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**National Economic Education Delegation**

**Trade and Globalization Narrative**

Date: March 5, 2020

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Slides:

1. **Opening slide**

<brief summary and opening>

1. **DO NOT DELETE: National Economic Education Delegation**
   1. Brief discussion of what NEED is and NEED does
   2. Use your judgement for what should be said.
2. **Who we are?**
   1. 44 honorary board – 3 Nobel prize winners, 6 former chairs of council, and 2 former Chairs of the Federal Reserve.
   2. 364 delegates, one in each state.
   3. 42 Global Partners
3. **Where are we?**
4. **DO NOT DELETE: Credits and Disclaimer**
5. **Outline:**

***[PART 1: American Economic History (Michael)]***

1. **What is globalization?**
   * We live in an era of globalization, one which can be traced back to the end of the Second World War. But what does this mean? You may have noticed prominent commentators either extolling or decrying the effects of globalization on communities or nations. This could be for many reasons. This presentation focuses on the economic aspects of globalization, or the exchange of goods, services, and money across international borders, and the consequences of these flows for the American economy.
   * The current debate over trade policy fits into a longer-running history of globalization. Before discussing the effects of international trade and investment on the modern American economy, we/I’ll start with a brief overview of western globalization. This will be followed by discussion of trade, foreign investment, and offshoring.
2. **What Drives Globalization?**
   1. There are primarily three forces driving globalization.
      1. The first is innovations in transportation. Over time, transportation technologies increase in speed and efficiency, driving down the costs of transportation. The cheaper it is to move goods and people across borders, the more people will contemplate doing it.
      2. The second is technology. Technology primarily in the form of communications. The easier it is to communicate between countries, the greater will be the awareness of opportunities for exchange or migration. Communications technology in the form of the internet has also become very important for facilitating trade in services.
      3. Finally, international cooperation goes a long way towards facilitating globalization. The friendlier are the terms on which people, goods, services, and investments move across borders, the more movement of each will occur.
3. **Transportation**
   1. Note: click through from an old sailing vessel to the Wilbur and Orville Wright airplane, to the container ship. Finally is the growth pattern of container ships.
   2. Going back in time, vessels moving goods looked something like this – and were very slow relative to airplanes <click>, and modern container ships <click>.
   3. Container ships proved to be yield enormous efficiency gains relative to the bulk method of loading and unloading ships.
   4. <click>The modern container ship has grown significantly over the past 50 years. Prior to 1970, the average container ship held about 1,700 TEUs. A TEU is a Twenty Foot Equivalent container. Most containers are 40 feel long, or two TEUs. The most recent versions of container ships are significantly bigger (by a factor of nearly 10), with a carrying capacity in excess of 14,000 TEUs.
4. **Technology**
   1. Click through: telegraph (morse code), rotary phone, mainframe computer, to network cables – representing the internet.
   2. Communications technology has progressed enormously since the telegraph <click>. The telephone was an enormous increase in the ease of communications. <click> The birth of the computer was the precursor to an enormously efficient means of communication <click>, the internet.
   3. At this point, learning about other countries – the prices and availability of goods in those countries, or the desirability of visiting other countries, or the ease of finding a partner for the manufacture of products – is orders of magnitude easier than it was just 40 years ago. This improvement in technology has been a catalyst for very rapid growth in international trade, migration, and investments.
5. **International Cooperation**
   1. Click through: Bretton Woods, GATT, EU, NAFTA, and WTO
   2. Since WWII, there have been significant efforts to bring the world together in ways that would facilitate global interactions. These efforts largely began with the Bretton Woods conference, at which the participating countries agreed to adopt the gold standard. <click> This was a policy designed to reduce fluctuations in currencies and hence bring more certainty to international transactions. The General Agreement on Tariffs and Trade, the GATT was next. Sometimes earning the nickname the General Agreement to Talk and Talk, the GATT was a forum through which multilateral trade agreements that reduced tariffs on a reciprocal basis were accomplished. <click>
   3. The EU was begun in 1950 with an effort toward the establishment of closer economic ties, in the hopes of staving off another large war.[[1]](#footnote-1) The Union was not formally established until 1993. The primary feature of the move was to establish a formal currency union, which would reduce costs of trade between countries and more formally align broader economic policy goals.
   4. <click> Following closely on the heels of the EU was NAFTA. NAFTA is a free trade area between the United States, Canada, and Mexico. NAFTA has been the source of much anguish, significant job loss, and arguably more benefits from increased trade flows than costs. We will discuss the benefits and costs of increased trade in a little bit.
   5. <click> In 1995, the GATT became the World Trade Organization. The WTO instituted a number of changes. In particular, it strengthened the dispute settlement mechanism, it brought trade in services and intellectual property into the trade liberalization fold.
6. **Trade has skyrocketed in the past century**
   1. The net effect of all of this change in terms of transportation, technology, and international cooperation has been an unprecedented increase in the amount of international trade in the global economy. The graph shows total trade (imports + exports) in goods and services as a share of global GDP. Total trade is currently at about 60% of world GDP, more than double its value at the turn of the last century (a local high) and more than FOUR times its level during the Great Depression – in the wake of the Smoot-Hawley tariffs.
7. **International Cooperation – Ending?**
   1. Despite the massive gains that have come with liberalization during the post WWII years, the global economy may be currently sitting in a precarious position relative to global institutions, those regarding trade, in particular. President Trump has expressed skepticism and some disregard for these long established organizations. Time will tell when it comes to the effects of his actions on their effectiveness.
8. **Western Globalization in historical context**
   * Globalization in American history appears as two waves. The first of these occurred during the 19th century, as steam power and railroads dramatically increased producers’ abilities to bridge vast distances to reach their consumers. There is some academic debate as to whether this first global era began in the 1830s or 1870 (Federico and Tena-Junguito 2017), but global flows in trade and investment were driven by a combination of these new technologies and policy. This wave of globalization ended with the outbreak of the First World War.
   * In Europe, much of this move toward open trade followed the repeal of the Corn Laws by the British government in 1846, which signaled a shift to trade policy following the idea of comparative advantage, defined in the following section (Irwin 1996, Schonhardt-Bailey 2006, Frieden 2007).
   * American trade policy gradually followed this shift. Tariffs, or the taxes on goods entering the country, were quite high in 1830, at around 60%. (Tariffs that stemmed from those originally raised to pay for the costs of the War of 1812.) These fell to an average of less than 20% when the Civil War began (Irwin 2006, 2008).
   * After the Civil War ended, America retained high tariffs on manufactured products to protect its heavy industries, but had lower tariffs on other products, such as agricultural goods (Irwin 2000, 2007, 2017). The intent of the tariffs was to spur growth in industrial employment and output, but evidence shows that they were unsuccessful, with America’s westward expansion, population boom, and success in unprotected sectors contributing to its boom (Irwin 2001, 2002). The tariffs themselves also highlighted the differences between East Coast industry and finance and western agriculture and mining that were exemplified in the wave of populism that swept over the country in the 1890s.
9. **Interwar isolationism**
   * The first wave of globalization ended abruptly with World War I. With the end of hostilities, governments sought to re-establish peacetime economies through internally-focused policies. During the war, the United States had played an important role in feeding its and its allies’ armies in Europe. American farmers essentially bet on the war continuing longer than it did, taking out loans to increase their production. With the end of the war, commodity prices fell (which also had long-lasting consequences for much of the developing world), and in an attempt to protect domestic producers, American tariffs began to creep back up (Alston 1983, Johnson 1985, Irwin 2011, 2017).
   * With the stock market crash of 1929 and the rise of the Great Depression, . After a great deal of lobbying and vote trading (also known as logrolling), the Smoot-Hawley Tariff was passed the following year (Schattschneider 1935, Eichengreen 1989, Irwin 2011, 2017).
   * The Smoot-Hawley Tariff has gone down in history known as the ‘tariff wall’ (Eichengreen 1989, Irwin and Krozner 1996, Irwin 2011, 2017, Plouffe 2015). In response to both the new tariff and the effects of the growing depression, other countries soon implemented their own tariff walls.
   * The lobbying and vote trading surrounding Smoot-Hawley created a bad public perception of Congress, especially as it became clear that the tariff was neither helping the American recovery from the Great Depression, nor aiding agriculture. This political backlash led to the passage of the 1934 Reciprocal Trade Agreement Act, in which Congress delegated control over trade policy to the executive branch (Haggard 1988, Hiscox 1999). There were a few conditions involved. While the president could open bilateral negotiations with other countries with the goal of restoring trade through tariff reductions, any concessions made in offering to reduce American tariffs needed to be reciprocated by the negotiating partner. The negotiated deal then needed to be approved by the Senate before it would be adopted.
10. **Post-war liberal institutionalism**
    * The plans for trade liberalization under the RTAA were interrupted by the Second World War. During the war, there was a concerted effort among the allied partners to ensure that the mistakes of the 1920s and 1930s would not be repeated. Two summits were particularly important for the shape of the planned post-war economic order: the 1940 Atlantic Charter, and the 1944 Bretton Woods Conference.
    * The Atlantic Charter established the principle of nondiscrimination, meaning countries could not use domestic laws or regulations to discriminate against products based on where they were produced. For example, the United States would have to apply the same sorts of sanitary measures toward imported Italian olive oil as it would toward Californian olive oil. Because colonial relationships were still an important feature in the international arena at the time, this also meant that, as another example, India would have to treat American and British automobile imports the same, and equal to locally-produced Indian autos, under domestic law.
    * The Bretton Woods Conference, which took place as the end of the war was in sight, laid out plans for institutions to coordinate all aspects of the post-war global economy. These ranged from the International Monetary Fund (IMF) and International Bank for Reconstruction and Development (IBRD), the latter of which is now more familiar as a part of the World Bank, to the General Agreement on Tariffs and Trade, or GATT, which was the predecessor to the World Trade Organization (Frieden 2007).
    * The GATT, which has essentially been the governing multilateral trade framework since World War II, was established in 1948. It is based on the principles of reciprocity – adopted from the RTAA – and nondiscrimination. Nondiscrimination itself is divided into two categories: national treatment (the descendent of the Atlantic Charter) and Most-Favored Nation status, which means that any agreed bilateral concessions between a pair of GATT signatories are extended to all other GATT signatories as well.
    * Tariff reduction under the GATT took place in repeated multilateral negotiating rounds. These rounds started with a handful of countries, but as time passed, numbers grew.
    * It is important to note that GATT did include some exceptions to its core nondiscrimination principle. In the 1970s, for developing countries that wanted to participate in the negotiating rounds, the GATT incorporated the Generalized System of Preferences (GSP), which exempted developing countries from reciprocity with the aim of promoting their economic development. Furthermore, agreements between small numbers of countries that lead to freer trade than what is agreed upon by all GATT members at the negotiating rounds is also allowed, which has led to many smaller – but still significant – trade blocs, such as the European Economic Area (EEA), North American Free Trade Agreement (NAFTA), and Mercosur. Finally, exceptions can be made for national security and the imposition of temporary measures to shield domestic producers from the effects of exports propped up by non-market intervention by foreign governments. If a government sees a particular industry as being vital for reasons of national security, it can use domestic regulations to discriminate against foreign-produced imports. Similarly, if it determines that a particular industry is suffering because of some non-market factor, like market manipulation by a competing government, it can enact temporary trade barriers, in the form of antidumping measures or countervailing duties, against that country’s exports of that product.
11. **Tariffs under the GATT**
    * While this all may seem rather complicated (it is), the GATT was very successful in reducing tariffs at a global level. The figure here shows average tariffs across the globe, from a peak before WWII as Smoot-Hawley and similar measure took effect, to a substantial decrease during the Cold War.
    * The World Trade Organization (WTO) was established in 1995, creating a more robust institution to oversee the international standards set out under the GATT. Negotiations under the WTO – the so-called Doha Round – have focused on developing-economy concerns, with a particular emphasis on agriculture, and are arguably dead. As such, governments seeking increased access to foreign markets have increasingly turned to bilateral or regional options, while primarily relying on the WTO for the settlement of disputes. The question remains though: how has the American economy been impacted by all of these changes?

***[PART 2: TRADE (James)]***

1. **International Trade**
2. **Exports and imports**

Just to make sure everyone is on the same page, let’s briefly define exports and imports. Exports are goods or services that one country sells to another country while imports are goods or services that one country buys from another country. This table shows the goods and services that the US trades the most using 2016 data. For US exports of goods, planes accounted for 4.5% of US exports of goods, crude petroleum 4.3% and cars 4.2%. For US imports of goods, cars accounted for 8.2%, crude petroleum 4.7% and computers 4.1%. For exports of US services, business/financial/insurance services accounted for 34%, travel 27% and royalties 17%. For US imports of services, business/financial/insurance services accounted for 34%, travel 24% and transport 19%.[[2]](#footnote-2)

1. **What do we export?**

In 2017, the United States exported about $1.6 trillion worth of goods. A number of U.S. goods export categories are predictable: cars and car parts, integrated circuits, and medical equipment. However, 2017 is the first year in which the leading source of U.S. export was petroleum products.

1. **What do we import?**

U.S. Exports in 2017 were in similar products, with cars and crude oil taking the top spots. Exports totaled about $2.4 trillion in that same year. It is interesting that the U.S. imports and exports many of the same goods. Exactly why that is will be the subject of conversation shortly.

1. **Top US trade partners**

In terms of US trade partners in 2016, 16% of US goods exports went to Canada then 14% to Mexico, 9.2% to China and 4.9% to Japan. The top 10 here account for 63% of US exports. For US imports of goods, 21% came from China, 14% from Mexico, 13% from Canada and 6.1% from Japan. The top 10 here account for 72% of US imports.[[3]](#footnote-3)

1. **Importance of US trade**

Here, we see that trade has long been a growing part of the US economy with imports and exports each growing from around 4% of GDP around 1950 to around 12%-16% in 2017. On the one hand, the US has run a trade deficit in goods, importing more goods than it exports, of up to 5% of GDP. But, on the other hand, the US also runs a large trade surplus in services, exporting more than it imports, up to around 1.5% of GDP.[[4]](#footnote-4)

1. **U.S. Trade Deficits**

In 2018, United States is running a trade deficit of about 2.9% of GDP, or $570 billion. This deficit is lower than the levels reached between 2005 and 2008, but is a post-recession high. It is also true that the overall deficit masks a significantly higher deficits in the trade in goods. That deficit was nearly $900 billion in 2018. This was offset by a surplus in the trade in services of approximately $270 billion.

The 2018 trade war did not do much to narrow the goods trade deficit. But more on that later.

1. **Why Do Countries Trade?**

At this point, it is worth stepping back and asking why exactly do countries trade? The really short answer is generally that prices differ across countries and trade is a way of arbitraging those price differences.

The longer answer is that there are many reasons why countries trade. Three, however, stand out. The first, is directly related to prices and has to do with competition, or the arbitraging away of price differences that I just mentioned. The second has to do with varieties. Take cars, for example. Different car companies produce different versions of the same vehicle: 4 wheels, a steering wheel, accelerator, brake, and a body over the whole thing. Different consumers have different preferences of which sort of a car they most prefer.

Finally, it has to do with efficiency. There is a reason for many of the price differences that exist across countries and it doesn’t always have to do with the extent of competition across countries. Some goods are simply produced more cheaply in some countries than in others.

1. **Why Might Efficiency Differ Across Countries?**

There are a wide variety of reasons why efficiency, or prices, might differ across countries. Most have to do with the resources available in that country. These resources range from types of labor – some countries (the U.S.) are well endowed with high skilled labor, while producers in some countries simply have better access to the technology involved in production.

For some, the environment is better suited to producing some agricultural goods than others. There is a reason why 70% of the world’s supply of almonds is grown in California’s Central Valley.

Or, beyond the environment, the terrain or soil conditions may not permit the inexpensive cultivation of certain agricultural products.

The bottom line is simply that most any difference in endowment of productive resource can lead to differences in relative prices of goods across countries.

As we will see, even if ALL goods cost more in one country than in another, there are still gains from trade to be had.

1. **Comparative advantage and specialization**

Comparative advantage is perhaps the most important concept in international trade. A starting premise is that countries have scarce resources, so they cannot produce unlimited amounts of goods. Thus, countries have to allocate these scarce resources to the production of different goods.

As a non-economic illustration of comparative advantage, think about Babe Ruth. He was the top pitcher in baseball between 1916 and 1918. But, he was the best hitter of all time and even Babe Ruth had to decide how to allocate his time between pitching and hitting, at least in terms of training time. That Babe Ruth chose to specialize as a hitter after 1918 is an example of specialization according to comparative advantage.

As an economic example, think of the US and the UK in 1951. For a given level of output, the US used fewer resources than the UK in each of 26 manufacturing sectors. That is, the US was more productive than the UK in every one of these sectors. In practice, for each sector, the US both exported to the UK and imported from the UK. But, consistent with the idea of comparative advantage, the US was a net exporter to the UK only for the sectors where its productivity advantage strongest. And, also consistent with the idea of comparative advantage, the UK was a net exporter to the US for the goods where its productivity disadvantage was weakest.[[5]](#footnote-5)

1. **Benefit of specialization**

Importantly, both exports and imports are important for countries to benefit from specialization in production. For goods where the US production advantage is weakest, the US can consume these goods by either importing them from UK or producing them domestically at the cost of reducing production of other goods that it exports to the UK. The key point is: The US can consume more of these goods by importing them from UK rather than producing them domestically. The analogous story is true for the UK. As a consequence, trade increases the size of economic pie for both countries.

1. **Comparative Advantage – Key Notion**
2. **Relative Advantage**
3. **Same Holds True for Countries**
4. **Trade Contributes to Growth**

There are also other benefits from trade. Here are four important examples.

First, trade can reallocate resources from low productivity to high productivity firms (see Melitz, 2003). When trade generates better foreign market access or more foreign competition in the domestic market, high productivity firms will grow but low productivity firms will shrink. This reallocation of resources makes both countries more productive.

Second, trade can increase the variety of goods available to consumers. For this and the subsequent results, see Krugman (1979). For example, even though the US and Japan both make cars, they make different varieties of cars. This increases consumer well-being assuming that consumers value having more varieties to choose from.

Third, exposure to foreign competition reduces the price setting power of domestic firms when there’s not much competition in the domestic market. The resulting lower prices benefit consumers.

Fourth, for some industries, production costs can fall quite a lot as the industry produces more output. Economists call this phenomenon “economies of scale”. For industries with economies of scale, countries can save a lot of resources by specializing in different industries. This both lowers prices and increases the productive capacity of the economy.

1. **How to Think About Imports**

Conceptually, international trade can be thought of as the birth of a new technology. Imagine, if you will, that every seaport were, instead of a seaport, a manufacturing facility. This manufacturing facility is really marvelous! It can turn pretty much anything into anything else! It can even turn some U.S. made cars into Japanese made cars.

It can take a major U.S. export, say soy beans and turn them into laptops and iPhones!

Now, this is a pretty great new factory! But it kind of begs the question: Why do so many people hate international trade?

1. **What do the data say? Consumer prices**

An important benefit of trade and trade liberalization is that consumers see lower prices of importable goods. The import surge from China in the 2000s is one of the biggest import surges in US history (Jaravel and Sager, 2018). Recent academic research shows that prices in the U.S. would be 10% higher if we had not experienced the surge in imports from China. As I mentioned earlier, this import surge also depressed U.S. manufacturing employment. To put these numbers in context, the benefits from lower prices are estimated at $100,000 for each manufacturing job lost.

In terms of whether poor or rich people benefit more from lower import prices, there’s mixed academic evidence. For example, there’s some evidence that the poor benefit more because a larger share of their consumption is on imported goods like clothes and food (Fajgelbaum & Khandelwal, 2016). But, there’s also evidence that the rich tend to consume imported goods like electronics where import competition is very important for low prices (Borusyak & Javarel, 2018) which offsets any pro-poor bias.

1. **Why is the Public Turning Against Trade?**

If trade has all of these great attributes, why, exactly is it that so many people are upset about international trade?

Fundamentally, this has to do with the way that the benefits of trade are distributed and the way that the costs of trade are distributed.

With regard to the benefits, they get widely distributed and are not always notices. Much the same happens with the introduction of a new technology. An individual consumer might save $50/year, which is great, but doesn’t make a big impact, while the overall economy, some 300 million consumers might save $15 billion collectively. This $15 billion is a big deal to the economy, but is hard to highlight.

The costs of trade, however, tend to be highly concentrated and are, perhaps overly, visible. I say overly, because a lot of the job loss attributed to trade may be due to other factors. More on this in a minute.

1. **Distributional impacts of trade: basic insights**

The discussion on the previous few slides was about why trade increases the size of the pie. But, trade can also reallocate the pie within each country and thereby create winners and losers in each country.

Generally speaking, if trade reduces the demand for a factor then this factor suffers from trade. This could happen because factors find it very difficult to move out of locations and/or industries in decline because of trade. It could also be because a factor is mobile across locations and industries, but this factor is used intensively in a location and/or industry is declining because of trade. Note that the industries and locations in decline because of trade will be those that heavily compete with imports.

And, vice versa, if trade increases the demand for a factor then, generally speaking, the factor owners will benefit from trade. Note that industries and locations expanding because of trade will be those that heavily export.

Another piece of the distributional story is that trade lowers the price of importable goods but, because different people consume different baskets of goods, the benefits will flow to some people more than others.

1. **The Basic Issue: Inverted V of Jobs in Manufacturing**

<click through to get a graph with the trend lines in it – the first one (buried behind the 2nd one) does not have trend lines in it>

I mentioned earlier that some job losses are inappropriately attributed to international trade. For the United States, the trend in manufacturing employment has been for recent dramatic declines. In the post-WWII era, manufacturing employment first increased significantly and then, after peaking in 1979, began to fall, quite dramatically after 2000.

1. **“International Trade is Surely a Contributor”**

<click through to get the flat arrow first, showing historical change, followed by a click to show the new growth of trade>

This decline is often attributed to trade, largely because international trade, both imports and exports, grew dramatically during this period. That growth truly began in earnest in 1970, well before manufacturing employment peaked, but close enough, apparently for popular wisdom to grab ahold of the relationship.

It's also a little tempting to attribute the resurgence of manufacturing employment in the wake of the great recession to declining trade flows. This graph suggests declining trade flows, but it is scaled by GDP. Trade is not declining, so much as it is rising much more slowly than is the overall economy.

1. **But There is No V in the Fraction of Jobs in Manufacturing**

For several reasons, this relationship is more spurious than it is causal. In particular, the share of manufacturing employment of all employment in the U.S. economy has been falling throughout this entire period. It had a heyday during WWII, but that’s only because of the plethora of tanks, jeeps, ships, and airplanes that were being produced.

Once manufacturing employment returned to its usual level in the economy, it started a reasonably steady decline as a share of overall employment in the United States.

If trade were truly the cause, it seem likely that it would have affected the trend in the share of employment in manufacturing in the United States. But it has not.

1. **And Manufacturing Output Keeps on Growing**

It is also the case that during this period of declining manufacturing employment, output in the manufacturing sector continued to increase. Granted, its composition was highly likely to have been impacted by trends in trade – imports displacing previously domestically produced goods, in the ways that we have discussed – but the level is not likely to have been impacted in the way that we have observed.

However, unless production is systematically being pushed towards industries that simply use less labor to produce output – which it surely was – the attribution of all of this job loss to trade is inappropriate. Some of it surely is a result of trade, but productivity differences between import competing sectors and exporting sectors are unlikely to be large enough to explain all of the decline.

1. **And Manufacturing Productivity is on the Rise**

<Note: it wouldn’t be unreasonable to drop the previous slide and make the points above and below using just this slide – there’s a little redundancy here>

Given that manufacturing productivity, or output per worker in the sector has increased significantly since 1980, it seems quite likely that technological change has played a significant role in causing employment losses in manufacturing. In particular, in the steel industry, technological change has been significant – see, mini-mills.

That employment in manufacturing has declined so consistently since the late 1940s is more likely attributable to labor saving technological change than to trade. Trade not doubt plays a role, but the main point here is that a lot of the job losses in manufacturing are possibly being blamed on trade when they should be blamed on technological change instead.

In no way is trade to be let off the hook, but it is not likely the major influence that conventional wisdom seems to think that it is.

1. **Another Problem: Trade Deficit**

Not only is the growth of trade a problem, but the magnitude of the trade deficit presents another opportunity to attribute, incorrectly, some of labor’s ills to international trade.

In 2018, the U.S. ran a deficit of 2.9% of GDP on goods and services. On just goods, this amounts to nearly $900 billion. There is an intuitive unfairness in this observation that is not correct. The logic goes like this: if we are importing more than we are exporting then there is more labor embodied in imports than in exports, so we are losing jobs because of the deficit.

1. **How to Think About the Trade Deficit**

A trade deficit occurs when the value of imports is greater than the value of exports – it is important to note that it is value and not volume. The numbers of each good that is imported or exported is not directly relevant except when combined with price to establish value.

Why exactly this happens is because we also trade financial instruments and assets in addition to goods and services. It turns out that when you consider this trade as well, the U.S. does not run any sort of a deficit. The trade deficit only looks at goods and services. In fact, there will be a surplus in trade in assets that exactly offsets the deficit in goods and services.

1. **Trade and Investment Flows Balance Out**

The U.S. routinely runs a deficit in international trade and a surplus in investments. Here, you can see that they mirror each other.

The reason they have to balance out is because of the exchange rate. The more investments foreigners make in the United States, resulting in a surplus in investment flows, the more dollars they have to buy in order to buy the investments. This raises the demand for the dollar, which raises its value.

When the value of the dollar rises, the dollar price of imports falls, so we import more. At the same time, the foreign currency price of U.S. exports rises, so foreign consumers buy less.

A surplus in investment flows therefore necessitates a deficit in goods and services flows.

1. **Exchange Rates Prevent and Overall Deficit**
2. **Balanced Budgets & Increased Savings**

It is worth asking exactly why we run a surplus in investments – why more foreigners invest in the United States than Americans invest overseas. There are a couple of reasons for this:

* 1. U.S. Treasuries are one of the most secure investments available, so foreign governments and investors may use them as a safe haven.
  2. The United States is an enormous market for goods and services provision, so buying or building productive capacity in the U.S. is an attractive proposition.
  3. Finally, and most importantly, the U.S. whether individuals or government is not very good at saving:
     1. The U.S. federal government runs a chronic deficit
     2. U.S. households have a relatively low savings rate: 7.2%
     3. This combination means that investment funds are more likely to flow into the U.S. from abroad than the other way around.

It is primarily the budget deficit and low savings rate that drive the surplus on investment flows and hence the trade deficit. Changing this would be the most productive way to eliminate the trade deficit.

1. **U.S. Savings and the Trade Deficit**

Here we see the inverse relationship between the savings rate in the United States – among private households – and the trade deficit. At times when the savings rate is high, before 1980, as the savings rate dropped, the trade deficit increased.

Raising savings rates and reducing government borrowing is the surest way to reduce the trade deficit.

1. **General Agreement Among Economists**

The Institute on Global Markets at the University of Chicago regularly surveys a group of prominent economists on policy issues or important economic issues. There is general agreement amount these economists, but not consensus, about whether or not reducing the fiscal deficit would shrink the trade deficit.

Of those who have some confidence in their answers, more than half agree with the statement.

Important to note is that very few, only one, indicated that they disagree with the statement.

1. **Trade with China: 63% of the US Trade Deficit**

All of that not withstanding, it remains true that our bilateral trade deficit with China is enormous, which is from an optical perspective, highly problematic and is fueling the current trade war with China.

In 2018, the U.S. imported $540 billion in goods from China at the same time that it exported just $120 billion. This asymmetry can easily be sold as a result of unfairness, even though this might not be the case. Now, it is undoubtedly true that China is not abiding by international rules and norms, but that is not the source of their trade deficit.

The U.S. trade deficit is the result of other things, as we just discussed, and how it is distributed across countries is primarily a matter of comparative advantages.

1. **Bilateral Trading Relationships**

This graph illustrates how large the China bilateral trade deficit is relative to our deficits with other countries.

It also points out that China is not the only country with which we have a trade deficit. We in fact are much more likely to run a trade deficit with any given country, in large part because we run a large overall trade deficit.

It is important to realize that bilateral trade deficits are a natural outgrowth of the aggregate trade deficit and not the other way around. Accordingly, imposes barriers to trade flows between the U.S. and any other particular country is not the way to reduce the trade deficit.

1. **Bilateral Trade Deficits are Unimportant**
2. **Distributional Impacts of Trade**

Nonetheless, there are potential costs of trade. Trade results in overall benefits, but these benefits don’t necessarily accrue to everybody. Some will gain and some will lose.

1. **Intiuition on Distributional Impacts**
2. **What do the data say? Trade benefits some Workers**

Trade theory suggests a country benefits from both exports and imports. Indeed, recent academic research shows that trade liberalization increases wages of workers at so-called “globalized firms” who are importing intermediate inputs and/or exporting. In these globalized firms, workers share part of higher revenues that their firms earn from lower tariffs on their intermediate inputs and, for exporting firms, lower tariffs on the products that they sell (Amiti & Davis, 2012).

1. **What do the data say? Trade hurts some Workers**

Here’s some recent empirical evidence illustrating how trade can hurt some people.

Naturally, some parts of the US are highly exposed to import competition, manufacturing hubs in the rust belt for example, while others are barely exposed, for example Washington DC which revolves around government and services. Since workers often find it very difficult to leave locations and/or industries that are declining because of trade, they can be hurt.

In response to rising Chinese import competition between 1990 and 2007, recent academic research found that highly exposed locations experience higher unemployment, lower labor force participation and lower wages. They find that Chinese import competition can account for about 25% of the employment decline in manufacturing over this period (Autor et al., 2013, page 2140).

In response to US tariff cuts on Mexico due to NAFTA, recent academic research finds that workers without a college degree experience lower wage growth between 1990 and 2000 by up to 8% points in highly exposed locations and by up to an additional 17% points in highly exposed industries (Hakobyan and McLaren, 2016). So, for example, a bartender who didn’t finish high-school in a heavily exposed Rust Belt location would have 8% point lower wage growth than if they lived in a non-exposed suburb of Washington D.C. But, if this Rust Belt bartender was instead working in a heavily exposed manufacturing industry then they would have an additional 17% point lower wage growth, now a total of 25% point lower wage growth, than the D.C. bartender. Consistent with the importance of skills, these adverse impacts of NAFTA disappear for workers with college degrees.

1. **Costs of Trade**

***Earnings:***

Clearly, there are important distributional effects of international trade in goods and services. We, as a profession, have known for 80 years that there is a tension between trading more and the well-being of low-skill/low-wage workers in the United States.

There are relatively few low-skilled workers in the United States when compared to many of our trading partners. They are certainly a lower proportion of the labor force than they are in China. Accordingly, in the absence of trade, their wages will be higher in the U.S. than in China. Opening up trade exposes these workers to competition from low-skilled workers abroad, which lowers their earnings.

The exact opposite effect happens for more highly skilled workers. Trade will primarily serve to increase their earnings.

***Adjustment Costs:***

In addition to the effects on wages, there are adjustment costs. There is no question that growing trade will reduce employment in some industries (import-competing) and increase employment in other industries (exporting). There is thus a necessary transition from one industry to another for many workers. The costs of these transitions can be enormous and are generally greater for low-wage workers than for high-wage workers. People do not like to move and there is trauma in losing your job.

1. **Understanding Adjustment Costs**

There are costs borne by both firms and workers associated with these adjustments. For firms, they need to search for new workers, train new workers, adjust to new employees, and absorb the costs of releasing workers that are no longer needed.

For workers, the costs are perhaps more significant. There are certainly emotional, or psychic costs associated with job loss and moving. Friends, and familiarity of your surroundings are all surrendered. Very often workers will have skills that were useful only to the firm that they were hired at or in the industry in which they were working. These skills, if the worker is employed in an import competing industry, may well just have lost all of their value.

There is also the cost of a job search. Again, this is generally easier for high wage workers as their job markets are more likely to be nationwide, making information about available jobs relatively easy to come by. Harder for workers with lower skills. It is also very expensive to move across geographies. These costs again are more easily borne by high wage workers than low wage.

There are therefore great inequities associated with the transition. It is harder generally for lower skilled and lower wage workers than those with more labor market skills.

1. **Estimates of Adjustment Costs**

Estimates of the costs suggest that they are much higher in developed countries than in developing countries for firms. They also suggest that layoffs are more likely to happen all at once, with groups of workers being laid off rather than gradually.

For workers, there have been new estimate in the last 10 years. Let’s have a look.

1. **Estimated Costs to Workers of Changing Jobs**

In the U.S., it is estimated that worker adjustment costs are about 6 times annual earnings. This is a staggeringly large cost! It is also much less than is estimated for most of the developed world, or developing countries.

1. **Characteristics of Adjustment Costs**

Additional issues associated with trade adjustment include the fact that many industries are geographically concentrated. This means that not only will these regions be hit relatively hard from trade adjustment, but that there may not be good alternative employment in the region. Workers will have to leave and the local economy may well be unable to recover.

It is also true that not all workers displaced by trade fully “adjust”. It is sometimes true that the effect might be permanent: wages may never recover and the emotional toll can last for a very long time and have a permanent influence on the family.

These adjustment costs can be large and can significantly reduce the gains from trade. Estimates suggest that it is still very well worth opening borders and continuing to engage in trade, but the gains may not be as large as expected when these costs are included in the calculation.

1. **Why Adjustment Costs Matter**

Adjustment costs matter for a variety of reasons. In particular, they serve to erode the popular support for trade. As they are so visible, they can have a tendency to overwhelm the benefits of trade to the public.

It is also true that these adjustment costs suggest that there is a lot of policy work to be done to make labor markets more efficient. This would help not only to address the adjustment costs associated with trade, but also of job loss more generally.

1. **Distributional impacts of trade: unemployment**

Generally, trade theory has nothing to say about unemployment. This is because trade is primarily about how a country will reallocate its resources from declining sectors and/or firms that face strong import competition to expanding exporting sectors and/or firms that hold their own in international markets. That is, labor, capital, land etc. all move from the contracting import-competing sectors and/or firms to the expanding export sectors and/or firms. Indeed, the typical assumption in trade theory models is that this reallocation happens costlessly and immediately.

But, probably unsurprisingly to many non-economists, recent empirical evidence suggests that workers can face very large costs to move between sectors and/or locations in the U.S and that it does not happen immediately (Autor, Dorn and Hanson, 2013). In turn, workers who face rising exposure to import competition because of the sector or location where they work can have higher rates of unemployment and lower rates of labor force participation.

1. **Trade is Not a Driving Force of Unemployment**

It is an intuitive notion that import competition contributes to job loss and therefore to unemployment. Recent studies have validated this view. There is often a significant lag between displacement due to trade and finding a new job. However, the magnitude of this effect relative to other things driving unemployment is very small. Business cycles are much more likely to contribute and to drive long term trends in unemployment than is trade.

The trend in this graph is toward declining unemployment rates over time. Throughout the duration of this graph trade was rising, suggesting its small role in determining aggregate unemployment in the economy.

1. **Policy Solutions**

Given the significant nature of these adjustment costs - costs of displacement and perhaps some increment to unemployment – how do we address these adjustment costs?

1. **Tariffs**

Despite their popular appeal and current use, it is generally believed by economists that tariffs and other forms of border protection are a costly way of reducing trade costs.

Tariffs do reduce imports of particular goods. They do this by raising prices, which causes purchasers of those goods – consumers and producers, alike – to buy fewer imports. The rising prices tend to change or distort what people buy and what firms produce. This introduces sometimes significant inefficiencies into the economy.

It is also true that imposing imports will not be well received by our trading partners. As such, retaliation, or imports in foreign countries could well be placed on our exports. This would reduce exports in the same way that our tariffs would reduce imports.

In the long term, as we have discussed, the exchange rate would adjust so that the tariffs would, in fact, have no effect on the trade deficit.

Basically, imposing tariffs have exactly the opposite effect of opening borders to trade. Trade results in big welfare gains that are dispersed throughout the economy, but also significant costs to a small part of the economy.

Similarly, tariffs bring gains to a small part of the economy while imposing costs on everybody else.

There are generally considered to be a bad way to alleviate the costs of trade.

1. **General Consensus of Economists on Tariffs**

When surveyed, prominent economists all agree that tariffs are not a good way to try and stimulate employment in specific industries – generally STRONGLY agree.

1. **Directed Support: Adjustment Costs**

The most efficient way to offset the adjustment costs would be directed support to those who have lost a job and are struggling to find a new one.

There is an existing Trade Adjustment Assistance program that is supposed to do just this. However, it has traditionally been badly underfunded and not all displaced by trade qualify. Turns out to be very difficult to discern just who has been displaced by trade.

Better would be a program that provides benefits universally to those suffering adjustment costs.

1. **Balanced Budgets**

As discussed earlier, it is quite likely that the best way to reduce the trade deficit, using government policy, would be to reduce the budget deficit and debt. The deficit in 2018 was $778 billion and the debt currently stands at more than $21 trillion.

Reducing the debt would also have the attractive features of reducing the share of the government budget, currently 8% that goes toward paying the interest on the debt.

It would also reduce our foreign debt exposure. China currently holds more than $1 trillion in U.S. Treasuries. There are some who worry that China could start to unload these securities, causing interest on Treasuries to rise, doing damage to the U.S. economy. There is some, but very little evidence that China has started to pursue this path in retaliation for U.S. tariffs.

1. **Trade Summary**

To summarize the conversation about international trade so far, I have discussed the fact that trade and growth are positively related. International trade, through a variety of channels, efficiency and competition, in particular, can lead to economic growth.

One of the primary benefits of international trade is lower prices. This is good for consumers and for firms that purchase imports or import competing products as inputs to production.

Unfortunately, the gains are widespread and not generally acknowledged by those who feel them, while the losses from trade can be highly concentrated. It is this concentration of losses that has helped to turn public opinion away from international trade and toward protectionism.

We have also discussed how tariffs and other means of reducing imports is not the most effective way of mitigating the harm caused by trade. As the benefits of trade are generally believed to outweigh the costs, there is likely a better way. In particular, we can address the problem of labor dislocation more generally, aiding workers displaced by international trade at the same time.

1. **U.S. Trade Policy**

We are currently in an era of very activist trade policy by the United States government. The bulk of the activity at this point has been directed at China, though some policies are not China specific. Let’s have a look at what has been happening in Washington, DC as international trade policy goes.

1. **US trade policy in practice: Congress**

Article I of the US constitution gives Congress the exclusive power over trade policy. In modern times, Congress frequently passes what’s known as “Miscellaneous Tariff Bills” that temporarily remove tariffs on thousands of products. In September 2018, Congress passed a Miscellaneous Tariff Bill covering over 1600 products including chemicals, footwear and toasters.[[6]](#footnote-6) Back in 1930, Congress passed the Tariff Act of 1930 that implemented the infamous Smoot-Hawley tariffs. These tariffs were 50% higher than those at the time and represent the highest tariffs in the US between 1828 and today.[[7]](#footnote-7)

However, over time, Congress has delegated a lot of trade policy authority to the Executive.[[8]](#footnote-8) Historically, there have been two main uses of this authority. First, negotiation of reciprocal trade agreements. This authority dates back to FDR and the 1934 Reciprocal Trade Agreements Act and the various forms of “trade promotion authority” since that time.[[9]](#footnote-9) And, this authority underpins all Free Trade Agreements, e.g. NAFTA, and multilateral agreements, e.g. the Uruguay Round of 1994, involving the US. Second, Temporary Trade Barriers, or TTBs, via the Tariff Act of 1930. And, we’ll talk more about these TTBs shortly.

1. **US trade policy in practice: Congress & WTO**

In 1994, Congress passed the Uruguay Round Agreements Act which committed the US to the rules of the newly founded World Trade Organization (i.e. WTO). Fundamentally, the WTO was built on the trade rules governing global trade since 1947 which were known as the GATT (General Agreement on Tariffs and Trade).

The basic rule of the GATT and, in turn, the WTO is the MFN principle: you have to apply the same tariffs, the so called “MFN tariff” on all other WTO members. That is, you can’t discriminate by levying high tariffs on some countries and low tariffs on other countries. And the US has committed to upper bounds on these MFN tariffs. In 2017, the average US MFN tariff, either the upper bound or actually applied, was 3.4%.[[10]](#footnote-10)

1. **US trade policy in practice: Congress & WTO**

However, there are exceptions to both the MFN principle and the upper bounds on MFN tariffs. First, Free Trade Agreements, or FTAs, NAFTA for example. Here, countries agree to eliminate tariffs on each other; in US FTAs, this happens for essentially, but not literally, all products. FTAs also have other rules on things like non-tariff barriers to trade, product standards and how FTA members settle trade disputes. The US has FTAs with 20 countries covering 35% of US imports and 42% of US exports.

Second, rich countries often levy tariffs on developing countries that are below the MFN tariff rates. For example, among other similar programs, the US participates in the Generalized System of Preferences, “GSP”, which gives certain developing countries tariff free access to the US on certain products.

Third, TTBs, those Temporary Trade Barriers we mentioned a few slides back. Under TTBs, countries can impose temporarily high tariffs that violate both the non-discrimination principle and the upper bounds on MFN tariffs.

1. **US Trade Policy in Practice: Bureaucracy**

Indeed, until recently TTBs were the most frequent use of new US tariffs. Specifically, Anti-dumping duties are tariffs imposed on foreign firms when they’re selling in the US at below fair value.[[11]](#footnote-11) And, countervailing duties are tariffs imposed on foreign firms when they’re receiving foreign government subsidies.[[12]](#footnote-12)

When Congress delegated these TTBs to the Executive branch via the Tariff Act of 1930, it legislated that the Department of Commerce and the USITC both manage these processes and that each had veto power.[[13]](#footnote-13) The USITC is the US International Trade Commission and is an independent and non-partisan government agency. ADs and CVDs have been imposed on 928 occasions between 1980 and 2016.[[14]](#footnote-14) And they have continued under the Trump administration. In August 2018, the administration announced AD duties on large diameter welded pipe from Canada and five other countries (China, Korea, Greece, India and Turkey).[[15]](#footnote-15) And, in 2017 the administration announced CVDs on laminated woven sacks from Vietnam.[[16]](#footnote-16)

1. **US trade policy in practice: Executive**

In contrast, the Trump administration has used a different set of Executive authorities delegated by Congress.

The first are “safeguard tariffs”, under Section 201 of the Trade Act of 1974. These are used when an industry claims major injury from an import surge. The USITC acts as a quasi-judge here and determines whether an import surge is the most important reason for the industry’s major injury. If so, the Executive can impose temporary trade barriers. In January 2018, Trump imposed temporary tariffs on $8.5bn of solar panel imports and $1.8bn of washing machines.[[17]](#footnote-17) Historically, use of safeguards is rare, being used only 11 times previously, last by Bush for the 2001 Bush steel tariffs.[[18]](#footnote-18)

Second, national security tariffs, under Section 232 of the Trade Expansion Act of 1962. These can emerge from an investigation instigated by the Secretary of Commerce into whether imports are damaging national security. If the Commerce Department finds such evidence, the Executive can impose trade barriers and there are no statutory limitations on their severity. Based on the Commerce Department’s February 2018 investigation into steel and aluminum, Trump has imposed tariffs on $40bn of steel and aluminum with imports from Australia, Argentina, Brazil and Korea exempted. There’s also currently an investigation and public hearings into whether over $200bn of auto and auto part imports are damaging national security. Historically, these situations are exceedingly rare. Excluding oil imports, national security tariffs have only been imposed once, by the Reagan administration on metal-cutting and metal-forming machine tools.[[19]](#footnote-19)

1. **US trade policy in practice: Executive**

The USTR was established through the Trade Expansion Act of 1962 and is part of the Executive Office of the president. The Office of the USTR is responsible for devising and recommending trade policies to the President, conducting bilateral and multilateral trade negotiations, and coordinating trade policies with the government.

The third leg of Trump’s recent Executive trade policy actions is the “unfair trade practices tariffs” under Section 301 of the Trade Act of 1974. These tariffs retaliate against unfair foreign trade practices and start with an investigation initiated by the USTR, which is the US trade representative. In August 2017, the USTR initiated an investigation into Chinese practices regarding technology transfer from US firms and unfair appropriation of US intellectual property from US firms in China. Following the report’s findings, Trump has currently imposed 25% tariffs on $50bn and 10% on $200bn of Chinese imports with plans to increase the latter rate to 25% (depending on current negotiations). An additional $267bn of Chinese imports might be subject to a tariff.[[20]](#footnote-20)

While these types of tariffs were used systematically in the pre-WTO world before 1995, they have rarely been used since then until now (i.e., 122 between 1974 and 2016, 49 during the Reagan Administration, and 1 since 2001).[[21]](#footnote-21)

1. **US Trade Policy in Practice: Retaliation**

Countries have already started retaliating against US tariffs. In response to the national security tariffs on steel and aluminum, this includes the EU, Canada, Mexico and China. Their retaliation has been proportionate to their US exports of steel and aluminum. And it’s been targeted retaliation either on industries reliant on foreign markets (such as pork), on farmers (particularly fruits and nuts), on consumer household goods (such as ketchup and mowers) and on politically sensitive products like Kentucky bourbon (Mitch McConnell’s state), Wisconsin ginseng and Harley motorcycles (Paul Ryan’s state) or Levi jeans (headquartered in Nancy Pelosi’s San Francisco district).

China has also retaliated in proportion and in two stages to the tariffs imposed by Trump for unfair trade practices. That is, a 25% tariff on $34bn of US imports into China. This includes soybeans, the largest US export to China in 2016, and cars, the third largest US export to China.[[22]](#footnote-22) An additional $14bn became subject to taxes since August 23, 2018 and include industries such as chemicals, medical equipment and oil. Lastly, China imposed tariffs on an additional $60bn of imports from the U.S. starting Sep. 24/2018.[[23]](#footnote-23)

1. **US Trade Policy in Practice: Winners and Losers**

Let’s talk a bit about the winners and losers from the Trump administration’s recent actions. The basic insights from trade theory are as follows. Because a US tariff is a tax on a US import, the price paid for this good by consumers in the US should rise. Hence, on one hand, US producers of the good win and so will their workers to the extent that firms raise wages and/or hire more workers. On the other hand, US consumers lose. And, sometimes it’s US firms that are the buyers and to the extent that these firms have to lower wages and/or lay off workers, these workers are losers too. And if they raise prices to cover the increased costs, their consumers or other buyers lose as well.

Let’s look at the safeguard tariffs on solar panels and washing machines. All else equal, the higher price of solar panels and washing machines in the US benefits US producers of these goods. Indeed, Suniva and SolarWorld are two US solar panel producers who were strongly behind the tariffs. On the washing machine side, Whirlpool was a strong advocate. However, things are not always all else equal. The price of solar panels depends heavily on Chinese demand and the Chinese government responded by massively cutting consumption subsidies for solar panels. This greatly depressed demand for solar panels and largely offset the price increase stemming from the tariffs.[[24]](#footnote-24) And, LG and Samsung are in the process of relocating production here to the US which means increased competition for Whirlpool in its own backyard.[[25]](#footnote-25)

As far as the losers, this includes you and me as consumers of solar panels and washing machines. But, sometimes firms are also consumers. Especially when it comes to the solar panel industry where it’s estimated that 85% of employment is actually in distribution and installation of solar panels rather than solar panel production.[[26]](#footnote-26) So, the losers here include distribution and installation firms and at least some of their workers who will likely see lower wages and layoffs. And, given the relative sizes of the workforce in solar panel production versus installation and distribution, it’s not hard to see that this could, on net, reduce the number of jobs in the solar panel sector.

1. **US Trade Policy in Practice: Winners and Losers**

Now let’s look at the national security tariffs on steel and aluminum. Again, it’s the US steel producers who are the winners here and, to the extent they raise wages and/or hire more workers, US steel workers too. Specific examples of US steel producers who are major supporters of these tariffs are Nucor, United States Steel and AK Steel. [[27]](#footnote-27)

Losers here are again US consumers, but when it comes to steel “consumers” are mostly firms. And, steel is of course a major input throughout the whole economy and the manufacturing industry in particular. Indeed, about 2 million jobs are in US industries where steel makes up for at least 5% of the value of inputs.[[28]](#footnote-28) In contrast, the amount of jobs in steel production is about 140,000.[[29]](#footnote-29) Again, given the relative sizes of the workforces in steel production versus steel consuming industries, it’s not hard to see that this could, on net, reduce the number of jobs in the US economy.

Another set of losers come from the retaliation we’ve seen by foreign countries against these steel and aluminum tariffs. The US agricultural sector is a major loser from tariffs. China and Mexico have tariffs on pork accounting for 44% of total US pork exports (i.e. not just exports to these countries). Adding India to the mix, there’s tariffs on 37% of total US apple exports. Chinese and Indian tariffs hit 12% of total US nut exports. Predominantly the EU, but also Canada and Mexico, have tariffs on 53% of total US whiskey exports, which include the politically motivated Kentucky Bourbon from Senate Majority Leader Mitch McConnell’s state. Canadian tariffs hit around 50% of total US exports of mineral water, coffee and ketchup.

1. **US Trade Policy in Practice: Winners and Losers**

The proposed national security tariffs on autos and auto parts, suggested by Trump to be 25%, is an interesting case. Typically, US producers of a good like a tariff because it increases prices. However, US auto producers and US auto parts producers are strongly united in their strident opposition to the proposed tariffs. For auto producers, they’re truly global firms, importing a lot of autos and auto parts and exporting a lot of cars which would likely be jeopardized by foreign retaliation. GM, BMW, Toyota, Honda, Nissan, Mitsubishi are all strongly opposed to tariffs.[[30]](#footnote-30) For auto parts producers, they fear lower demand for their products as auto producers scale back operations. For example, the auto parts association, Motor and Equipment Manufacturers Association (MEMA) is strongly opposed to tariffs. [[31]](#footnote-31)

US consumers are also losers here. It’s estimated that the price of new cars will rise by 10-20% depending on the extent of foreign imports embedded in these cars and the amount of the cost increase that car firms pass on to consumers.[[32]](#footnote-32)

Despite the unusually broad opposition to these tariffs, there is one group supporting them, which is the United Auto Workers Union (UAW). On one hand, auto and auto parts producers claim the tariffs will force them to scale back production because of higher costs and less access to export markets upon expected foreign retaliation. However, the UAW claims these firms will scale up US production of due to the disincentives for importing these products. [[33]](#footnote-33)

1. **US Trade Policy in Practice: Winners and Losers**

Trump has imposed tariffs of 25% and 10% on $50bn and $200bn of Chinese imports, respectively. About 85% of the $50bn and 47% of the $200bn imports are inputs and capital equipment used by US firms.[[34]](#footnote-34)

As usual, the winners are U.S. firms who produce goods subject to the tariff. Indeed, for this reason, prior to the announcement of which goods would be hit with tariffs, US producers pushing for their goods to be on the list included steel, furniture and textiles.[[35]](#footnote-35) And, again, US consumers are losers. Given that the goods targeted are nearly exclusively inputs and capital equipment used by firms, the consumers here include US firms who, at least somewhat, will pass on these prices to end consumers.

In terms of retaliation, China has imposed tariffs on $46bn of US exports to China with $14bn of that in effect as of August 23. Key US industries targeted include soybeans with nearly 60% of US soybean exports going to China, vehicles (10% of US vehicle exports), Crude Oil (20% of US crude oil exports), shellfish (23% of US shellfish exports) and sorghum (78% of US sorghum exports). So, agriculture is again talking a big hit via foreign retaliation and the auto and energy sectors are now bearing the brunt too. [[36]](#footnote-36) The big hit taken by farmers helps explain the Trump administration’s $12bn assistance package for US farmers.

1. **China: The Problem? The Solution?**

A great deal of the focus of international trade policy has been directed at China. It is worth stepping back to assess whether or not this focus is warranted. If our efforts are to be directed at a single country, China makes as much sense as any other country. At 21% of imports, it is the single largest source of imports into the United States. This still leaves some 79% of all imports out of the conversation.

Even if we were to address all of our concerns vis a vis trade with China, it is not at all clear that the fundamental difficulties – adjustment costs – arising from trade would be taken care of. It is likely that much of the adjustment to trade is a result of trade with other countries. This brings into question the motivation behind the use of China as either the source of our trade problems or the solution to them.

***[PART 3: Horizontal and Inbound FDI (Swati Verma)]***

1. **Foreign Direct Investment (FDI)**

Intro slide to the section

1. **FDI: Definition**

Any financial investment made by an entity, i.e. a firm or an individual, belonging to one country into business interests located in another country is known as Foreign direct investment or FDI. Foreign direct investments are different from foreign portfolio investments (FPI) in which an investor just purchases equities of foreign-based companies or other financial assets such as bonds or deposits[[37]](#footnote-37).The two forms of investments are distinguished by a notion of direct control[[38]](#footnote-38). The Organization of Economic Cooperation and Development (OECD) and International Monetary Fund (IMF) define control as owning 10% or more of the business[[39]](#footnote-39). Also, FDI is usually intended for a longer term, whereas FPI may specially focus on short-term financial gains.

The global FDI flows were about $1.52 trillion in 2017, as the estimates by UNCTAD’s Investment Trends Monitor indicate. The top three destinations of FDI have been developing Asia, European Union and North America. FDI has a significant presence in the US economy. US was the largest recipient of FDI in 2017, attracting an estimated US$ 311 billion in inflows[[40]](#footnote-40). The inward stock of FDI in the US has been $3.7 trillion in 2016, and its growth rate has been 7.8% per year, averaged over the years 2009-16[[41]](#footnote-41).

1. **Type of FDI**

FDI can be distinguished as being Greenfield or Brownfield, based on its method of entry into foreign host economy[[42]](#footnote-42). In cases where foreign investment is made by establishing a new production capacity in a host economy, it is called as Greenfield FDI. If the investment happens by purchasing an existing production facility, usually involving the process of mergers and acquisitions with domestic companies, it is commonly known as Brownfield FDI.

FDI can also be distinguished as being Horizontal or Vertical FDI on the basis of the overall production strategy interlinking the global operations of the investing company. Horizontal FDI happens in the case when roughly similar production activity is duplicated in multiple countries. An example of Horizontal FDI is the expansion of McDonalds, Starbucks or Coca-cola production facilities in different countries. In contrast, Vertical FDI refers to the location of various stages of production in different countries. This type of FDI is trade-creating (Cohen, 2007) because it gives rise to increased cross-border trade of intermediate products at different stages of production within the various branches or production units of a company located in different countries. It has been pointed out by some studies like Markusen (1995) that the bulk of FDI at the global level is horizontal rather than vertical[[43]](#footnote-43).

Vertical FDI can be of two types, namely Forward and Backward. Forward vertical FDI indicates a movement of a company towards the market. An example is Toyota acquiring a car distributorship in US. Backward vertical FDI refers to the process of moving back towards the source of raw-material. An example of this FDI is the case of Toyota acquiring a tyre manufacturer or a rubber plantation in any country.

1. **Why Invest in Foreign Countries?**

Some common motivations for FDI were identified by the theorist like Dunning (1977) in his OLI paradigm. He opined that three sets of advantages influence a firm's decision to produce abroad. These are Ownership, Locational and Internalization (OLI) advantages. Ownership advantages are firm-specific competitive advantages like production knowledge, managerial skill, technology etc. that can be profitably exploited abroad. Locational advantages comprise country specific features like geographical, political space or market conditions that make it attractive to do FDI. Internalization advantages are derived from exploiting the ownership advantages internally when sharing proprietary assets can be risky to a firm or in the presence of imperfect market for those assets.

FDI can also happen when markets for manufactured products are protected from international competition by high tariffs or quotas. Such FDI is known as 'tariff jumping' FDI (UNCTAD, 1998, p. 107). An example of this type of FDI is large scale FDI into Latin American markets for automobiles that has been protected from imports by a high tariff barrier (Bjorvan, 2000). In this case, FDI may substitute for trade.

FDI can also arise due to favorable tax policies in some locations. An example is Tax Haven FDI inflows into locations with low corporation tax rates like Cayman Islands, the Bahamas and Liechtenstein. Tax havens have accounted for the highest increase in FDI inflows in India in 2018 (Suneja, 2018).

Also, literature (e.g. Dunning, 1993) has identified the three most common types of priorities that FDI has for selecting any host location for investment. These are namely resource seeking, market seeking or efficiency seeking FDI. Resource seeking FDI are influenced by availability of natural resources whereas Market seeking FDI is attracted by factors like market size, per capita income and market growth in the host country. Efficiency seeking FDI is focused on minimizing cost of production by rationalizing the structure of investment across geographically dispersed production locations. It is primarily attracted to locations with relatively low wage scale and efficient socio-economic environment. It has been noted that a combination of these three motivations are pursued by many large MNCs (Cohen, 2007).

1. **Who Engages in FDI?**

FDI is mainly undertaken by the corporate sector, particularly by Multinational corporations (MNC). MNC is defined as a firm that owns, controls or manages production facilities in several countries (Salvatore, 2004). It has been argued by some theoretical studies like by Helpman, Melitz & Yeaple (2003) that usually the most productive firms invest in foreign market, while the less productive firms chose to export and the low productive firms serve only the domestic market.

The MNCs are large in size, and have high significance in the global economy. The total number of MNCs worldwide was 103,786 in 2010 and developing countries were host to 57 per cent of foreign affiliates. MNCs accounted for 25 per cent of world GDP in 2010 (UNCTAD, 2011). Their combined revenue is higher than GDP of most economies. A recent study by Cavanagh and Anderson (2000) has found that the combined sales of top 200 corporations surpass the combined economies of 182 countries. Another study by Global Justice Now (2016) has indicated that the top 100 global economic entities of the world consist of 69 corporations and 31 countries.

1. **FDI & trade**

FDI is closely related to global trade. In 2013, intra-firm trade within MNC networks accounted for 33 per cent and international production networks of MNCs accounted for 80 per cent of global trade (UNCTAD, 2013). FDI, mainly of the vertical type, involves transfer of resources (goods, services, finance) within highly complex Global Production Networks (GPN) of MNCs. These intra-firm cross-border transactions are highly susceptible to transfer mispricing (overpricing or underpricing) manipulation by MNCs to minimize their overall global tax liability due to differences in corporate tax rates among different jurisdictions. Such practices entail risks of serious losses of tax revenue for nations.

A recent study by the Global Agenda Council (2015) indicates that about 4 to 10 per cent of global corporate tax revenue is lost annually due to profit shifting conduct of MNCs, and developing economies are more at risk to such illicit trade practices. Another study by Global Financial Integrity (2015) has alarmingly indicated that about US$ 7.8 trillion have been lost by developing and emerging economies over 2004 to 2013 period through illicit financial flows, mainly through trade mis-invoicing.

As a policy response to check tax avoidance by MNCs, the OECD has initiated the BEPS (Base erosion and profit shifting) project in 2013 in association with the G20 countries[[44]](#footnote-44) and has recommended a set of 15 separate BEPS Action Plans[[45]](#footnote-45) to address flaws in international tax rules. Many of these action plans are being adopted by various nations currently. Country-by-Country reporting is a minimum standard of the OECD BEPS initiative and almost all countries that are headquarters to large MNCs have introduced new reporting obligations by May, 2018[[46]](#footnote-46).

In the case of the US, intra-MNC exports accounted for 30.8 per cent of total US exports and intra-MNC imports accounted for 35 per cent of total US imports in 2014[[47]](#footnote-47). Some studies have indicated significant risk of profit shifting by US MNCs. A study by Tax Note (2001) found that subsidiaries of U.S. corporations had 46 percent of their profits, only 9 percent of their employees and 13 percent of their plant and equipment in four major tax havens in 2001 (see Rattner, 2004). A report by Christian Aid (2009) estimated a value of $ 1.1 trillion in bilateral trade mispricing into US and EU from non-EU nations over 2005-07 (McNair, Hogg and Pak, 2009).

1. **FDI & market competition**

FDI or MNCs can make market competition imperfect by reallocating market shares, limiting the number of competitors and obtaining monopoly rents. A small number of MNCs may gain large and increasing shares of world economic resources (Khor, 2000) and may dominate world markets in certain strategic industrial sectors (e.g. pharmaceuticals, machinery) (Cohen, 2007). This may arise because MNCs have high efficiency owing to their technological expertise, financial resources and competitive strength. They engage in anti-competitive practices and may buy out local firms through mergers and acquisitions. Due to one or more of such factors, the local firms may be forced out of business (UNCTAD, 2003, p. 105). The exit of least productive domestic firms due to entry of highly productive foreign MNC firms has been theorized in a few studies like Helpman et al. (2004)

Some empirical evidence by Lall (1979) and Newfarmer and Marsh (1981) shows positive association between FDI & industrial concentration in Malaysia and Brazil respectively. Alternatively, in a more recent study, Rutkowski (2006) found that FDI reduced market concentration in 13 Central and East European countries. A similar finding was noted in the case of Portugal by Forte (2014).

1. **FDI & productivity**

FDI can generate positive productivity spillover to the host economy through diffusion of foreign technology, knowhow or skills. Foreign subsidiaries have a higher level of efficiency or productivity as compared to domestic firms due to their high capital intensity or larger scale of production. So, they are able to produce more products per input of capital or labour. As foreign firms provide higher wages, better training or expertise to their workers and also introduce new technologies, local workers get exposure to foreign skills and knowledge that leads to improvement of human capital (Carkovic and Levine, 2002). Backward or forward linkages with foreign firms may also generate diffusion of technology and knowledge to local input suppliers or sellers. Foreign competition can also stimulate local firms to improve productivity and knowledge (Blomstrom and Sjoholm, 1999). Large technology or productivity gaps between local and foreign firms can limit spillovers, however, due to limited absorptive capacity.

Various studies have found a higher productivity level of foreign firms compared to local firms in countries like Mexico (Blomström and Wolff, 1994), East Asian nations (Ramstetter, 1999) and for the US firms (Doms and Jensen, 1998).

Evidence on productivity spillovers to host economies is mixed though. Whereas there is little evidence for Horizontal FDI, the evidence is large and mostly positive for Vertical FDI. Studies that have shown positive spillover from FDI are Girma and Wakelin (2000) for the UK and Tseng and Zebregs (2002) for China. For the US, Keller and Yeaple (2003) found that 11 per cent of productivity growth of manufacturing firms over 1987-96 was caused by spillover from FDI.

A few studies like Aitken and Harrison (1999) also found some evidence for negative or no spillover respectively. There is evidence that inward FDI has been most beneficial to local firms when they are not very far behind the foreign firms (Keller and Yeaple, 2003). Technology or productivity gaps of local firms were found to affect spillover negatively in few studies like Girma and Wakelin (2000).

1. **FDI & growth**

FDI enhances economic growth of host economies by transferring production knowhow, skills or technology through productivity spillovers and local linkages. An improvement in productivity of capital stock (Wang and Blomström, 1992) or human capital (Balasubramanyam, Salisu and Sapsford, 1996) may result, and that promotes growth. The evidence of FDI’s impact on growth is mixed. Many studies have found evidence for a positive effect of FDI on growth primarily when some absorptive characteristics are present in host economies, such as advanced level of development, qualified labour force (Borensztein, De Gregorio and Lee, 1998), openness to trade (Balasubramanyam et al., 1996) and developed financial markets (Alfaro, Chanda, Kalemli-Ozcan and Sayek, 2004, and Hermes and Lensink (2003). Positive effect of FDI was found on growth of developed nations or high income developing nations by Xu (2000). Also, a negative effect on growth was noted for developing nations in some studies like Herzer (2012). Some studies have found insignificant effect of FDI on growth (Carkovic and Levine, 2002, and Carbonell and Werner, 2018). It has been commonly argued that exploitation of the growth potential of FDI needs a conducive economic climate comprising supportive business environment and some minimum level of economic development (OECD, 2002a).

1. **FDI & employment**

It has been argued theoretically by studies like Salvatore (2004) and various others that flow of investment capital from one country to another leads to redistribution of domestic income in both countries[[48]](#footnote-48). The return on capital may rise and return to labour or other factor of production may decrease in investing country. In the host country, inward FDI may lead to a redistribution of domestic income from capital to labour or other factors. In the case of less than full employment, FDI tends to increase employment in the host country, as suggested by these studies.

It has been argued that as foreign firms offer higher wages than domestic firms, there may be wage spillovers and a rise in average wages in host economy may result. If the labour market is competitive, a rise in demand for labour owing to presence of foreign firms may also raise average wages.

Many studies have shown that foreign owned firms pay higher wages than domestic firms in both developing and developed economies[[49]](#footnote-49). Similar evidence exists for the US in the study by Doms and Jensen (1998). In 2015, the average annual compensation (including wages) paid by foreign subsidiaries in the US was $79,000 per employee, which was higher than the annual average for all US private sector worker compensation.[[50]](#footnote-50)

However, the empirical evidence on wage spillovers is largely inconclusive. Some studies like Lipsey and Sjöholm (2001) have found positive wage spillovers to domestic firms in Indonesia, whereas other studies like Girma et al. (2001) have found no overall effect in the UK. The evidence on the effect of presence of FDI on average wages is sparse. Positive effect was found by Figlio and Blonigen (2000) in South Carolina. No effect was noted by several studies focusing on the US like Feliciano and Lipsey (1999)[[51]](#footnote-51).

FDI contributes significantly to employment in the US at present. Twelve million jobs in the US are attributed to FDI at present, which accounts for 8.5 per cent of the labour force (ITA study, 2016)[[52]](#footnote-52).

1. **Competition for FDI**

There is fierce competition among countries to attract the 'right' kind of FDI through various policies and incentives. These incentives are fiscal (ex. tax holidays, low tax rates etc.) or financial (subsidies, grants, loans etc.) in nature, and also involve infrastructure investments. Also, Investment Promotion Agencies have been established in various nations for this purpose. Competition exists mostly between countries or geographic regions with a similar development level, like between developing nations, as indicated by a study by WAIPA/ OECD (2003). However, it can also be severe at sub-national level. As an example, the Southern states of the US have bid aggressively for foreign automobile plants in 1990s. Alabama offered an incentive package worth $253 million to Mercedes-Benz in 1993 and Hyundai in 2002. Incentives have resulted in varying levels of success for different host countries. For example, China, Singapore and Ireland have successfully attracted FDI after the 1980s due to a combination of incentives, skilled labour force and strategic industrial policy.

However, various negative aspects associated with the competition for FDI have been discussed in the literature. Competition can lead to distortion of markets and trade, involve unreasonably high price and can also exacerbate regional disparities as wealthier states may provide larger incentives (OECD, 2002b)[[53]](#footnote-53). Developing nations may face serious budget constraints in offering incentives, and can also divert valuable resources away from welfare activity in the process (see Harish and Plouffe, 2018).

The developed nations usually adopt a neutral policy stance to FDI like national treatment and right of establishment with a few exceptions for national security. But, developing nations have significant sovereignty concerns as powerful and rich global corporations may control public policy and the countries may have very little power to regulate them[[54]](#footnote-54). Certain efforts have been taken to regulate incentives for FDI at both global level by the EU and at sub-national level in nations like Canada, Australia and US[[55]](#footnote-55).

1. **How is FDI Governed?**

In view of the significant real and potential impact of MNCs on performance of national economies, the international regulation of FDI is desirable (Gilpin, 2002). But there is a lack of clarity on the right degree of regulation. Thus, there is an absence of multilateral principles and formal institutions to regulate FDI or MNCS. The risks are largely governed through the investment protection clauses, mostly under Bilateral Investment treaties (BITs)[[56]](#footnote-56) (2,952 at present[[57]](#footnote-57)). These BITs deal with double taxation of MNC earnings or legal rights of foreign subsidiaries. Investment protection clauses are also part of various bilateral and regional trade and economic integration agreements like NAFTA[[58]](#footnote-58), ECT[[59]](#footnote-59), CETA[[60]](#footnote-60), CPTPP[[61]](#footnote-61) and RCEP[[62]](#footnote-62) presently.

However, the Investor-State dispute settlement (ISDS) system places host governments under undue vulnerability wherein foreign investors can sue the host governments over policy issues which may be harmful to their interests. There is scope only for the investors and no mechanism for the states to file claims. Some common concerns for developing countries are high legal fees, risk of limited gains under strong property right protection, and the possibility of avoidance of domestic legal system by a foreign investor[[63]](#footnote-63) (Harish and Plouffe, 2018). There has been much opposition to integration agreements like TPP in US and TTIP[[64]](#footnote-64) and CETA in Europe due to the fear that corporations may sue the state. Some other common concerns were the fear of job losses or risk of company relocation.

***[PART 4:* Offshoring/ Trade in Intermediates and Vertical FDI *(*Peter*)]***

1. **Offshoring**

Intro slide to the section.

1. **Offshoring – A new form of globalization**

A new form of globalization has been much discussed in the public over the past decades: offshoring.

Here, in the left picture, we can see a picture of the famous headquarters of Apple, a US-based company which has most of its production done abroad, for instance by Chinese assembly workers as depicted on the right.[[65]](#footnote-65)

1. **What is offshoring?**

To begin with, we need a clear definition of offshoring.

On Wikipedia we find: “Offshoring is defined as the movement of a business process done at a company in one country to the same or another company in another, different country.”

This is how the term is commonly used by economists.

The “business process” may refer to a production stage or a service, which we will distinguish below.

Note that this definition also helps us to distinguish offshoring from “outsourcing”, a term that is frequently used in the public debate to describe offshoring.

But economists distinguish between the two: While the defining feature of “offshoring” is that the activities are moved to a different country, “outsourcing” is defined as moving activities to a different firm. But outsourcing may of course also take place within the domestic economy, to a domestic supplier. Similarly, as the definition provided on this slide suggests, offshoring may also take place within a firm to a foreign subsidiary. We then speak of a multinational firm.

1. **Related to trade and FDI**

Our definition already makes clear that offshoring typically overlaps with trade and Foreign Direct Investment (FDI). In fact, different forms of offshoring can be understood as special cases of both.

First, offshoring typically involves imports of intermediate goods or services. To see this, consider a firm offshoring the production of a microchip to a foreign country. Provided that the firm needs this input to conduct its main business, it will subsequently have to import the microchips.

Second, offshoring may coincide with FDI. As already discussed in the context of our definition, offshoring may also take place within a multinational firm. In terms of our example, the microchip manufacturer abroad may be vertically integrated and owned by the firm. In this case, we will observe intra-firm imports of microchips subsequent to offshoring.

At this point, I would like to stress that, despite these overlapping features, offshoring is important by itself. In fact, it seems hard to imagine almost any manufactured consumer good in the US without offshoring (imported inputs). Also, it has distinct implications for domestic production, employment, and welfare, as we shall explore in the next few minutes. Therefore, we treat it separately.

1. **An example: The Boeing 787 Dreamliner**

To illustrate how important and pervasive offshoring is in practice, let’s first consider a prime example of successful offshoring This figure shows that Boeing buys the parts and components for its 787 Dreamliner from many suppliers all around the globe, located in countries like Japan, Italy, China, Australia, and many more.

1. **How much offshoring has happened?**

Now this is just one example. Before we think further about the consequences of offshoring, let’s have a broader look at the data to see: How much offshoring has happened from the US?

Offshoring is inherently hard to measure. We do not have systematic data on the exact number of domestic jobs moved abroad. But we can get some idea of the magnitude of offshoring and the rise over the past years by looking at data on imports of intermediate goods and services, which are a direct consequence of offshoring. Let’s have a look at three indicators:

First, the blue line is the share of foreign value added embodied in exports. This share, computed by the OECD, reflects how much imports of intermediate inputs the US uses to produce its exports. It increased from 11% to 15% between 1995 and 2011, suggesting a trend towards more offshoring by US firms.[[66]](#footnote-66)

Second, the red line represents the share of imports of other business services – like bookkeeping, R&D, or IT services – in total US service imports, which rose from 12% to 20% over the years 1999-2016. And this is on top of a general increase in total service trade (in absolute value and relative to GDP) over the same period. The data indicate that offshoring of services is still a rather small phenomenon, but it’s growing fast.[[67]](#footnote-67)

Third, we look at the share of imports from a related party, meaning a firm belonging to the same multinational corporate group, in total US imports. This is the green line. We see that intra-firm trade makes up a major part of offshoring – around 51-53% of US imports of manufactured goods over the years 2005-16.[[68]](#footnote-68)

1. **Why do firms engage in offshoring?**

The main motive for why firms do offshoring is simple: They want to save on production costs.

Through offshoring, firms can benefit from international specialization along global value chains – taking the principle of comparative advantage (discussed above) to the level of the firm.

Typically, firms from the US and other developed countries are seeking cheap labor abroad. That’s why low-wage countries like Mexico and China are prime offshoring destinations for US firms. In 2011, 14% of US imports of intermediate goods came from China and 10% from Mexico.[[69]](#footnote-69)

Classic examples for saving labor costs is the offshoring of automotive parts offshored to Mexico or the offshoring of call centers to India.

But besides labor costs, firms may also seek access to raw materials, intermediate goods, or   
specific technologies abroad. In line with this, a substantial part of US offshoring is also going to high-wage OECD countries: 20% of intermediate goods imports come from the EU and 17% from Canada.

Vice versa, the US is of course also an offshoring destination for other (incl. developed) countries.

1. **What are the effects of offshoring on employment and wages in the US?**

In theory (and, as we will see, also in practice), we can expect two main effects of offshoring by US firms on US workers:

First, quite obviously, offshoring has a direct negative effect on domestic employment and wages. If we take into account only this direct relocation effect, every job offshored by a US firm is a job lost. Also, since some people will get laid off, offshoring also puts pressure on the wages of other employees who are working in the offshored occupations.

However, there is a second, positive effect of offshoring that seems less obvious: The cost savings from offshoring make the firm more competitive and allow it to expand. After all, that’s why it started offshoring in the first place. The resulting increase in the firm’s output also raises demand for all factors of production, including labor. This is how offshoring can also create new jobs (potentially in other activities within the same firm) and work to increase wages. This effect has famously been called the productivity effect of offshoring because access to cheap inputs from abroad works much like technological progress within the firm.

The resulting net effect of offshoring on wages and employment is therefore ambiguous. These two effects and the ambiguity are well established among economists, resulting from work by Arndt (1997, 1998), Jones & Kierzkowski (2001), Kohler (2004), and Grossman & Rossi-Hansberg (2008).

To provide an extreme example for the second effect, consider once again Apple Inc.. Apple has offshored a large share of its production activities. This is an example of a so-called “factoryless” goods-producing firm (Bernard and Fort, 2015). Online you can find a list of more than 200 suppliers of Apple located in many countries around the globe, such as China, Japan, or Germany.[[70]](#footnote-70)

But: Apple also employs more than 80,000 workers in the US (according to their own website). These are mainly jobs in non-production services, like management, R&D, design, marketing, etc. What is more, Apple’s employment has increased fifteenfold since 1998 (up from 5,000 employees).[[71]](#footnote-71)

Finally, theory also tells us that offshoring can have relevant distributional implications: As Feenstra & Hanson (1996) have demonstrated, offshoring is typically skill-biased. It reduces the relative wages of low-skilled (production) workers, whose jobs are offshored, and can thereby increase inequality.

Also, national security concerns may arise in relation to offshoring, though they are mostly tied to the foreign investment that may come with offshoring.

1. **Empirical evidence on the effects of offshoring (more details on the underlying empirical studies are available from the authors of this slide deck on request – this has been cut)**

What do the data say on the effects of offshoring? This is a very active area of economic research, and I can only summarize the key insights from this empirical literature here.

In general, the empirical evidence on employment effects of offshoring is mixed. Most studies find zero or small negative employment effects. This is in line with the idea that offshoring does not only cost jobs, but the associated cost savings can also create new jobs.

Wage effects are more clearly negative in most studies, so offshoring tends to reduce domestic wages of people working in the offshored occupations.

Related, there is also considerable evidence that offshoring of manufactured components hurts low-skilled workers more than highly educated ones, so it can indeed contribute to an increase in income inequality.

Finally, positive effects of offshoring on industry output and firm productivity are also quite well documented, which may explain the ambiguous employment effects.

Offshoring of services is still a rather small phenomenon. There is little data and hence less empirical evidence. But the existing evidence points to more favorable, non-negative employment effects.

1. **Policy responses to FDI and offshoring**

A variety of policy responses have been proposed and implemented to deal with offshoring and FDI. Generally, these policies can be put into three categories:

First, policies targeted at improving the competitiveness of the US or, in other words, the attractiveness of producing in the US. Examples include modifying the tax code to make producing in the US attractive for US and foreign firms. Other such policies have aimed at promoting investments into innovation and education, so that US workers and firms will have the necessary know-how and skills to benefit from offshoring. It can be said that these policies at not very specifically tailored to the specific issue of offshoring.

Second, mitigating adverse effects on workers, e.g. through financial support or retraining. The prime example for this type of policy response is the trade adjustment assistance (or TAA) program. It supports workers, firms, and farmers, who can file a petition if workers are layed off due to increased import competition or offshoring. The workers can receive finance for retraining or relocation to another state for a new job. The program has existed since 1974, and in 2017 around 1,000 petitions were filed, covering an estimated 100,000 workers.

And third, some policies have aimed at reducing or prohibiting certain types of FDI or offshoring altogether. For instance, the committee on Foreign Investment in the United States (or CFIUS) has been in the news in 2018 for blocking the takeover of Qualcomm by Singapore’s Broadcom Ltd. This government committee reviews national security concerns related to FDI into the US. Based on its investigations, the president can block foreign takeovers. While there has been a rising number of reviews over time (there were 79 in 2016), only few of them result in a withdrawing of the takeover and even fewer are eventually rejected by the president (1 in 2016). Unfortunately, there are no official numbers for the years since the new administration has taken over.

In general, if you recall where the parts of the Boeing Dreamliner come from, it seems hard to imagine that shutting down borders is a viable option. Instead, it seems advisable to support the affected workers in adjusting to offshoring (as the TAA does), regulating FDI to prevent hostile takeovers that threaten national security (as the CFIUS does), while making the US an attractive destination for offshoring and FDI from other countries (which it is in many regions and sectors).

**Outlook: How many jobs might be offshored?**

Where do we go from here? Looking ahead, one might ask: How many US jobs are threatened by offshoring and might be moved abroad in the coming years?

This question is very tough and remains to be answered. We (as economists) can only make an educated guess.

Blinder (2009) and Blinder and Krueger (2013) attempt such an educated guess. They use different approaches: Blinder (2009) conducts a detailed but subjective categorization of jobs by whether or not they require physical presence or interaction or not. Blinder and Krueger (2013) conduct a worker survey in 2008. Despite the different methodologies, both studies conclude that roughly 25% of all US jobs in the 2000s were *potentially* offshorable. Now this is only a possibility, and we can see that most jobs are still here, but it provides a rough idea of what might be coming over the next decades.

That being said, our previous discussion of the effects of offshoring on employment, productivity, and inequality seems to provide little reason to panic. Nevertheless, the distributional implications of offshoring might warrant some attention by policy makers.

One aspect that is even harder to forecast is the future offshorability of services. It seems likely that more services will become tradable over the next decades due to additional innovations in information and communications technologies (ICT). However, Jensen (2011) expects that, given its comparative advantage in tradable services, the US economy is likely to gain more from future increases in services offshoring than it loses.

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