 40 per cent today.

- GVC links in developing countries can play an important role in economic growth (*Figure 3*). Domestic value-added resulting from GVC trade that is, the contribution of trade to GDP can be very significant relative to the size of local economies. In developing economies, value-added trade contributes some 28 per cent to countries GDPs on average, as compared to 18 per cent for developed economies..

- There appear to be a number of GVC development paths available to developing countries, including engaging in GVCs, upgrading along GVCs, and leapfrogging and competing via GVCs. The best development outcomes may result from an increase in GVC participation and a move towards higher domestic value added in trade at the same time. *Figures 4 and 5 compare the share of domestic value added in overall exports, across countries and over time. This illustrates the diversity of development paths across developing countries.*

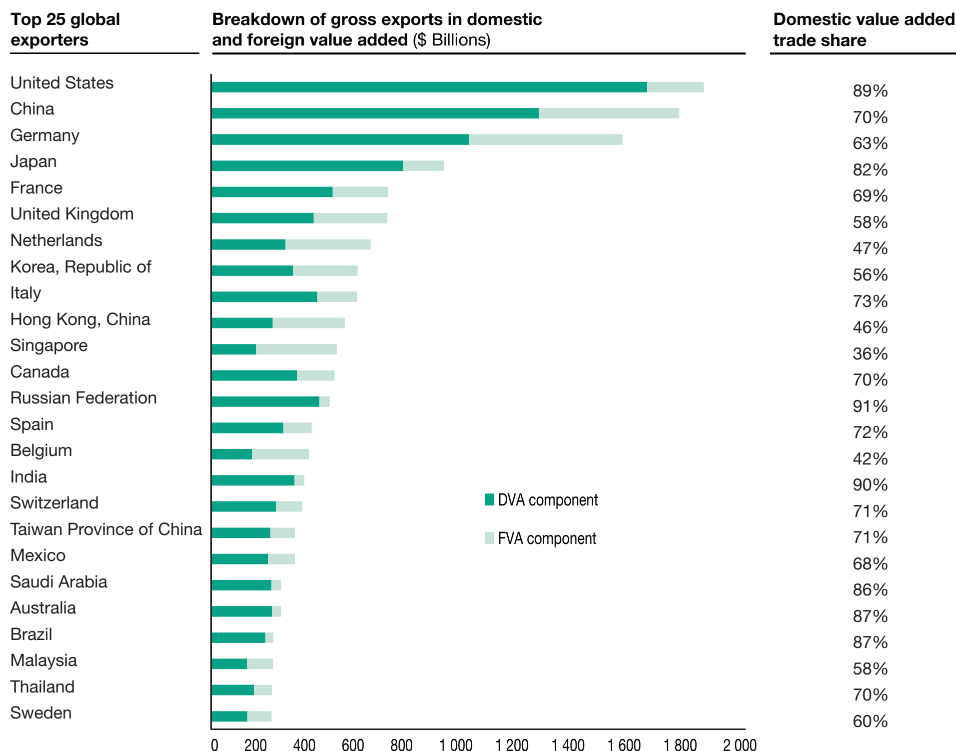
Figure 3. Correlation between growth in GVC participation and GDP per capita



Source: UNCTAD-Eora GVC Database, UNCTAD analysis.

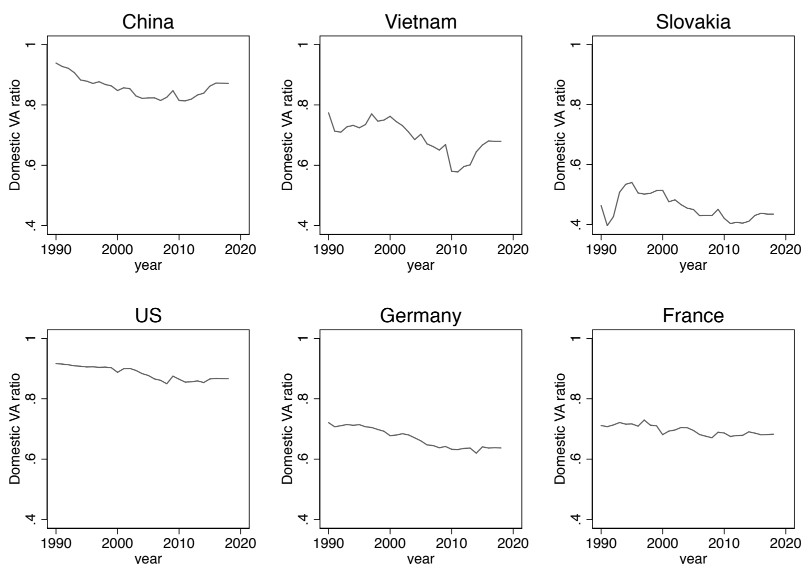
Note: the regression between the annual GDP per capita (in PPS) growth and annual GVC participation index growth, in logs, shows a positive and significant correlation, at the 5% level. This relation also holds, at the 5% level, dividing the sample in developed and developing countries, and in two time periods (1990-2000 and 2001-2010). To avoid picking-up a compositional effect resulting from the correlation between a country' s total value added (used as a component to calculate the GVC participation index) and its per capita GDP, all regressions use lagged (one year) GVC growth rates.

Figure 4. Domestic value added trade shares of the top 25 exporting countries, 2010



Source: UNCTAD-Eora GVC Database.

Figure 5. Domestic value added trade shares of selected countries, over time



These findings have important policy implications. Describing the situation, UNCTAD Secretary-General Supachai Panitchpakdi notes: Global value chains are everywhere. They show that investment and trade are two sides of the same coin. Policymakers have to take into account both sides when thinking about economic growth and development.

GVCs can be an important way for developing countries to build their productive capacities, including through technology dissemination and skill building, the report contends. They can also open up opportunities for longer-term industrial upgrading. However, such potential benefits of GVCs are not automatic. Governments need well-focused and mutually reinforcing strategies for trade and investment and for development generally that encourage upgrading of their productive capacities.

The balance of opportunities and risks associated with GVCs makes it important for governments to carry out well-informed policy debates on GVCs development impacts, the report says. UNCTAD intends for the GVC Database to stimulate and contribute to such debate by providing new insights into the evolving nature of globalized production networks.