

Trade and Globalization

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What is globalization?

- **Economic globalization involves the flow of goods, services, and investment across international borders**
- **Common terms:**
 - Exports: goods or services sold to another country
 - Imports: goods or services bought from another country
 - Trade Balance = Exports - Imports
- **Presentation roadmap**
 - A brief history of globalization and the United States
 - International trade and the American economy
 - Foreign direct investment (FDI) in the United States
 - Offshoring and its effects



Interwar isolationism

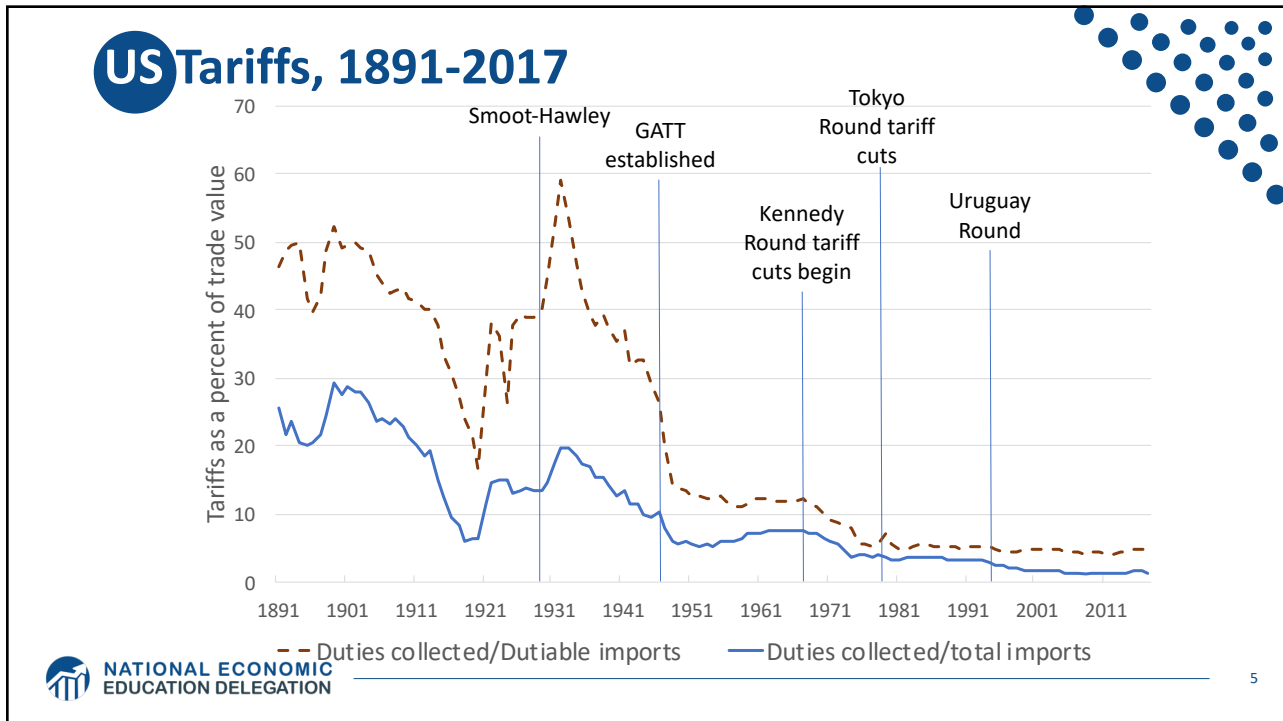
- **The first wave of globalization - roots in the 1830s, height in 1870s, end in 1913**
 - Driven by Technology and Policy
- **After WWI, many countries focused policy efforts internally**
 - The US agricultural sector speculated wartime demand would continue longer than it did
 - End of war results in commodity prices falling leading → rising tariffs
- **The Great Depression led to the highest levels of trade barriers in the 20th century**
 - Embodied by the 1930 Smoot-Hawley Tariff, i.e. 'Tariff Wall'
 - 50% increase in US tariffs
 - Highest US tariffs between 1828-2018 period
- **Eventual backlash over Smoot-Hawley led to the 1934 Reciprocal Trade Agreement Act**
 - Executive branch may negotiate trade agreements conditional on reciprocity and approval by the Senate



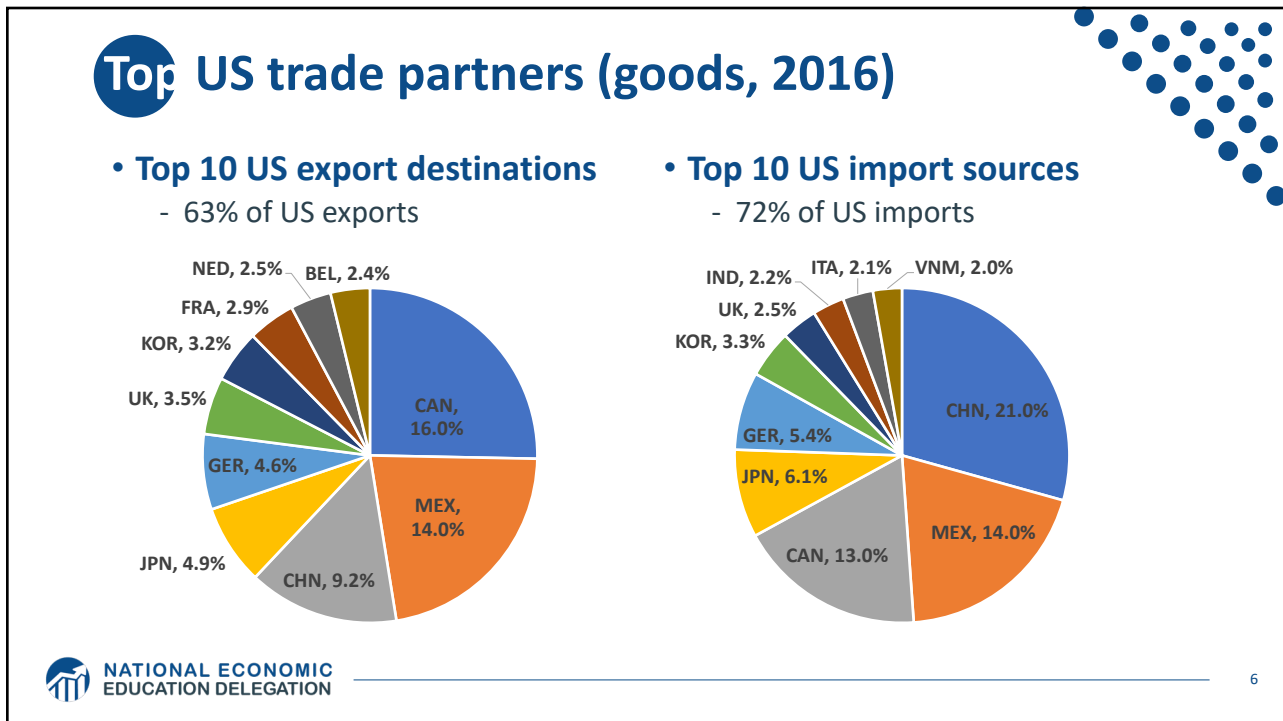
Post-war liberal institutionalism

- **General Agreement on Tariffs and Trade (GATT, 1948)**
 - Based on earlier agreements Atlantic Charter (1940) and Bretton Woods Conference (1944)
 - Nondiscrimination and reciprocity
 - Repeated multilateral negotiating rounds
- **GATT did create allowances for exceptions to nondiscrimination**
 - Generalized System of Preferences (1970s) – exempts developing countries from reciprocity
 - Preferential/regional trade agreements (i.e. free trade agreements or FTAs)
 - National security and remedies to counter uncompetitive foreign practices





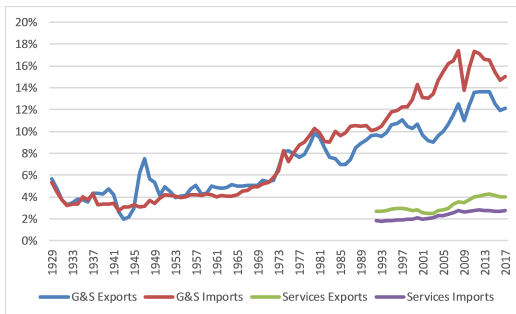
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Importance of US trade

• US trade as % of GDP



• US trade balance as % of GDP



Comparative advantage and specialization

• Comparative advantage

- Scarce resources: can't produce unlimited amounts of goods
- Export goods where production advantage largest (or disadvantage weakest)

• Non-econ example: Babe Ruth

- Top pitcher during 1916-1918. But best hitter of all time!
 - o Scarce resources: training time
 - o Post 1918, Babe Ruth specialized as hitter

• Econ example: US-UK trade in 1951

- For same output, US used less resources than UK in each of 26 manuf sectors!
- But, US net exporter to UK only for sectors where it's advantage largest
- UK net exporter to US for goods where it's disadvantage weakest

Benefit of specialization

- **For goods where US production advantage weakest...**
- **US can consume these goods by either**
 1. Importing them from UK
 2. Producing them *and* reducing production of goods exported to UK
- **Key point**
 - US can consume more of these goods by importing them from UK
- **Analogous story true for UK**
 - Trade increases size of economic pie for *both* countries



Other benefits from trade

- **Increased variety of goods**
 - US cars different than Japanese cars
- **Increased competition**
 - Competition by foreign firms reduces price-setting power of domestic firms
- **Economies of scale**
 - For some industries, production costs fall with increased production
 - Countries save resources by specializing in different industries
- **Reallocate resources to more productive firms**
 - Countries have some high, some low productivity firms
 - With better foreign market access or more foreign competition...
 - high productivity firms grow, low productivity firms shrink
 - Overall productivity increases in each country



Distributional impacts of trade: basic insights

- **Previous slides**

- Trade increases “the size of the pie” for each country
- Ignores how trade impacts distribution of the pie in each country

- **Basic insights from trade theory**

- If trade decreases demand for a factor, it generally loses from trade
 - Factors in import-competing sectors tend to lose
- If trade increases demand for a factor, it generally benefits from trade
 - Factors in exporting sectors tend to win
- Trade benefits consumers via lowers prices of imported goods
 - Some consumers may benefit more than others

Distributional impacts of trade: unemployment

- **Generally, trade theory has nothing to say about unemployment**

- Trade is primarily about reallocating resources
- Some sectors expand, other sectors decline
 - Labor, capital, land, etc. move from import-competing to exporting sector
- Typical assumption in trade theory models that this *reallocation happens costlessly and immediately*

- **However, recent empirical evidence suggests otherwise**

- Workers can face very large costs of moving between sectors or locations
- Rising exposure to import competition can increase unemployment, reduce labor force participation

What do the data say?

Trade hurts some people

- **Some parts of US are highly exposed to import competition**
 - Workers tend to be “stuck” in these locations and/or industries
 - So they suffer – lower wages, higher unemployment
- **Effects of Chinese import competition 1990-2007**
 - Higher unemp, lower labor force participation & wages in exposed locations
 - Accounts for nearly 25% of manuf employment decline
- **Effects of NAFTA-led US tariff cuts on Mexico**
 - Generally negative effects on workers without a college degree
 - Up to 8% point lower 1990s wage growth in highly exposed locations
 - Up to 17% point lower 1990s wage growth in highly exposed industries



What do the data say?

Trade benefits some people

- **Trade liberalization raises wages at “most globalized” firms**
 - Firms importing intermediate inputs and/or exporting
 - Wages higher because
 - lower tariffs on imported inputs used by firm
 - lower tariffs on products sold by exporting firms



What do the data say?

Trade lowers prices for consumers

- **Effect of import surge from China 2000-2007**
 - Prices would be about 10% higher without this import surge
 - Benefits for U.S. consumers of \$100,000 per lost manufacturing job
- **Do rich or poor benefit more from lower import prices?**
 - Evidence is mixed
 - The poor may benefit more because a larger share of their consumption is on imported goods like clothes and food
 - The rich tend to consume imported goods like electronics where import competition significantly lowers prices

US trade policy in practice: Congress

- **Constitution gives Congress exclusive power over trade policy**
 - Frequently passes “Miscellaneous tariff bills” (MTB)
 - Temporarily remove tariffs on thousands of products
 - Sept 2018 MTB: 1600 products, e.g. chemicals, footwear, toasters
- **Congress has delegated much authority to the Executive**
- **Main historical uses of Executive authority**
 - Negotiating reciprocal trade agreements (e.g. WTO and FTAs)
 - 1934 Reciprocal Trade Agreements Act, now “trade promotion authority”
 - Temporary trade barriers (TTBs) via Tariff Act of 1930

US trade policy in practice: Congress & WTO

- **Congress passed legislation committing US to WTO rules**
 - 1994 Uruguay Round Agreements Act
 - WTO built on 1947 GATT rules
- **Basic rule: Most Favored Nation (MFN) principle**
 - Impose same tariff, the “MFN tariff”, on all WTO members
 - Committed to upper bounds on these MFN tariffs
 - Average 2017 US MFN tariff (upper bound or applied): 3.4%



US trade policy in practice: Congress & WTO

- **Key exceptions to principle of MFN tariffs**
- **Free Trade Agreements (FTAs, e.g. NAFTA)**
 - Eliminate tariffs between FTA members (for nearly all products in US FTAs)
 - Stipulate other rules: non-tariff barriers, product standards, trade disputes
 - US has FTAs with 20 countries covering 35% of US imports, 42% of US exports
- **Below MFN tariffs for developing countries**
 - E.g. Generalized System of Preferences - Tariff free access to developing countries in certain products
- **Temporary Trade Barriers (TTBs)**
 - TTB tariffs can violate non-discrimination and upper bounds



US trade policy in practice: Bureaucracy

- **Until recently, most frequent use of new US tariffs: TTBs**
 - Imposed in response to foreign uncompetitive market practices
 - Anti-dumping duties (AD)
 - Tariffs imposed on foreign firms selling below fair value
 - Countervailing duties (CVD)
 - Tariffs imposed on foreign firms receiving foreign government subsidies
- **ADs and CVDs processes managed by bureaucracy**
 - Department of Commerce and USITC both have veto power
 - USITC: US International Trade Commission
 - ADs and CVDs imposed on 928 occasions 1980-2016
 - Aug 2018: AD on large diameter welded pipe from Canada & other countries
 - Sept 2017: CVD on Vietnamese laminated woven sacks

US trade policy in practice: Current Executive Use

- **Safeguard tariffs (Trade Act of 1974, Section 201)**
 - If an import surge → major injury to industry
 - Executive power enacts temporary tariffs conditional on USITC agreeing the surge caused major injury
 - Today: tariffs on imports of \$8.5bn solar panels, \$1.8bn washing machines
 - Historically: rare, used 11 previous times, last was 2002 Bush steel tariffs
- **National security tariffs (Trade Expansion Act of 1962, Section 232)**
 - If Commerce Department investigation finds evidence, Executive can impose tariffs
 - Today: tariffs on \$40bn of steel & aluminum imports
 - Public hearings into over \$200bn of auto and auto part imports
 - Historically: excluding oil imports, only used once
 - 1986 Reagan administration: metal-cutting and metal-forming machine tools

US trade policy in practice: Current Executive Use

- **Unfair trade practices tariffs (Trade Act of 1974, Section 301)**
 - US Trade Representative (USTR) investigates unfair trade practices by foreign countries
 - Aug 2017: investigation into Chinese practices over US IP and technology
 - Today: 25% tariffs on \$46bn Chinese imports, plans to extend by \$200bn
 - Historically: used systematically pre-WTO, but rarely since WTO



US trade policy in practice: Retaliation

- **National security tariffs on steel & aluminum**
 - EU, CAN, MEX, CHN have already retaliated with tariffs
 - Proportionate to their US exports of steel & aluminum
 - Targeted retaliation
 - Industries reliant on foreign markets (e.g. pork)
 - Farmers (fruits & nuts), household goods (ketchup, mowers)
 - Politics: KY bourbon, WI ginseng & Harleys, CA Levi jeans
- **Unfair trade practices tariffs on China**
 - Proportionate: 25% tariff on \$46bn of imports from US
 - EX: Soybeans and cars (largest and 3rd largest US exports to China)
 - Extension as of August 23: \$16bn of US imports
 - EX: Chemicals, medical equip, oil



US trade policy in practice: winners and losers

• Tariffs: basic insights from trade theory

- US tariffs = tax on US imports. So, higher consumer prices in US
- Winners: US producers and (at least some of) their workers
- Losers: US “consumers”, including any “consuming” firms and their workers

• Safeguard tariffs on solar panels & washing machines

- Presumed winners: US solar panel & washing machine producers
 - o Suniva, SolarWorld, Whirlpool...
 - o But #1: China cuts consumption subsidies → massive fall in Chinese demand
 - o But #2: LG and Samsung relocating washing machine production to the US
- Losers: US “consumers” of solar panels and washing machines
 - o “Consumers” can be firms
 - o Solar panels: 85% of employment in distribution and installation

US trade policy in practice: winners and losers

• National security tariffs on steel & aluminum

- Winners: US steel producers (Nucor, United States Steel, AK Steel) & workers
 - o BEA: 140,000 jobs in steel producing industries
- Losers #1: US consumers, including steel-consuming US firms
 - o BEA: 2 million jobs in US industries where steel \geq 5% of inputs
- US industries targeted by foreign retaliation

Industry	Countries	Share of US exports
Pork	China, Mexico	44%
Apples	China, Mexico, India	37%
Nuts	China, India	12%
Whiskies (e.g. KY bourbon)	EU, Canada, Mexico	53%
Mineral water, coffee, ketchup	Canada	About 50%

US trade policy in practice: winners and losers

• Unfair trade practices tariffs on China

- 25% tariff on \$46bn of Chinese imports (\$14bn as of Aug 23)
 - o About 95% on inputs and capital equipment
- Winners: US producers where tariffs in place
 - o US producers pushing for protection included steel, furniture, textiles
- Losers: US consumers (including firms using inputs & capital equipment)
- Retaliation (\$46bn of US exports, \$14bn as of Aug 23)

Industry	US exports to China	Share of US exports
Soybeans	\$12.4bn	57%
Vehicles	\$11.3bn	10%
Crude oil	\$4.4bn	20%
Shellfish	\$1.2bn	23%
Sorghum	\$0.8bn	78%

FDI : Definition

• Investment made by an entity (firm/individual) of one country into business interests located in another country

- Controlling ownership – at least 10 percent equity (OECD , IMF definition)
- **Greenfield:** establishing new production capacity
- **Brownfield:** purchase of existing production facility; Mergers/Acquisitions

• Global FDI flows : \$ 1.52 trillion (2017)

- Top 3 destinations are developing Asia, EU , North America
- US was largest recipient in 2017, \$311 billion
- US inward FDI stock growth rate from 2009 - 2016: 7.8% per year

Type of FDI: Production Strategy

- **Horizontal FDI**
 - Roughly similar production activity duplicated in multiple countries (bulk of FDI)
 - *McDonalds, Starbucks, Coca-Cola*
- **Vertical FDI**
 - Different stages of production located in different countries (trade-creating FDI)
 - *Automakers*

Why FDI?

- **Common FDI Motivations are a combination of Resource/Market/Efficiency Seeking**
- **OLI Advantages**
 - **Ownership:** To exploit firm specific advantages
 - E.g. production knowledge, managerial skill, technology
 - **Locational:** Exploit country specific features geographical/political/market for profit maximization
 - **Internalization:** To exploit ownership advantages internally
- **Response to trade barriers/tariffs**
 - “Tariff Jumping”; FDI substitutes trade
- **Response to favorable tax policies:**
 - Tax haven FDI – e.g. low corporate tax rates (Cayman Islands, Bahamas, Liechtenstein)

FDI & TRADE

- **Multinational corporations participate in FDI**
 - Account for 25% of world GDP (2010) and 2/3 of world trade
 - 57% of affiliates are located in developing countries
 - Combined revenue is higher than GDP of most economies
 - Combined sales of Top 200 corporations > combined economies of 182 countries
- **FDI involves trade within highly complex MNC production network**
 - Intra-firm trade is 33% of global trade
 - International production networks account for 80% of global trade
- **Intra-firm trade is exposed to risk of mispricing for tax optimization (i.e. tax avoidance)**

FDI & MARKET COMPETITION

- **MNCs can make competition imperfect by reallocating market share, limiting competition, and obtaining monopoly rents**
 - High efficiency - technological expertise, financial resources, competitive strength
 - Engage in anticompetitive practices – buy out local rivals (mergers, acquisitions)
 - Least productive firm may exit market
- **Evidence of this behavior is mixed**
 - Positive association between FDI & industrial concentration - acquisition of rivals by MNC
 - FDI reduces market concentration

FDI & PRODUCTIVITY

- **FDI generates positive spillovers to host economy**

- Foreign subsidiaries have high productivity
- Stimulates improvement of technology & productivity by local firms
 - o Exposure to foreign skills, knowledge/foreign competition/backward- forward linkages
- Large productivity or technology gaps limit spillovers due to absorptive capacity

- **Evidence is mixed**

- Foreign firms are generally more productive than local firms
- Productivity spillovers to local firms are uncertain
 - o Horizontal FDI - Little evidence; Vertical FDI - Mostly positive
- Technology/ Productivity gap with foreign firms affect spillover

FDI & GROWTH

- **FDI enhances economic growth of host economy**

- Transfers production knowhow, skills, technology via productivity spillovers and local linkages
- Improvement in productivity of capital and human capital

- **Evidence: Many studies find positive effect of FDI on growth only when other characteristics are present in host nation**

- E.g. advanced economies, presence of technology, developed financial markets, skilled labor force, trade openness
- Supportive business environment and minimum level of economic development required for positive effect
- Few studies find no effect on growth

FDI & EMPLOYMENT

- **FDI leads to rise of employment and wages in host countries**
 - Reallocation of resources from capital to other factors including labor
 - Foreign firms offer higher wages; wage spillovers
 - Rise in average wages may result
- **Evidence that foreign firms offer higher wages than domestic firms**
 - Mixed evidence of wage spillovers to local firms
 - Impact on average wages is unclear - sparse positive evidence
 - FDI contributes significantly to employment in US (8.5 % of labor force)

Offshoring – A new form of globalization



What is offshoring?

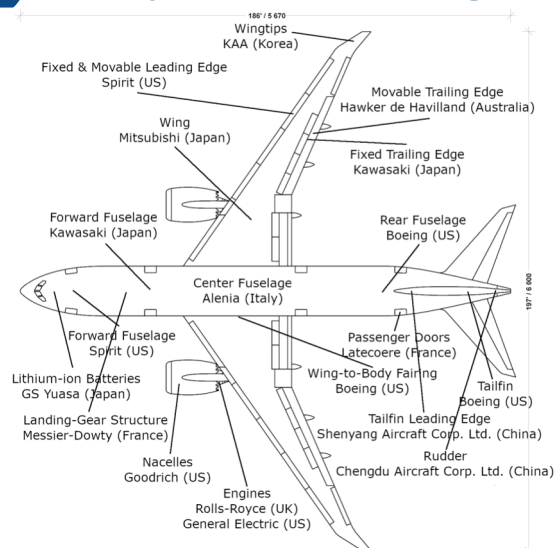
- **Definition:**

“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.*” (Source: Wikipedia, emphasis added)

- The “business process” may refer to a production stage or a service
- Offshoring is often labeled “outsourcing” in the public debate, but economists distinguish between the two:
 - Offshoring to a different country vs. outsourcing to a different firm
 - Outsourcing may also take place within the domestic economy
 - Note: Offshoring may take place *within* the firm, to a foreign subsidiary



An example: The Boeing 787 Dreamliner



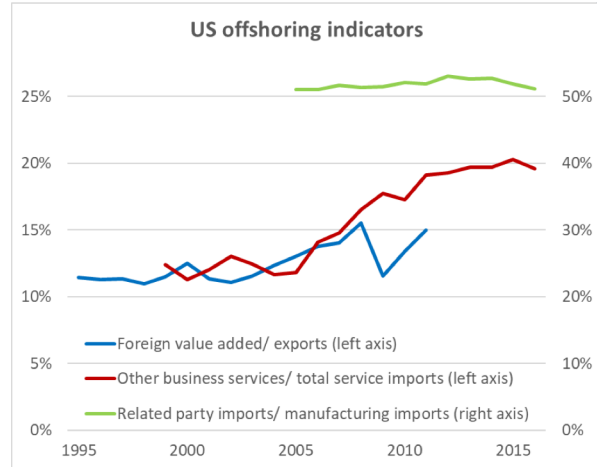
- **Parts and components from suppliers all over the world:**

- Japan
- Italy
- China
- Australia
- ...



How much offshoring has happened?

- Offshoring is hard to measure
- Three indicators for its rise:
 - Share of foreign value added in US exports increased from 11% to 15% (1995-2011)
 - Import share of other business services in US service imports rose from 12% to 20% in the US (1999-2016)
 - Related party trade in US imports: Intra-firm offshoring makes up 51-53% of US imports (2005-16)



Why do firms engage in offshoring?

- **Main motive for offshoring: Costs savings**
 - Firms benefit from international specialization along global value chains
- **Typically US firms seek cheap labor → Prime offshoring destinations: Low-wage countries like China (14%) and Mexico (10% of US imports of intermediate goods in 2011)**
- **Classic examples:**
 - Automotive parts offshored to Mexico
 - Call centers offshored to India
- **But also: Access to raw materials, intermediate goods, or specific technologies → EU (20%) and Canada (17%)**

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

- **Two main effects on US workers expected in theory:**

1. Negative relocation effect → Job losses and lower wages
2. Positive productivity effect: Cost savings increase competitiveness
→ Job growth and higher wages
→ *Ambiguous net effect* in theory

- **Extreme example for the productivity effect: Apple Inc.**

- Has offshored most production activities and become a “factoryless” firm; 200+ global suppliers
- Employs 80,000 US workers in R&D, design, marketing,... (and growing)

- **Other concerns: inequality (skill bias), national security**



Empirical evidence on the effects of offshoring

- **Offshoring of manufactured goods and components**

- ... might have positive or negative employment effects → mixed evidence
- ... tends to reduce domestic wages in offshored occupations
- ... hurts low-skilled workers more and → can increase income inequality
- ... boosts industry output and firm productivity

- **Offshoring of services**

- ... is a much smaller phenomenon (little data)
- ... seems to have more favorable, non-negative employment effects



Conclusions

- **Overall, the benefits of trade appear to outweigh the costs**
 - Production factors in exporting industries and some consumers gain
 - Production factors in import competing industries and some consumers lose
- **Tariffs reduce the overall gains of trade**
 - By increasing prices paid by “consumers”; allows less efficient firms to compete
- **FDI enhances economic growth in some economies, affects market concentration, and MNCs tend to pay higher wages**
- **Offshoring in manufacturing has mixed effects on employment and reduces wages in offshored industries**
 - But it increases firm output and productivity

