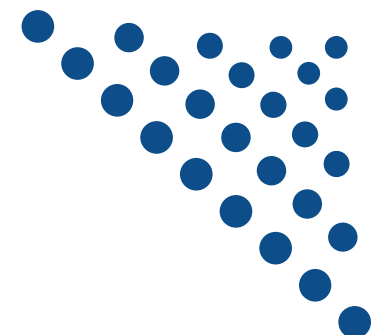


Osher Lifelong Learning Institute, Winter 2025

Contemporary Economic Policy

University of Southern Maine

Host: Geoffrey Woglom, Ph.D.
Director, National Economic Education Delegation



National Economic Education Delegation

- **Vision**

- One day, the public discussion of policy issues will be grounded in an accurate perception of the underlying economic principles and data.

- **Mission**

- NEED unites the skills and knowledge of a vast network of professional economists to promote understanding of the economics of policy issues in the United States.

- **NEED Presentations**

- Are nonpartisan and intended to reflect the consensus of the economics profession.

Who Are We?

- **Honorary Board: 54 members**

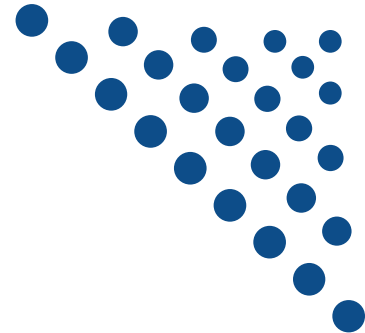
- 2 Fed Chairs: Janet Yellen, Ben Bernanke
- 6 Chairs Council of Economic Advisers
 - Furman (D), Rosen (R), Bernanke (R), Yellen (D), Tyson (D), Goolsbee (D)
- 3 Nobel Prize Winners
 - Akerlof, Smith, Maskin

- **Delegates: 652+ members**

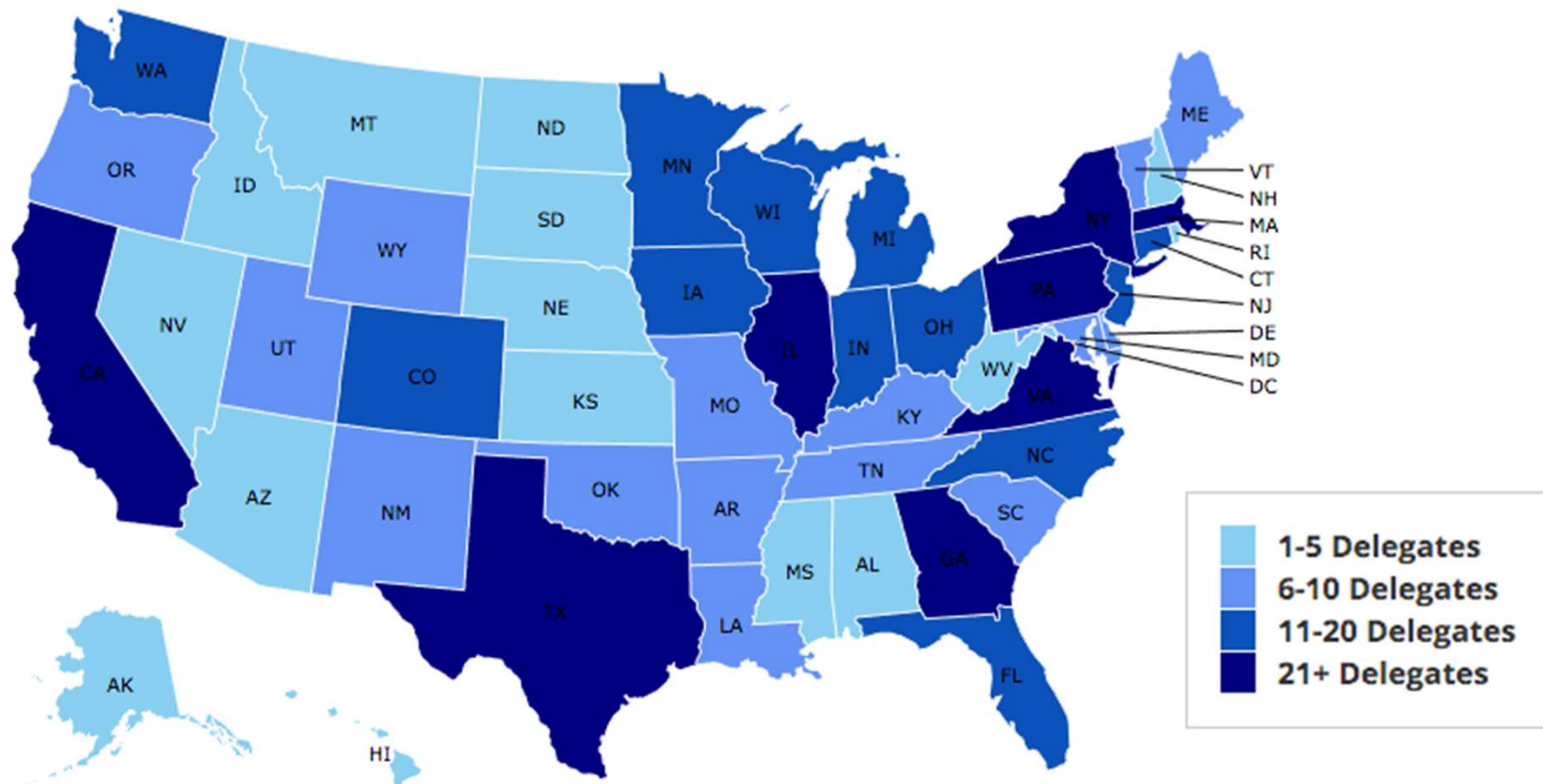
- At all levels of academia and some in government service
- All have a Ph.D. in economics
- Crowdsource slide decks
- Give presentations

- **Global Partners: 48 Ph.D. Economists**

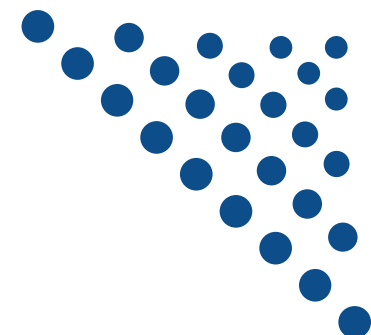
- Aid in slide deck development



Where Are We?

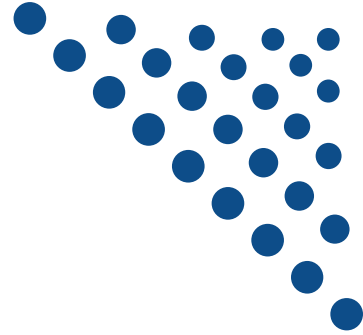


Available NEED Topics Include:



- US Economy
- Healthcare Economics
- Climate Change
- Economic Inequality
- Economic Mobility
- Trade and Globalization
- Minimum Wages
- Immigration Economics
- Housing Policy
- Federal Budgets
- Federal Debt
- Black-White Wealth Gap
- Autonomous Vehicles
- US Social Policy

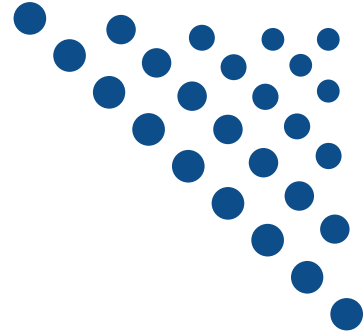
Course Outline



- **Contemporary Economic Policy**

- Week 1 (1/16): Economic Update (Geoffrey Woglom, Amherst College)
- **Week 2 (1/23): Trade and Globalization (Avik Chakrabarti, UWisconsin Milwaukee)**
- Week 3 (1/30): Tariffs and Their Effects (Alan Deardorff UMichigan)
- Week 4 (2/6): Federal Debt and Deficits (Dmitriy Stolyarov, UMichigan)
- Week 5 (2/13): The New Inequality (Geoffrey Woglom, Amherst College)
- Week 6 (2/20): Economics of Immigration (Robert Gitter, Ohio Wesleyan)

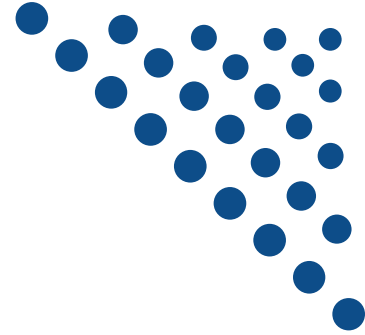
Submitting Questions



- **Submit questions in the chat or by raising your digital hand.**
 - I will try to handle them as they come up.
- **We will do a verbal Q&A once the material has been presented.**
- **Slides will be available from the NEED website tomorrow (https://needelegation.org/delivered_presentations.php).**



Credits and Disclaimer



- **This slide deck was authored by:**
 - Avik Chakrabarti, University of Wisconsin-Milwaukee (UWM)
 - Peter Eppinger, University of Tübingen
 - James Lake, Southern Methodist University
 - Michael Plouffe, University College London
 - Swati Verma, ISID, New Delhi
- **This slide deck was reviewed by:**
 - Alan Deardorff, University of Michigan
 - Ed Leamer, UCLA
- **Disclaimer**
 - NEED presentations are designed to be nonpartisan.
 - It is, however, inevitable that the presenter will be asked for and will provide their own views.
 - Such views are those of the presenter and not necessarily those of the National Economic Education Delegation (NEED).



Trade and Globalization

OLLI – University of Southern Maine
 January 23, 2025



Avik Chakrabarti, Ph.D., University of Michigan, Ann Arbor
 Associate Professor of Economics, University of Wisconsin-Milwaukee (UWM)
 Affiliated Faculty, Northwestern Mutual Data Science Institute (NMDSI), UWM

What is Globalization?



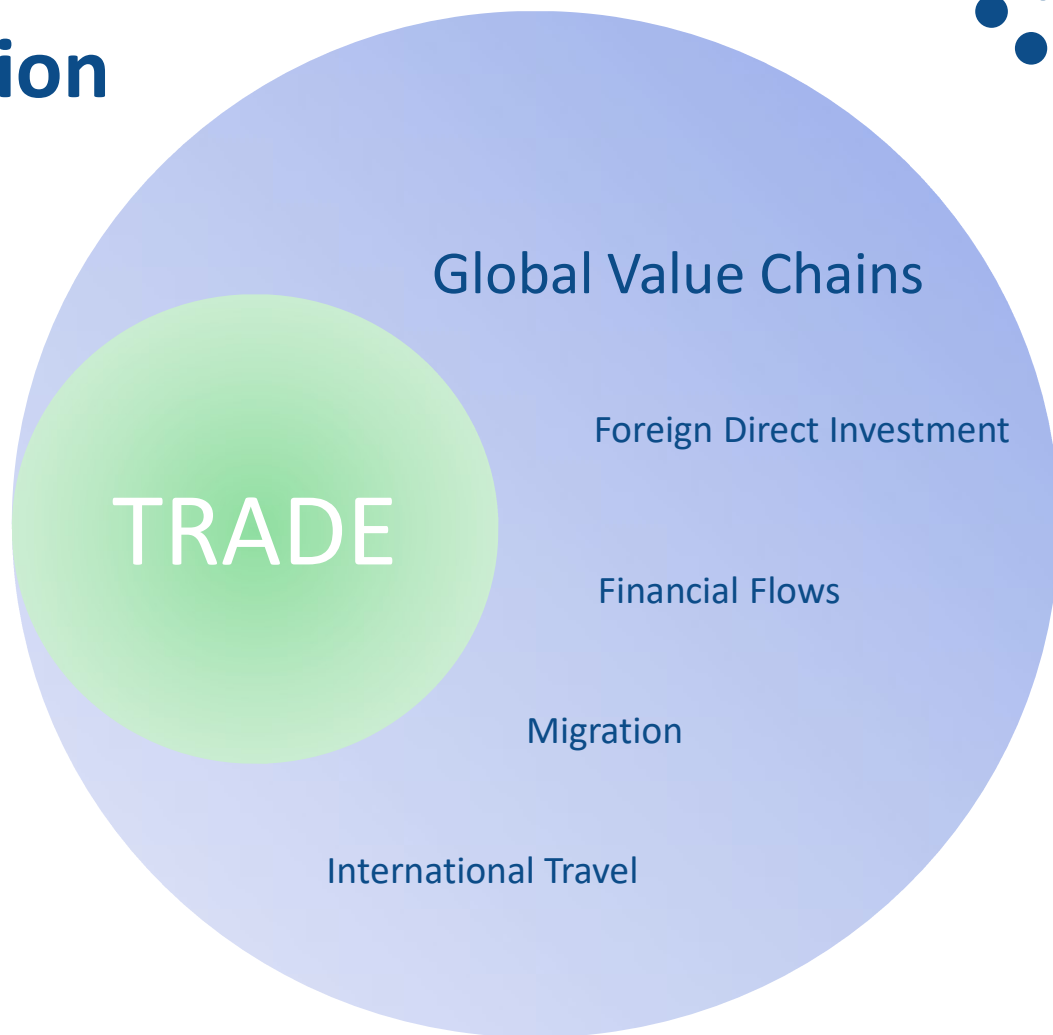
- **The growing integration of the world's:**

- Economies
- Cultures
- Populations

- **Brought about by cross-border flows of:**

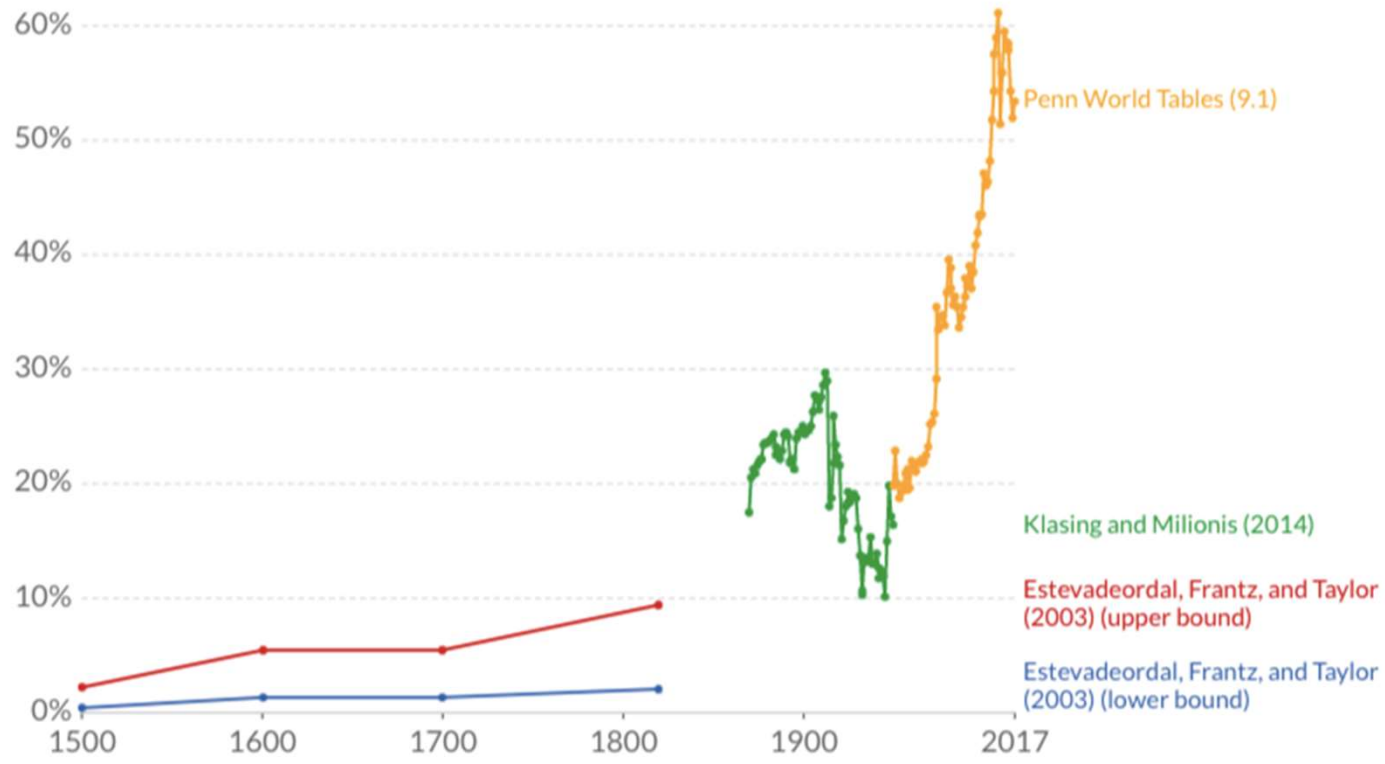
- Goods and services
- Technology
- Investment
- People
- Information

What is Globalization



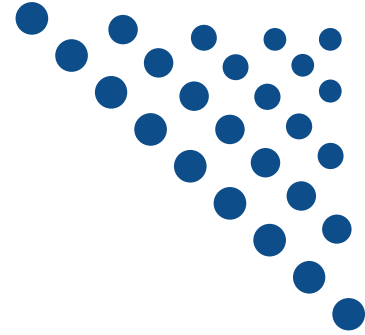
Globalization over 5 centuries

Shown is the "trade openness index". This index is defined as the sum of world exports and imports, divided by world GDP. Each series corresponds to a different source.

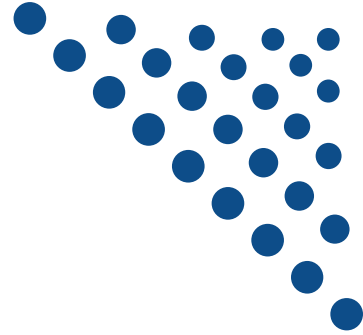
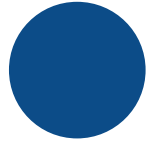


Source: Estevadeordal, Frantz, and Taylor (2003), Klasing and Milionis (2014), Feenstra et al. (2015) Penn World Tables 9.1

What Drives Globalization?



- **Reduction in Transportation Costs**
- **Advances in Technology**
- **Cooperation across Countries**

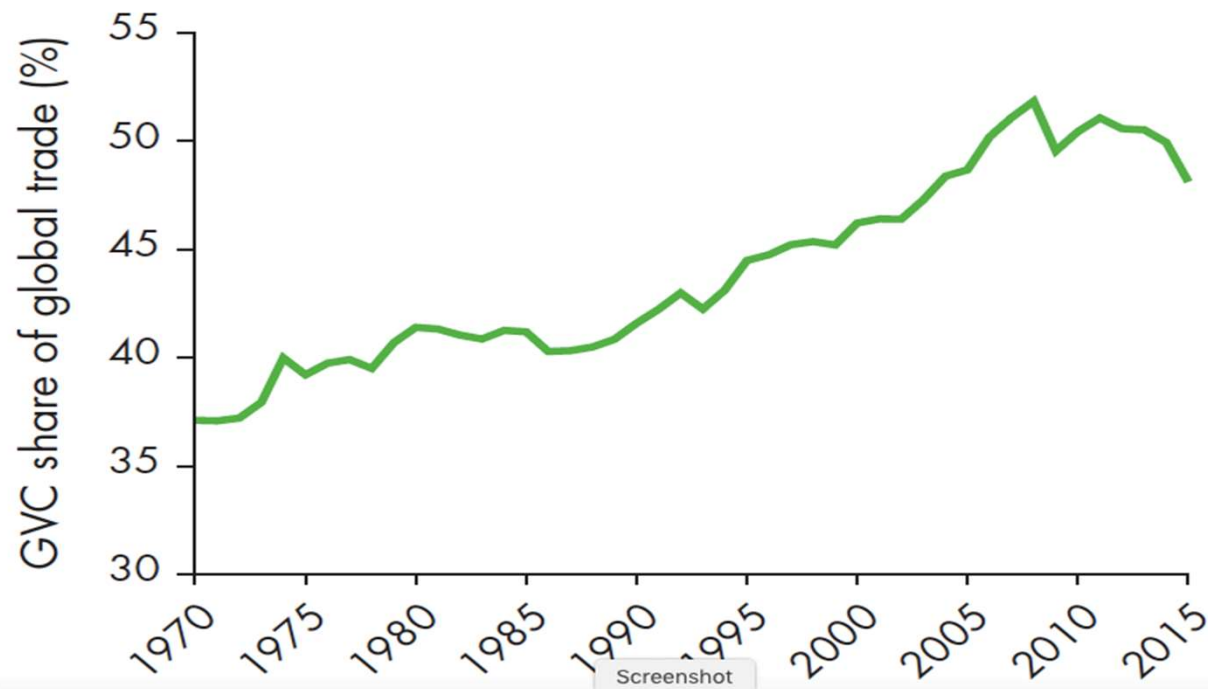


Global Value Chains (GVCs)

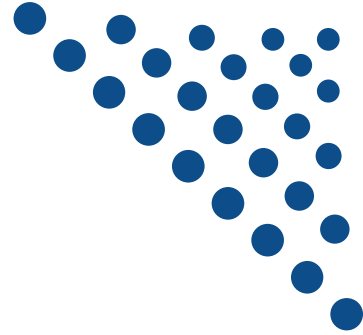


Growth of Global Value Chains, 1970-2015

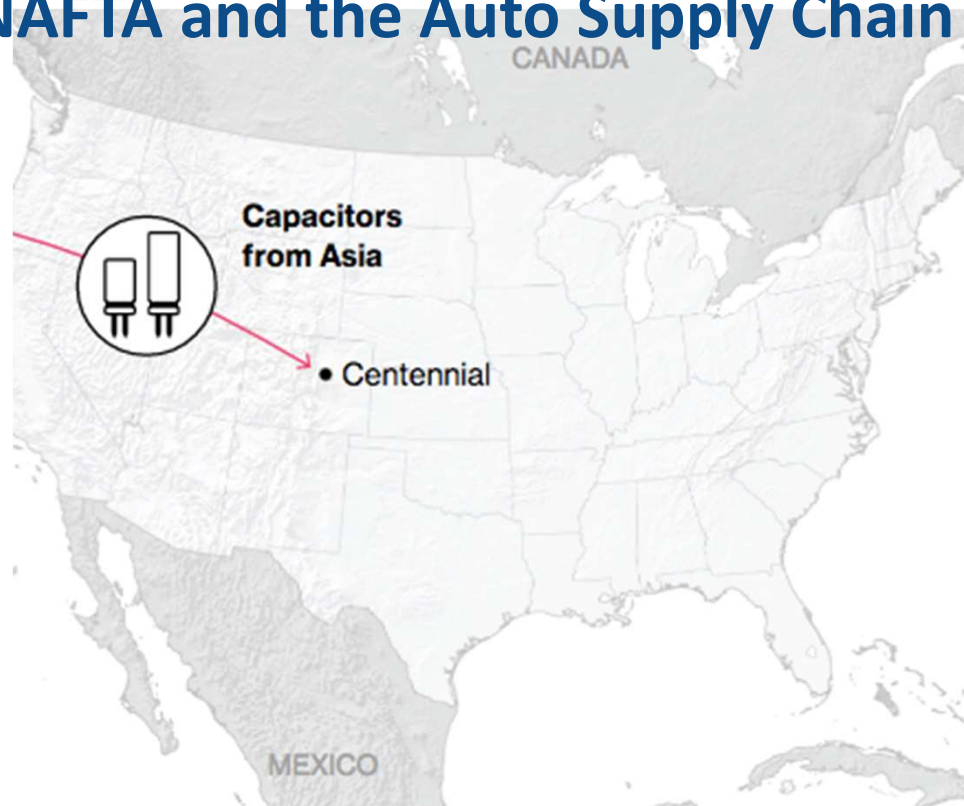
Figure 1.2 GVC trade grew rapidly in the 1990s but stagnated after the 2008 global financial crisis



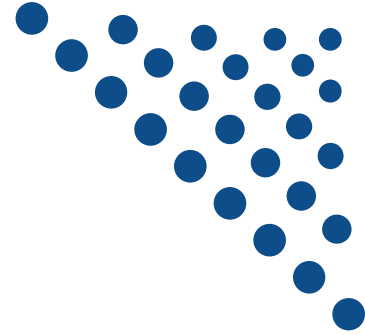
Source: World Development Report 2020



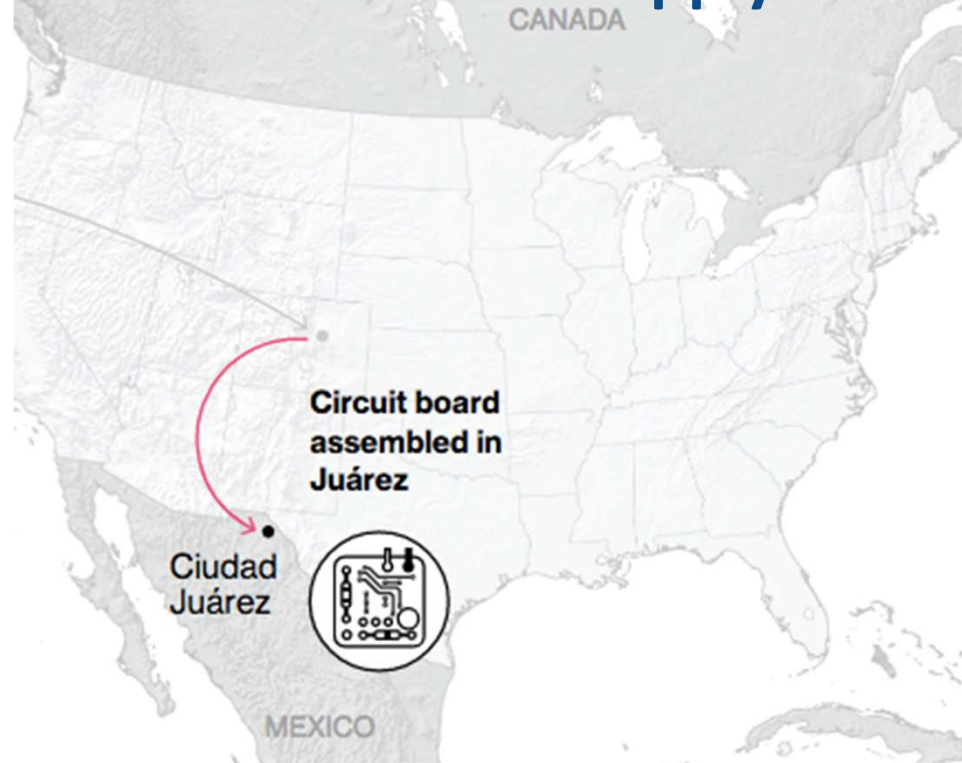
NAFTA and the Auto Supply Chain



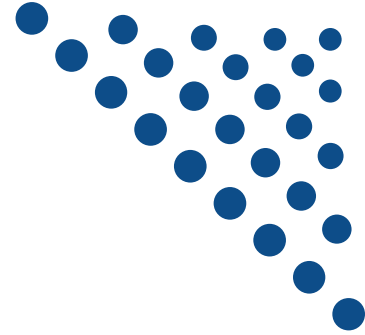
Black, Diamond, and Merrill, “One Tiny Widget’s Dizzying Journey Shows Just How Critical Nafta Has Become,” *Bloomberg*, February 2, 2017.



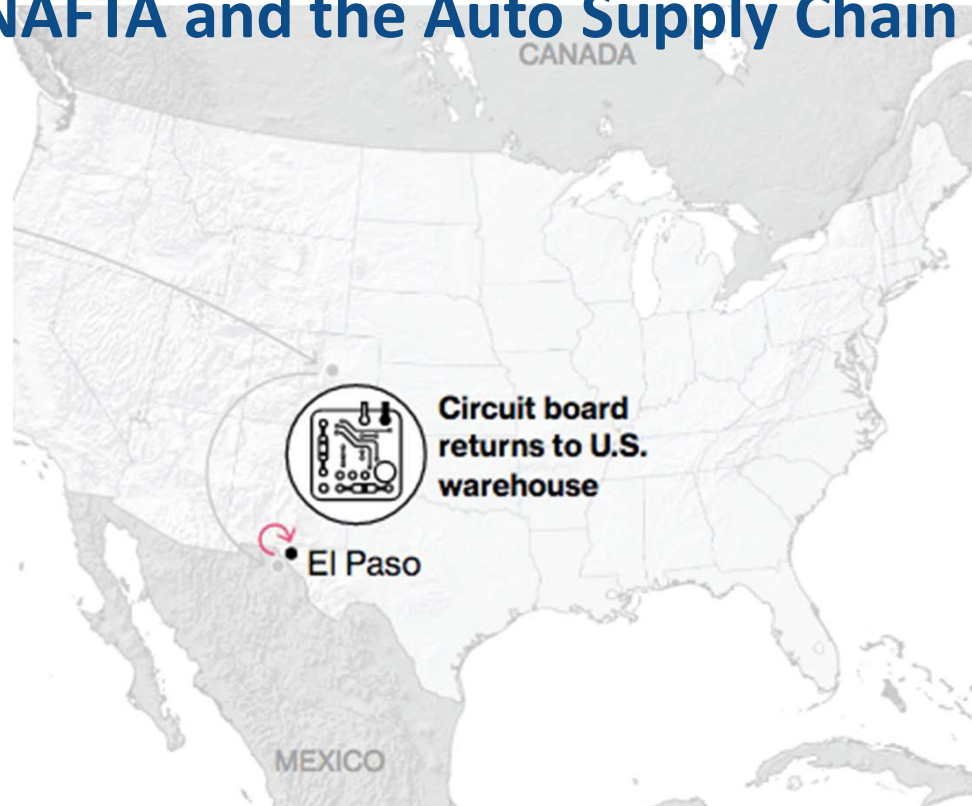
NAFTA and the Auto Supply Chain



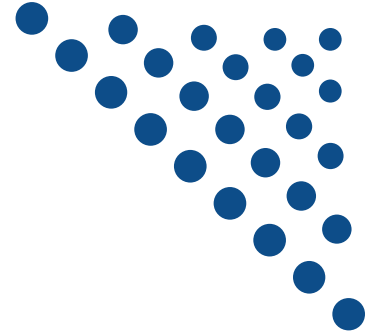
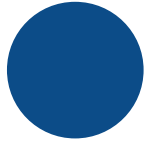
Black, Diamond, and Merrill, “One Tiny Widget’s Dizzying Journey Shows Just How Critical Nafta Has Become,” *Bloomberg*, February 2, 2017.



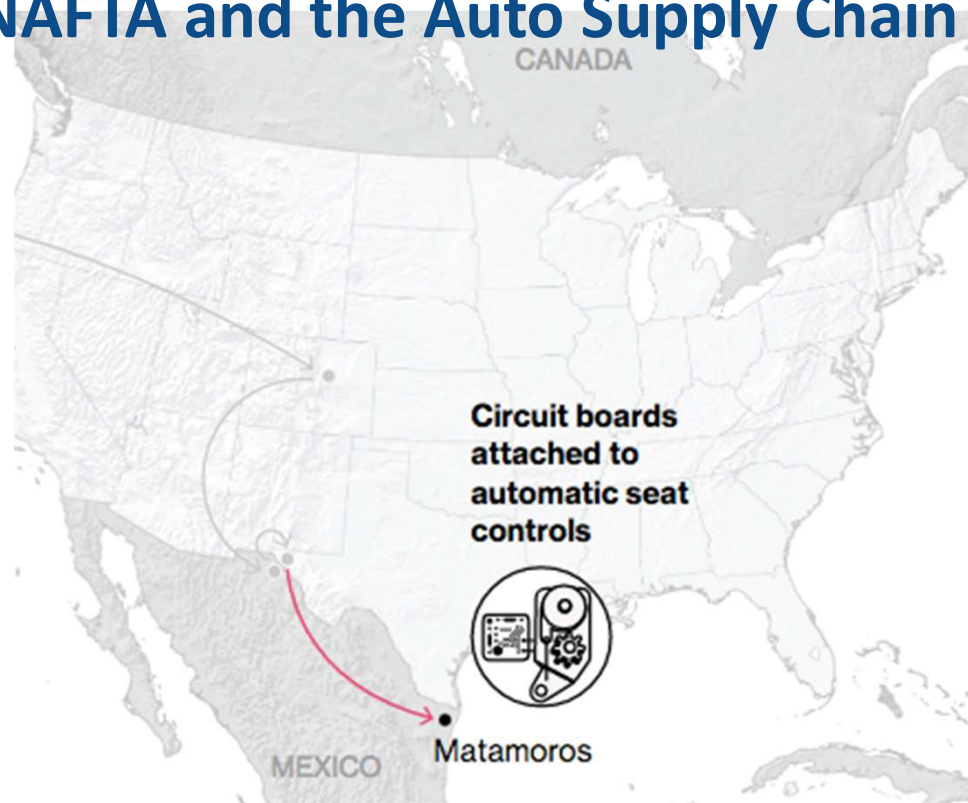
NAFTA and the Auto Supply Chain



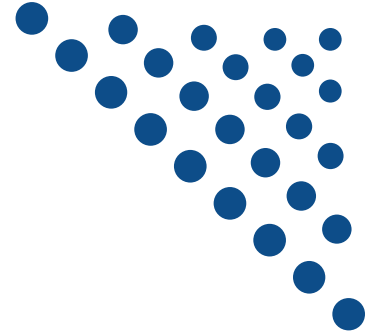
Black, Diamond, and Merrill, “One Tiny Widget’s Dizzying Journey Shows Just How Critical Nafta Has Become,” *Bloomberg*, February 2, 2017.



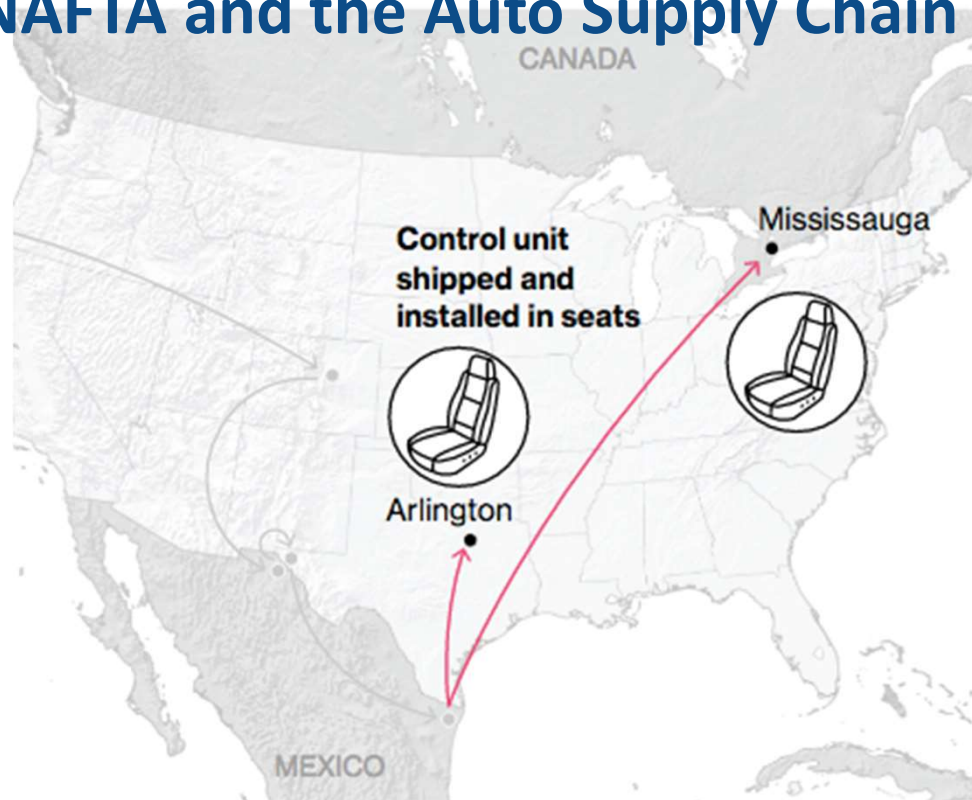
NAFTA and the Auto Supply Chain



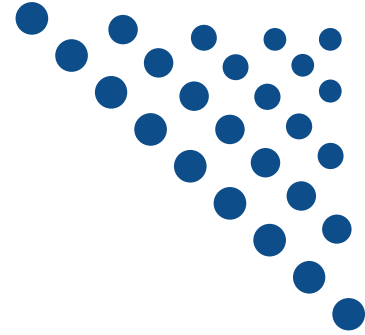
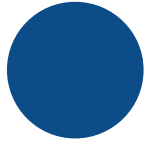
Black, Diamond, and Merrill, "One Tiny Widget's Dizzying Journey Shows Just How Critical Nafta Has Become," *Bloomberg*, February 2, 2017.



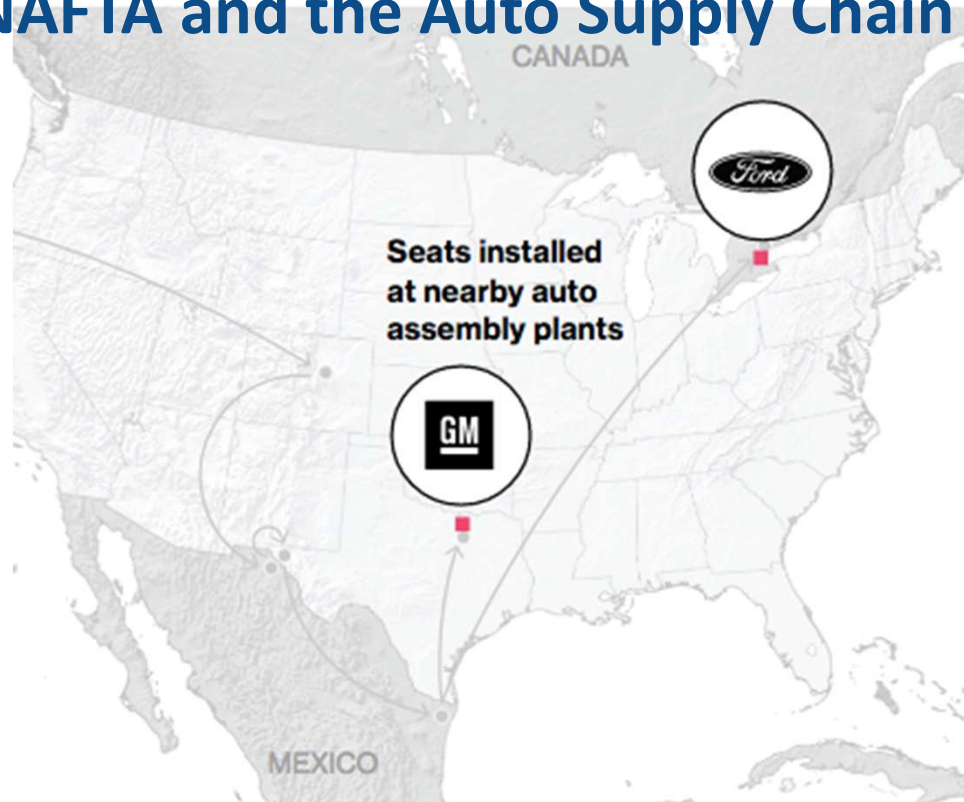
NAFTA and the Auto Supply Chain



Black, Diamond, and Merrill, "One Tiny Widget's Dizzying Journey Shows Just How Critical Nafta Has Become," *Bloomberg*, February 2, 2017.

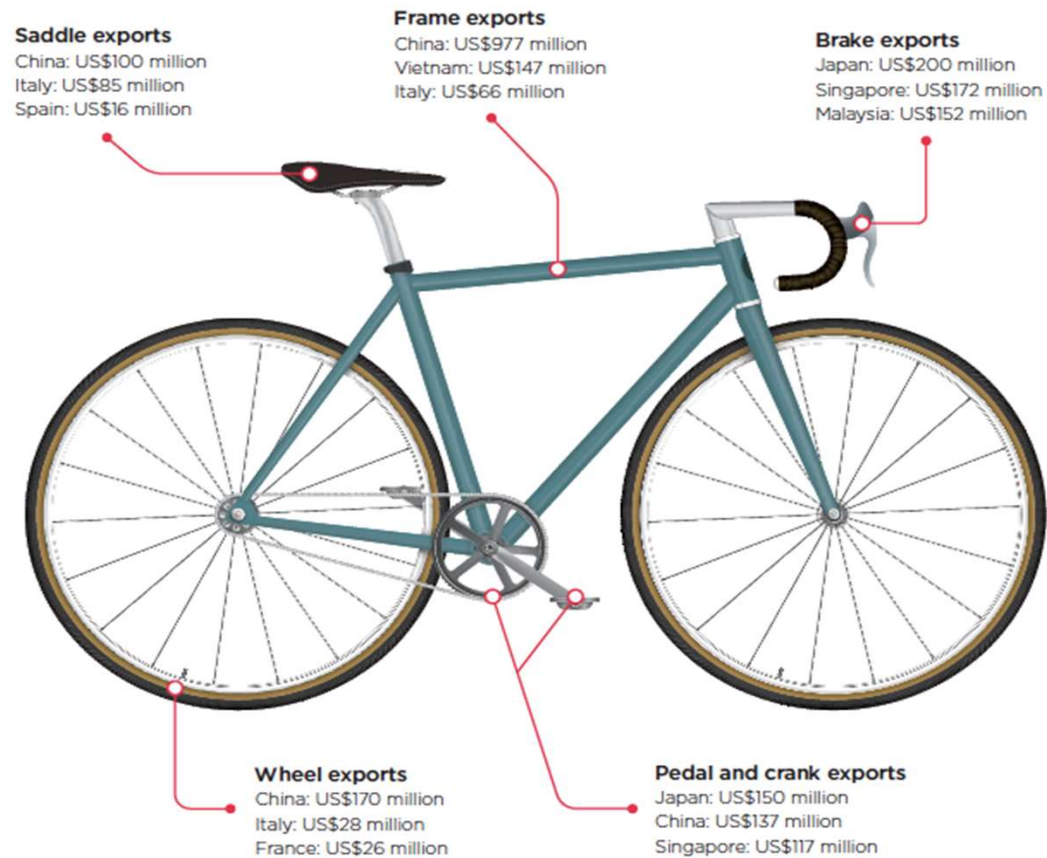


NAFTA and the Auto Supply Chain



Black, Diamond, and Merrill, "One Tiny Widget's Dizzying Journey Shows Just How Critical Nafta Has Become," *Bloomberg*, February 2, 2017.

Figure 1.1 Where do bicycles come from?



Countries mentioned:

- China
- France
- Italy
- Japan
- Malaysia
- Singapore
- Spain
- Vietnam

Source: World Development Report 2020

Supply Chains

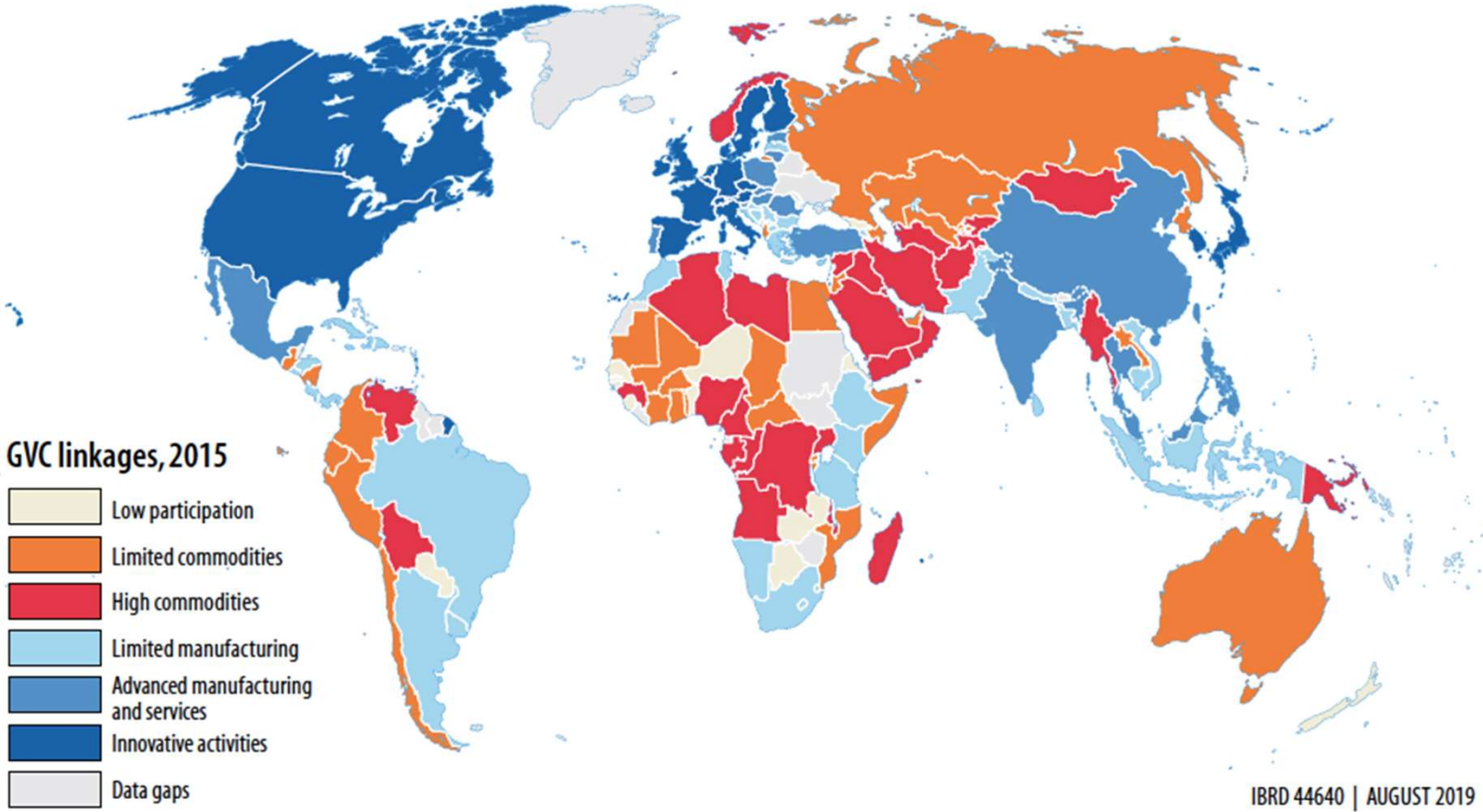


- **Example: The iPhone assembled in China from parts:**

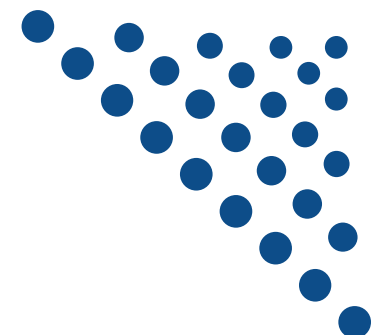
Part	Come from
Accelerometers	Germany, the US, South Korea, China, Japan, and Taiwan.
Audio chips	US, UK, China, South Korea, Taiwan, Japan, and Singapore.
Batteries	Samsung (South Korea), which has factories in eighty countries.
Cameras	Qualcomm (US) and Sony (Japan), both with plants in many countries
Chips for 3G/4G/LTE networking	Qualcomm (US)
Compasses	AKM Semiconductor (Japan) with plants in the US, France, England, China, South Korea, and Taiwan.
Glass screen	Corning (US) with plants in twenty-six countries.
Gyroscopes	Switzerland
... and many more	

Source: Krueger 2020, International Trade (What Everyone Needs to Know), p. 254

Map 1.1 All countries participate in GVCs—but not in the same way




Source: World Bank



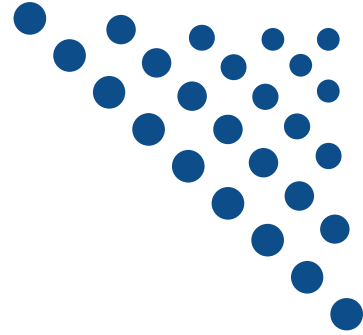
Pros and Cons of Globalization

- **Pros and Cons of Globalization**
 - Mutually Beneficial Trade
 - Comparative Advantage
 - Other Sources of Gains from Trade
 - Costs of Trade

Mutually Beneficial Trade
based on
Comparative Advantage



Comparative Advantage



- **The Principle of Comparative Advantage says:**

- Countries can gain by
 - Producing
 - More than they need of what they do relatively best, and
 - Less than they need of what they do relatively worst
 - Exporting any excess to other countries in exchange for what they need
- **All countries can**
 - Get more of everything, if that's what they want, and therefore
 - Gain from trade



“I cannot offer any grand strategy for dealing with the aversion of intellectuals to Ricardo's difficult idea.”

Paul Krugman

Comparative Advantage

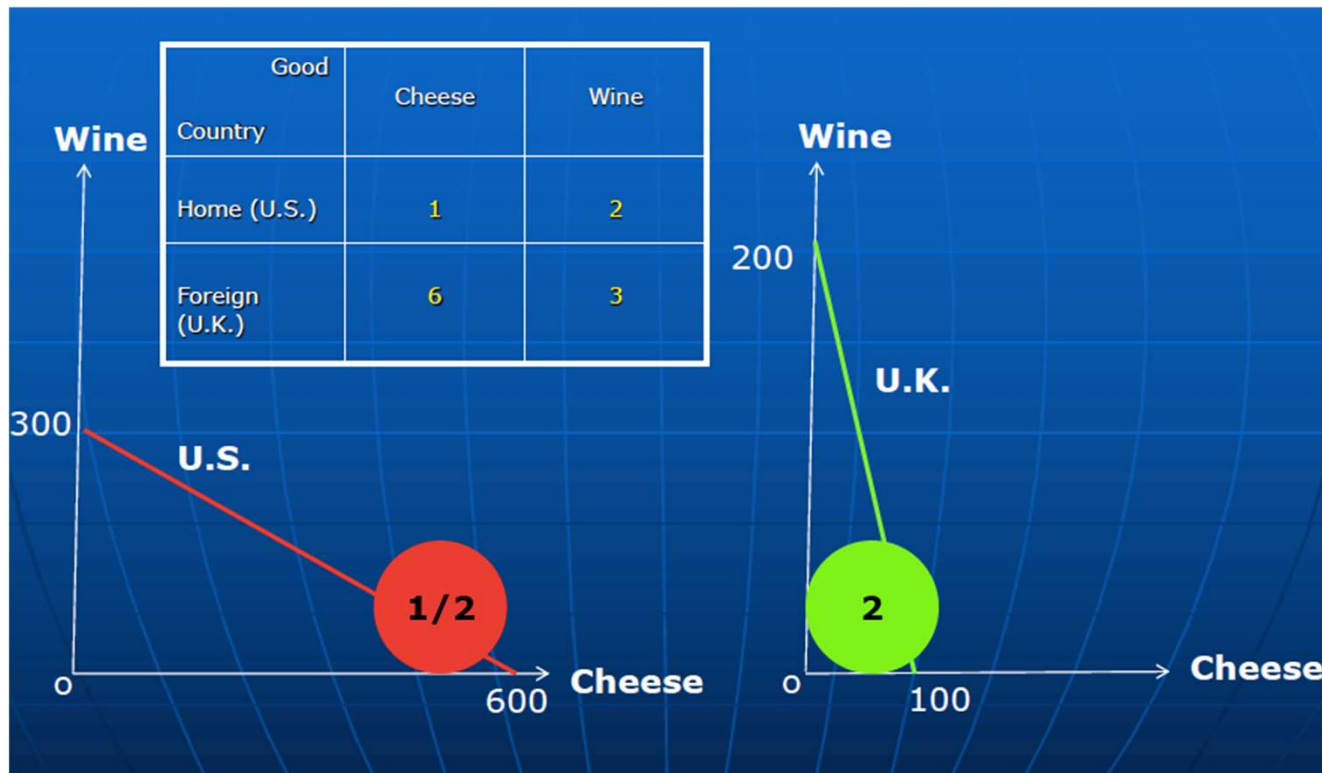


Paul Krugman's
illustration
of
David Ricardo's
Principle of
Comparative
Advantage

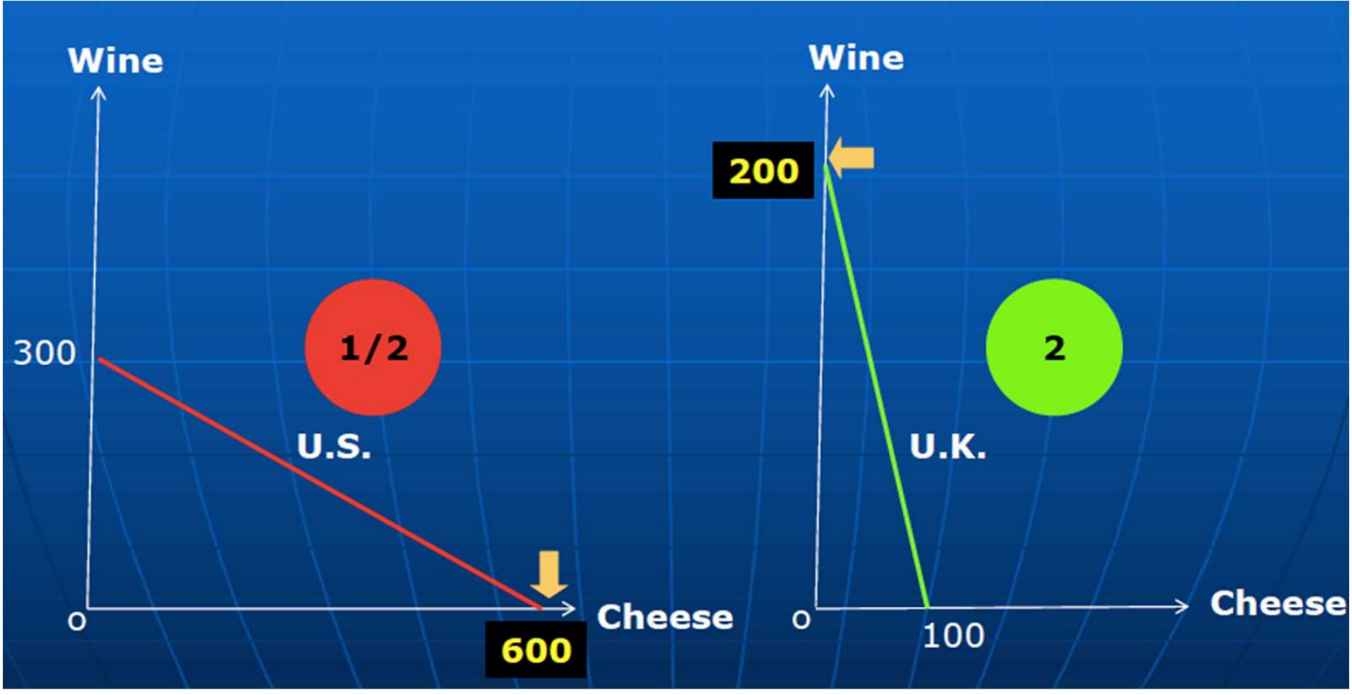
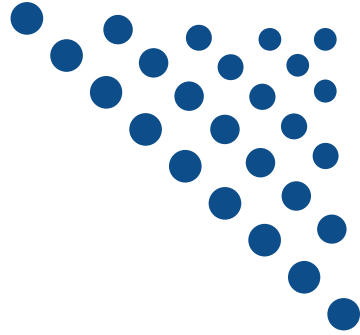
Good	Cheese	Wine
Country		
Home (U.S.)	1	2
Foreign (U.K.)	6	3

Suppose each country has an endowment of 600 hours of labor.

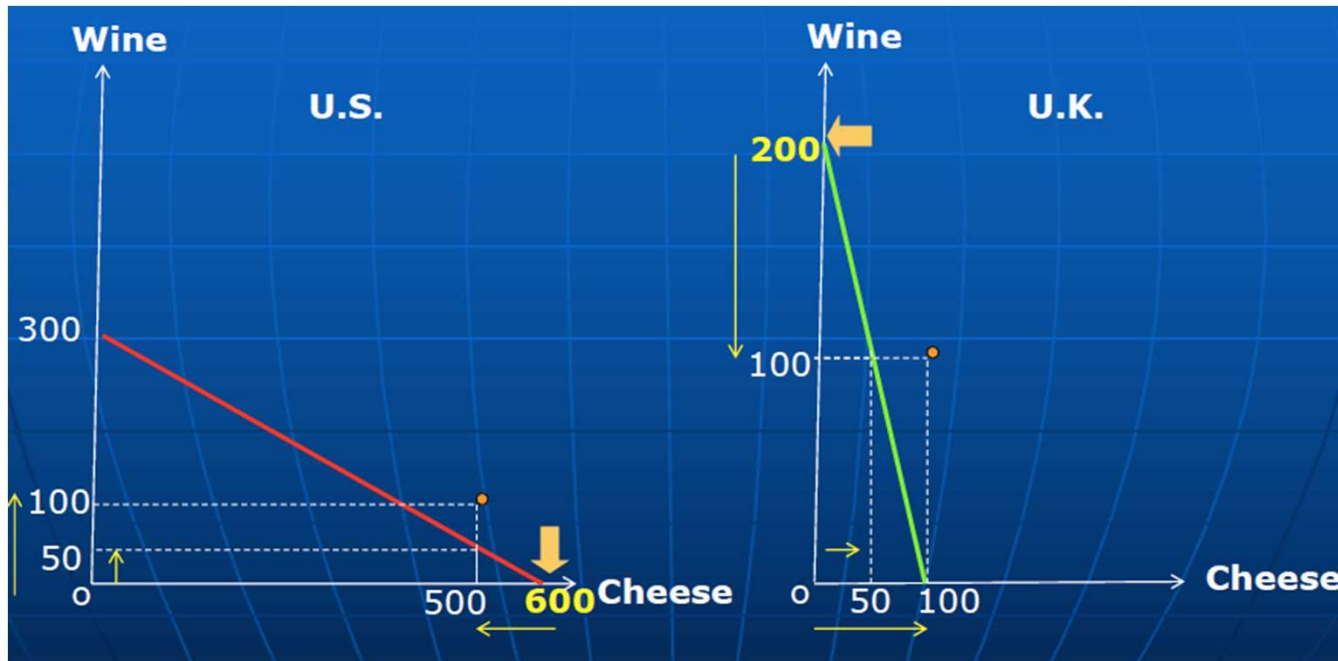
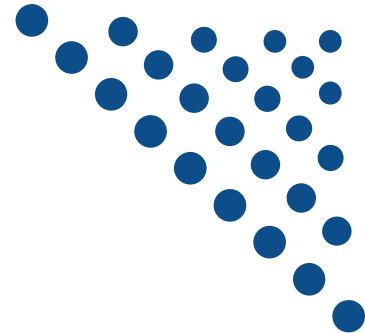
The Principle of Comparative Advantage



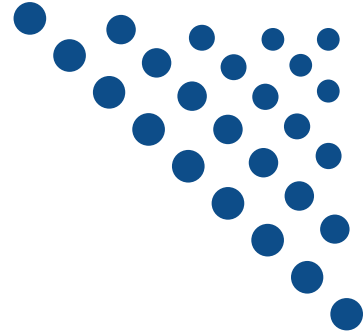
Specialization



Mutually Beneficial Trade

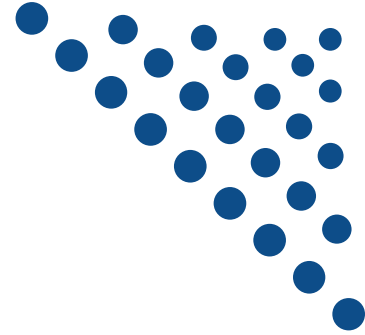


Comparative Advantage



- **Without a mechanism for redistribution ...**
 - Nothing in the theory says that everyone in each country gains
 - Opening to trade requires
 - Some industries to shrink or disappear while others expand
 - Firms and workers in shrinking industries
 - Certainly lose during the transition
 - May be permanently worse off

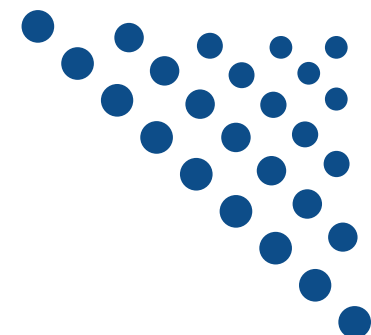




Gains from Trade

Other sources of Gain from Trade





Other sources of Gain from Trade

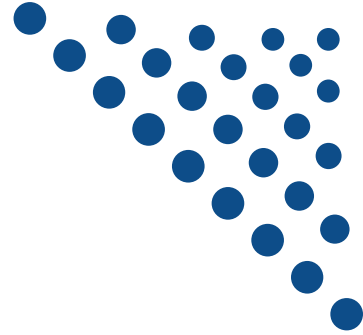
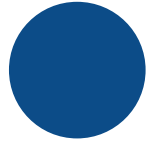
- **Returns to scale** (small countries can support larger firms)
- **Increased competition** (monopolies in small countries lose market power)
- **Variety** (buyers, both consumers and firms, can have more choices)
- **Efficiency** (relatively productive firms expand and export)
- **Supply chains** (firms can source parts from cheapest or best sources)
- **Learning** (firms can have access to foreign technology)

Other sources of Gain from Trade

Arkolakis, Costinot and Rodriguez-Clare
“New Trade Models, Same Old Gains”

“Either the gains from trade are small for most countries or the workhorse models of trade fail to adequately capture those gains. This uncomfortable conclusion seems inevitable given recent results in quantitative trade theory.”

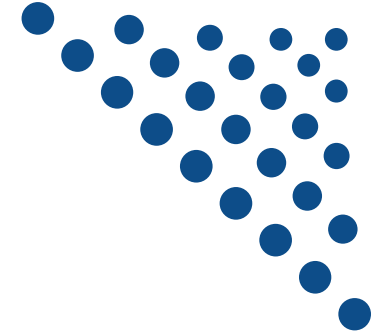




Costs of Trade



But there are Costs



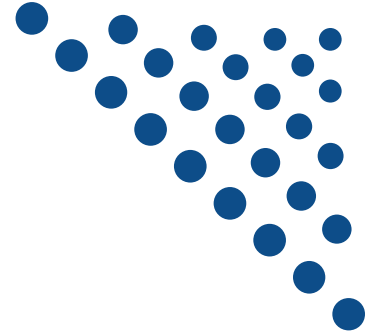
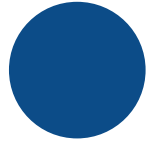
- **Economic:**

- When trade expands (or contracts)
 - Some firms lose market share or shut down
 - Other firms supplying inputs to those firms shrink or shut down
 - Workers in both lose jobs
 - And their **communities** lose customers
- Macroeconomic cost: Vulnerability to foreign recession/inflation
- Dependence on other countries' willingness to trade
- Vulnerability to trade disruption
 - Crisis induced (earthquake, flood, disease, war)
 - Policy induced (sanctions, tariffs, export bans)

- **Non-economic**

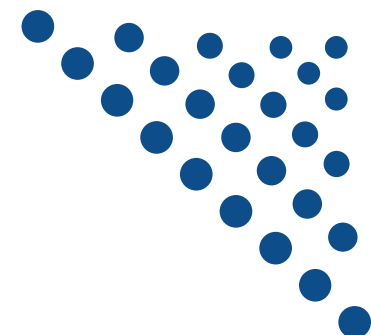
- Loss of cultural differences
- Spread of invasive species and plant disease
- Spread of human disease





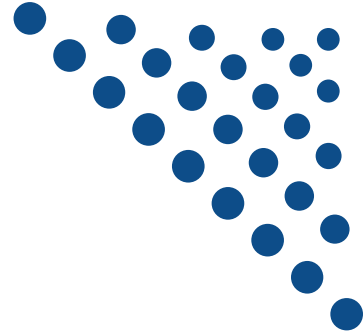
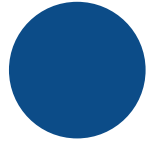
Trade Policies





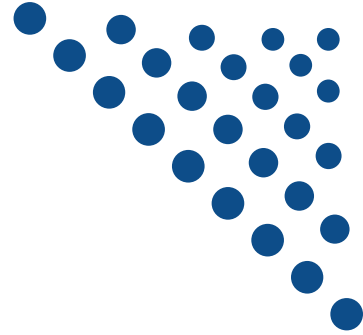
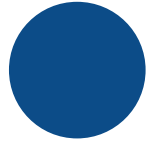
Trade Policies that Affect Globalization

- Policies that Encourage It
 - Tariff Reductions
 - Trade Agreements
 - Other
- Policies that Discourage It
 - Tariffs
 - Trade War



Trade Policies Encouraging Globalization





Tariff Reductions



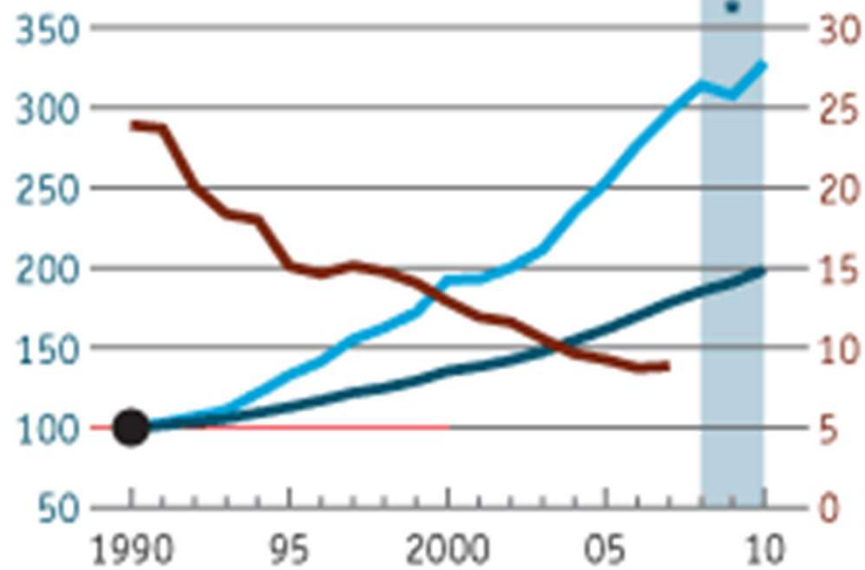
Golden years

Indices, 1990=100:

— world trade volume

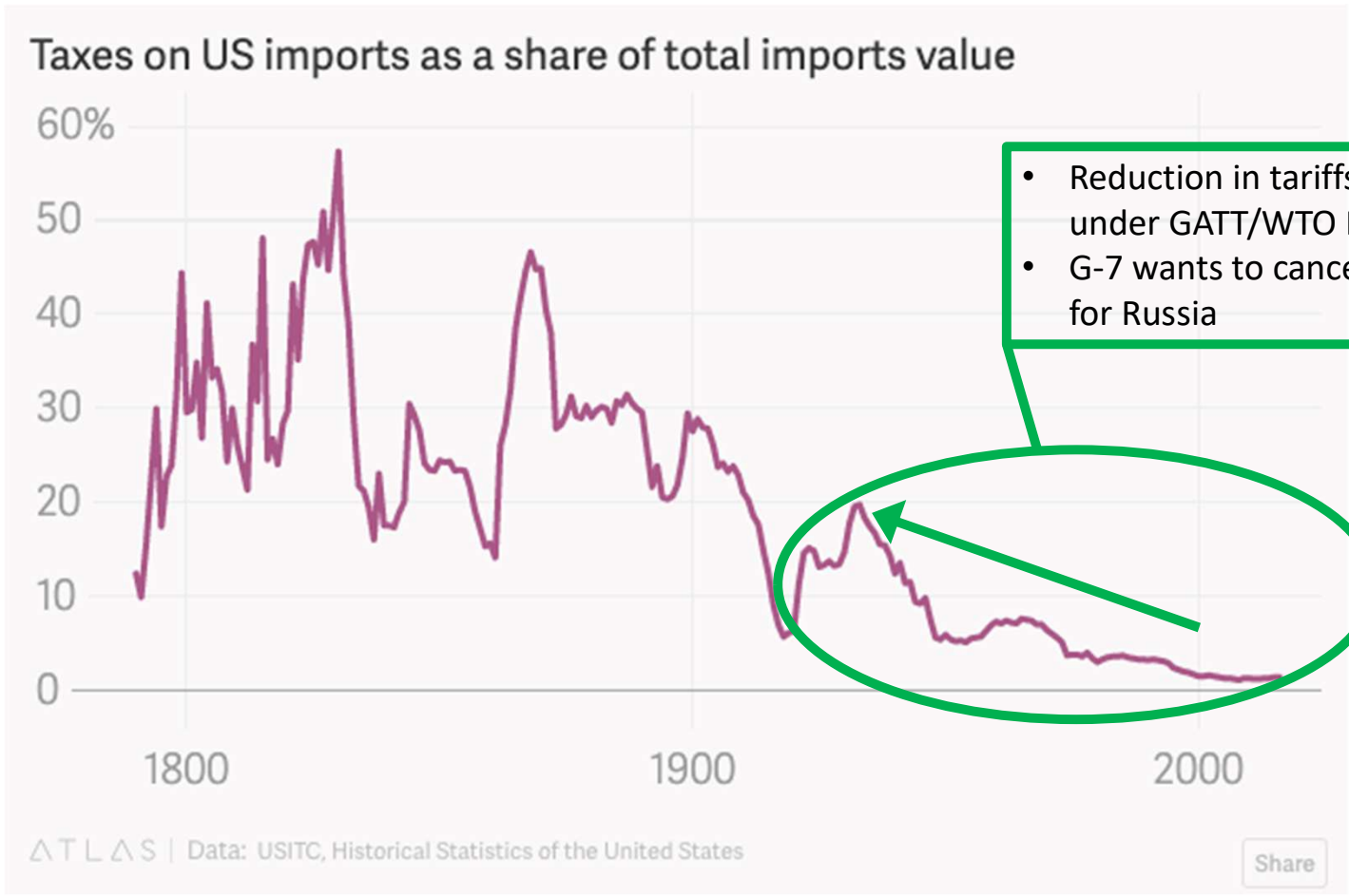
— world GDP

Average tariff applied, %

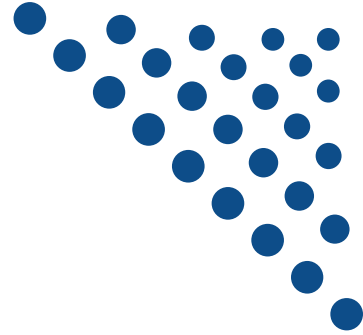
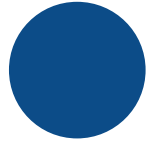


Sources: World Bank; IMF

* Forecast



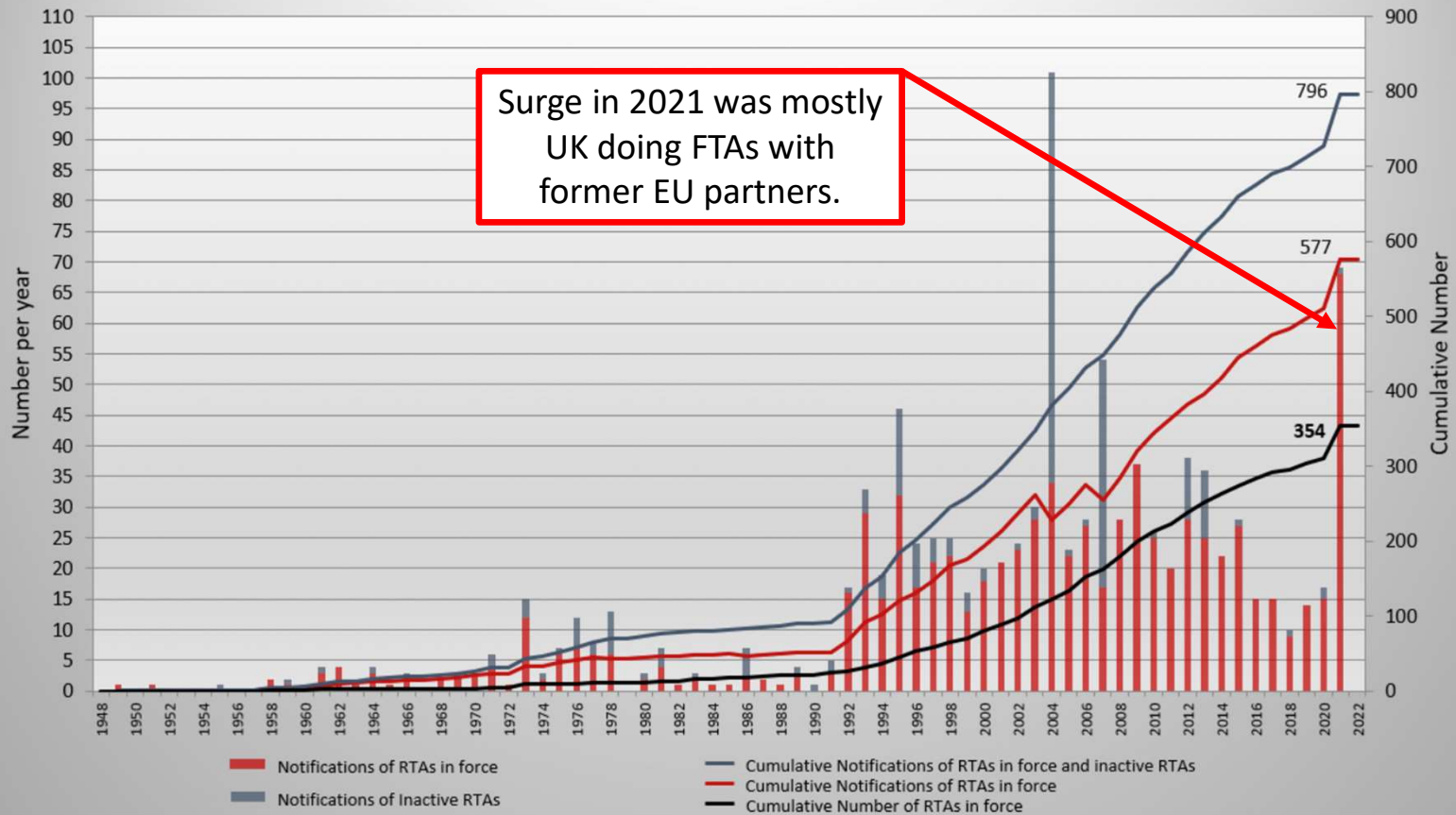
Source: Quartz 2018



Trade Agreements



Evolution of Regional Trade Agreements in the world, 1948-2022



Note: Notifications of RTAs: goods, services & accessions to an RTA are counted separately. The cumulative lines show the number of RTAs/notifications that were in force for a given year. The notifications of RTAs in force are shown by year of entry into force and the notifications of inactive RTAs are shown by inactive year.
 Source: RTA Section, WTO Secretariat, March 2022.

Source:
WTO

European Union



Source: Europa.eu

NAFTA (now USMCA)

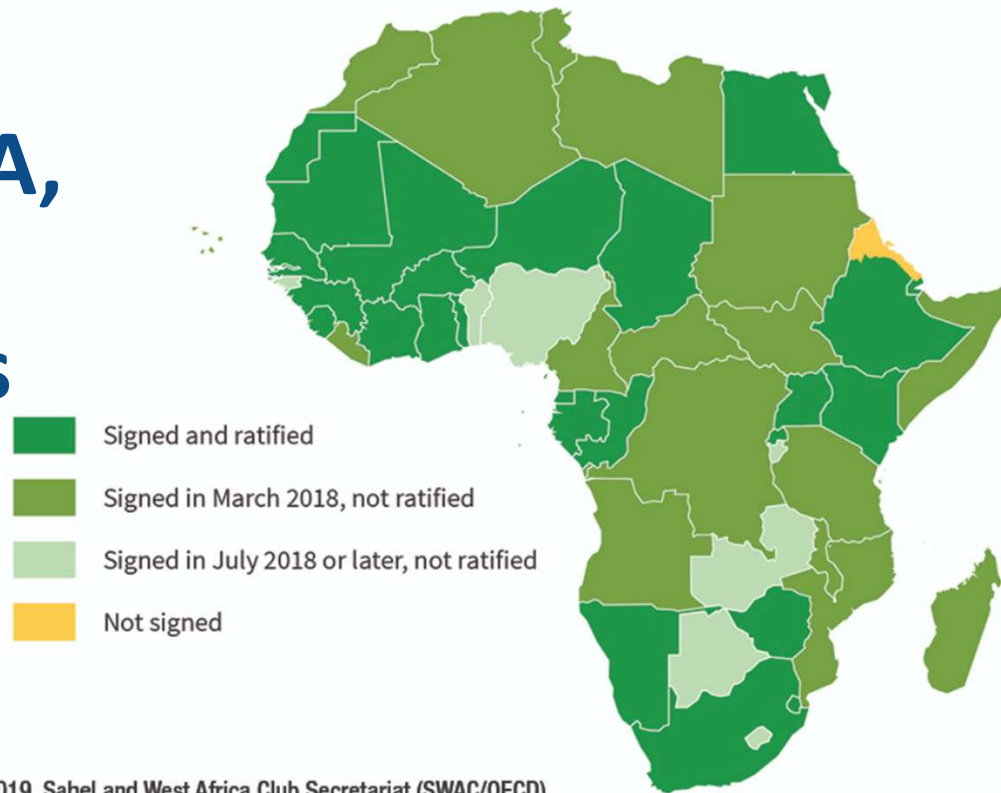


MERCOSUR



THE AFRICAN CONTINENTAL FREE TRADE AREA (AfCFTA)

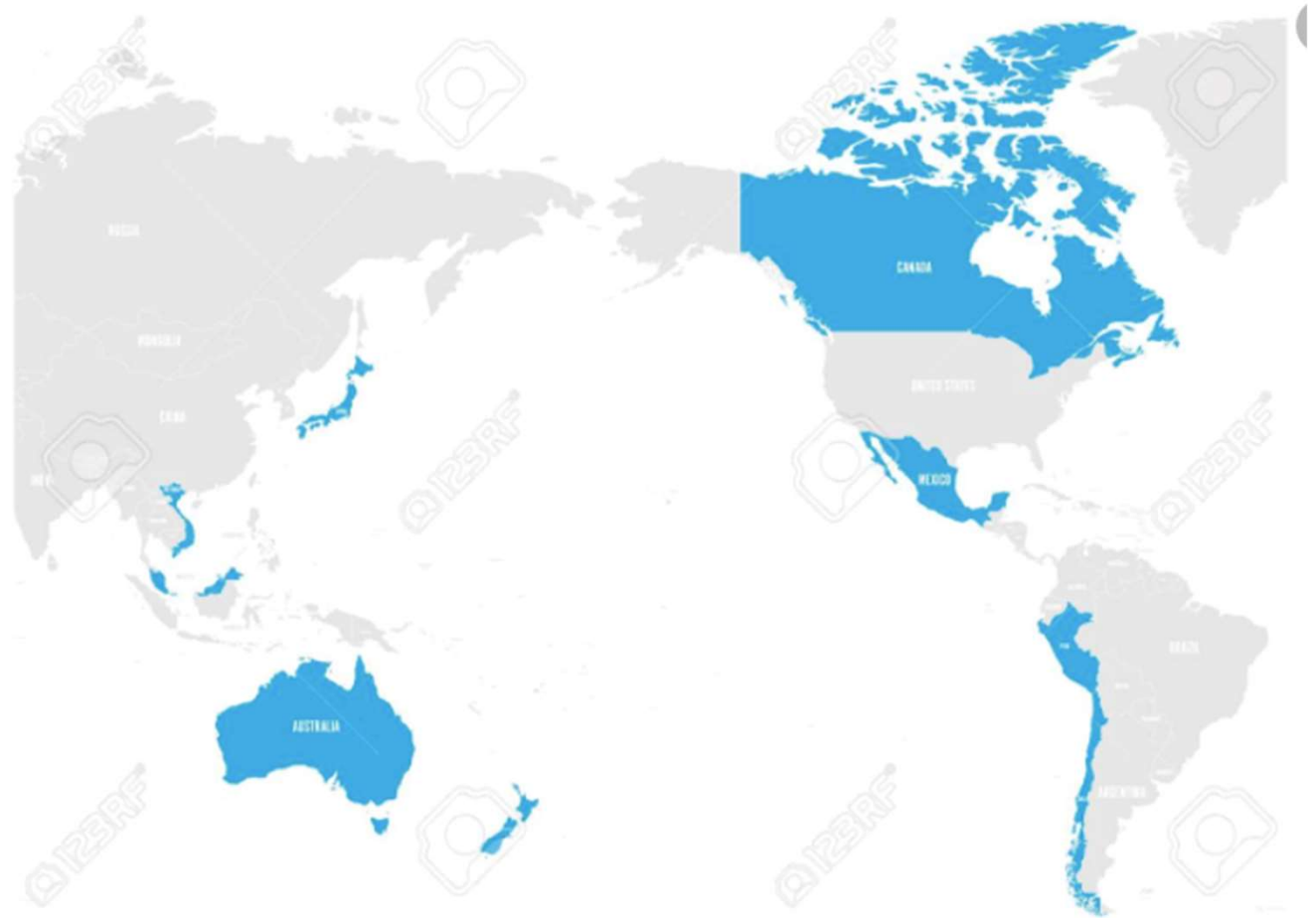
AfCFTA
Largest FTA,
with 55
countries



CPTPP

=

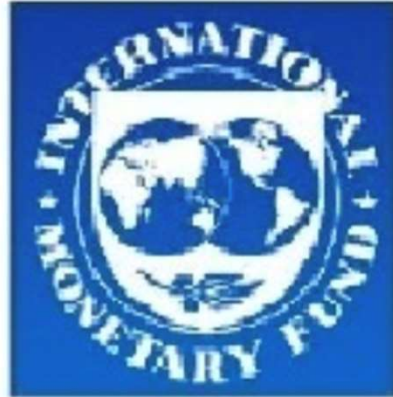
**Trans-Pacific
Partnership
minus US**



RCEP
=
**Regional
Comprehensive
Economic
Partnership**



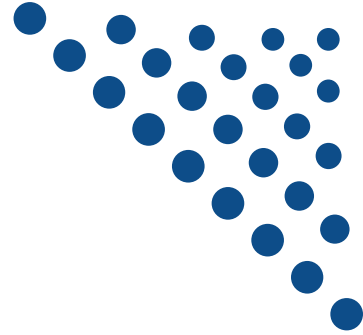
Main Economic Institutions



UNITED NATIONS

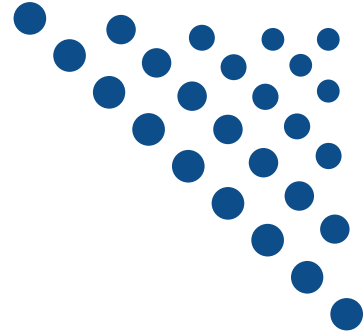
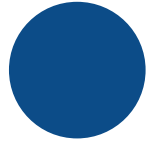


Other Policies to Encourage Globalization



- **IMF/World Bank**
 - Policy advice to open markets (the “Washington Consensus”)
 - Loans to countries conditional on
 - Reducing trade barriers
 - Permitting capital flows
- **GATT/WTO (World Trade Organization)**
 - Negotiate reciprocal trade liberalization
 - Settlement of trade disputes (usually about interfering with trade)

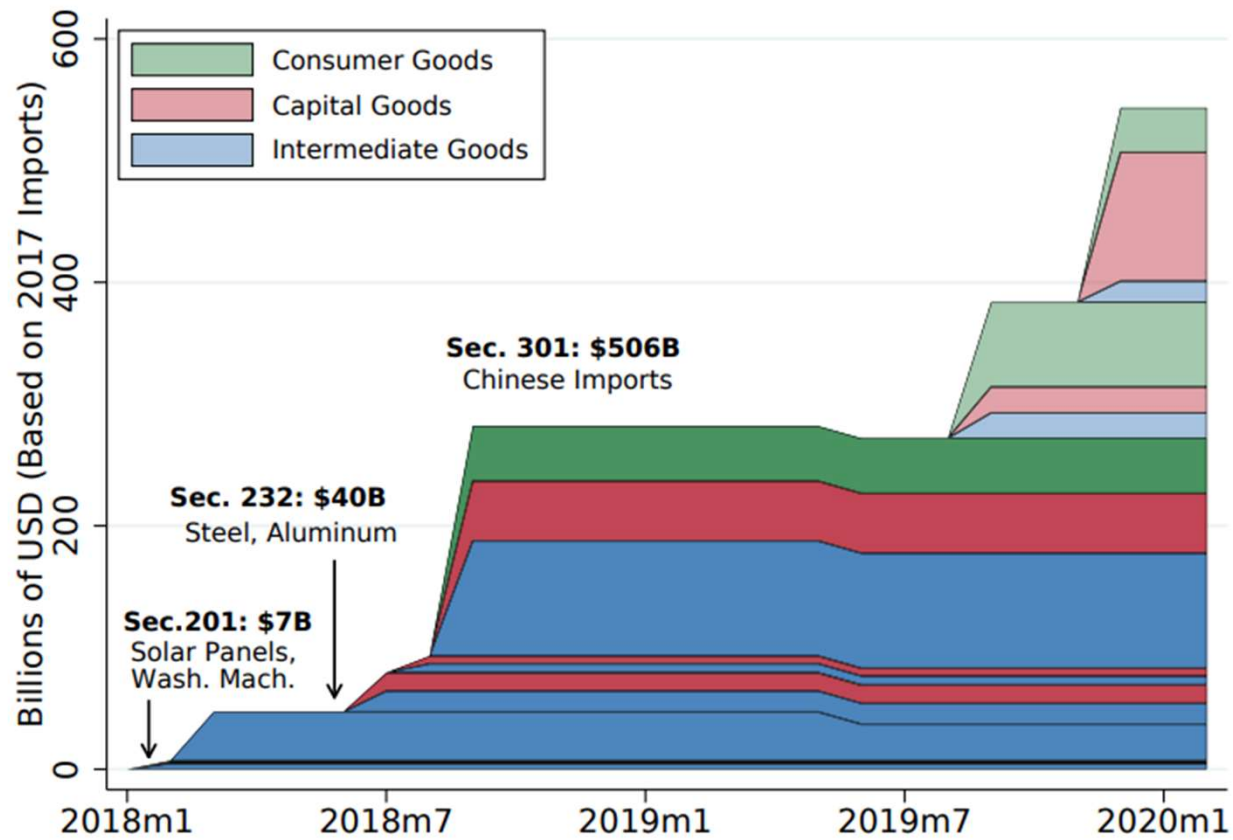




Trade Policies Discouraging Globalization

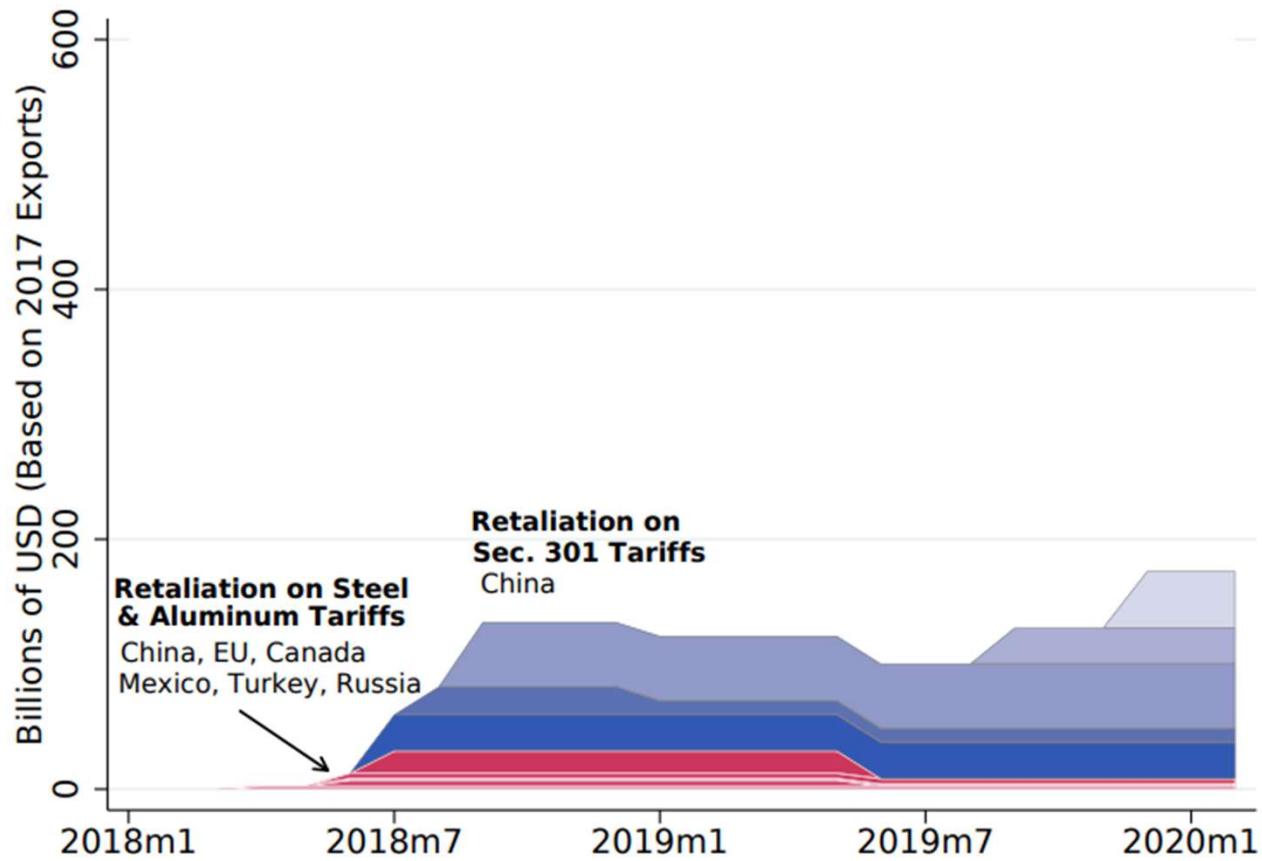


Figure B1: Composition of New U.S. Import Tariffs: 2018-2019

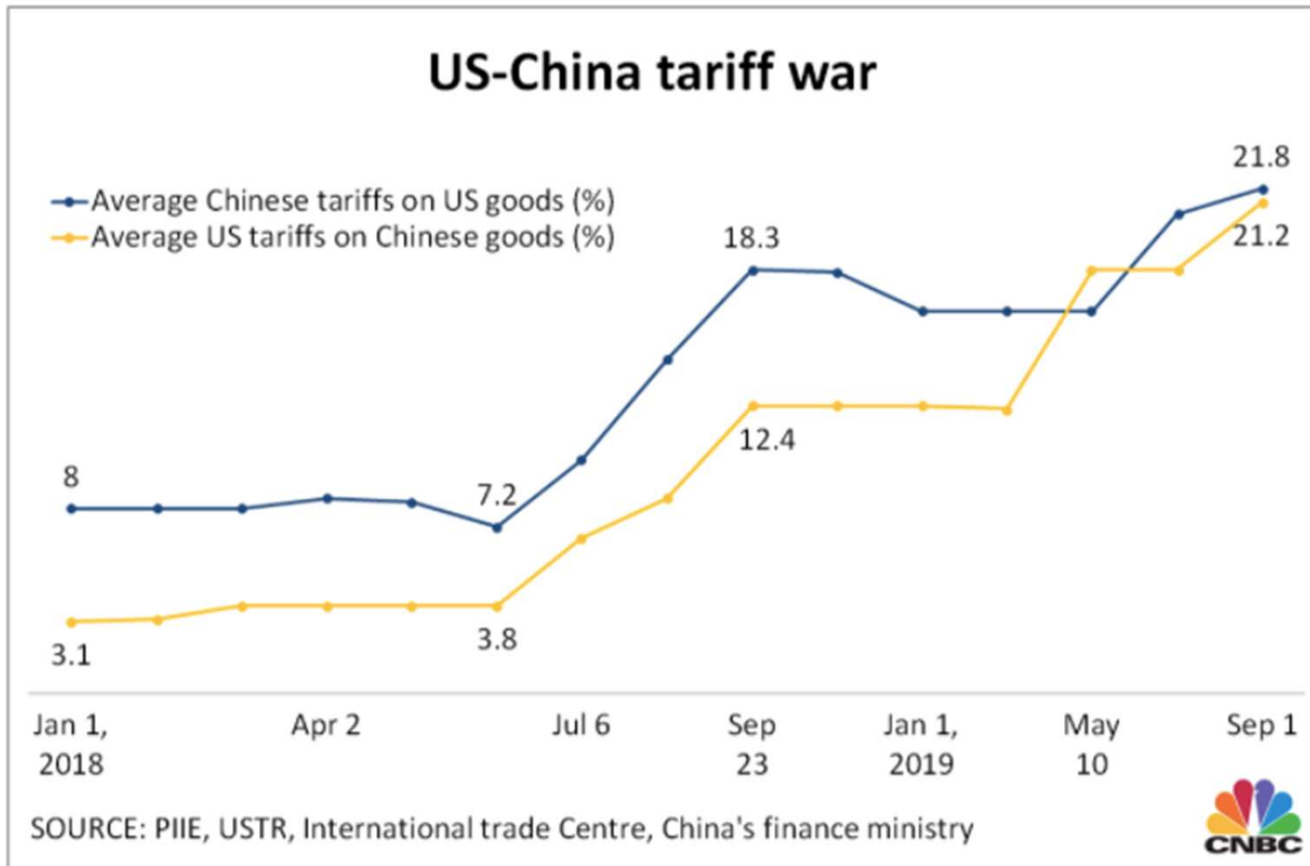


Source:
Flaan &
Pierce
2020

Figure 3: Timeline of Retaliatory Tariffs on U.S. Exports: 2018-2019



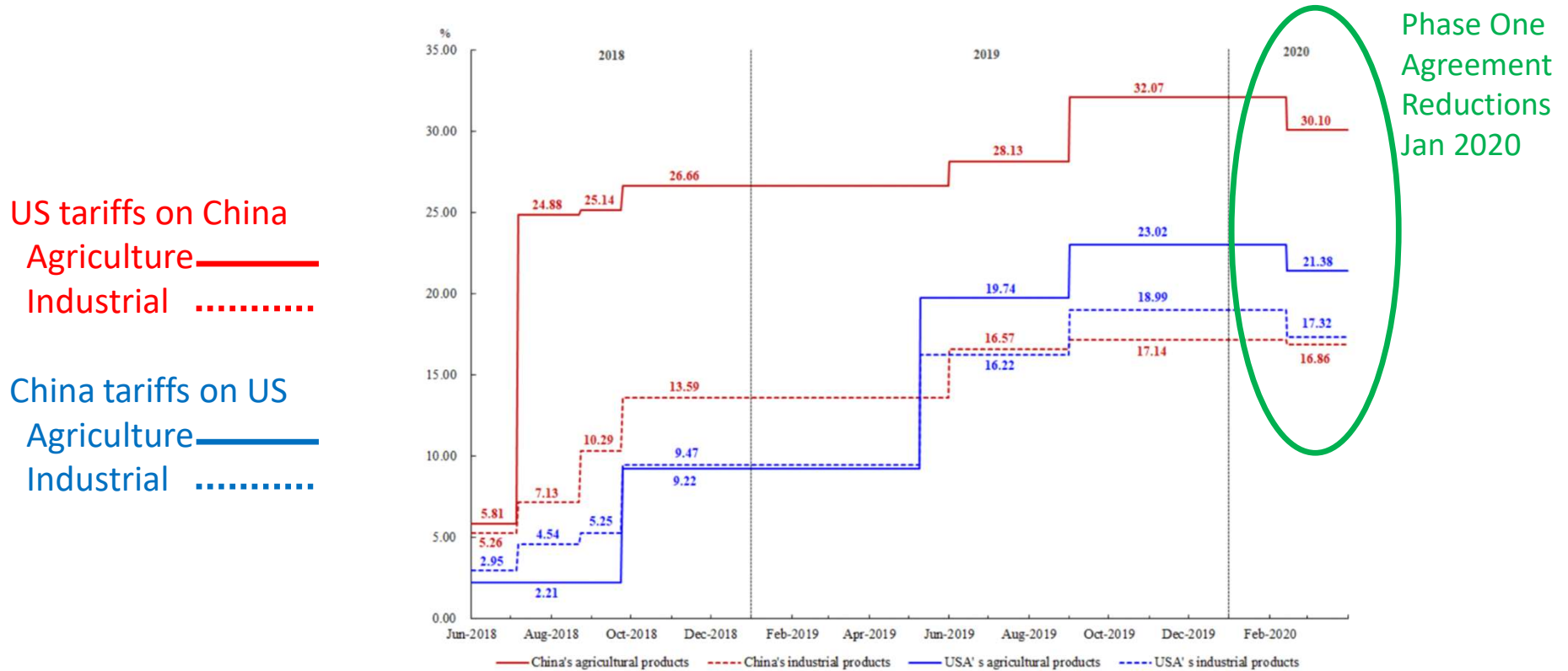
Source:
Flaan &
Pierce
2020



The first trade salvo was fired by the U.S. in early 2018, but the bilateral trade war between the U.S. and China really kicked into a higher gear in July 2018.

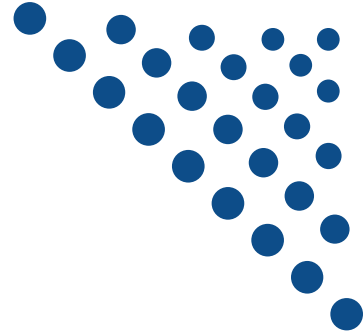
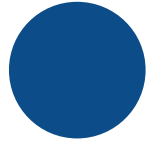
Source: CNBC.com

Figure 1. China-US bilateral import tariff increases, percentage points.



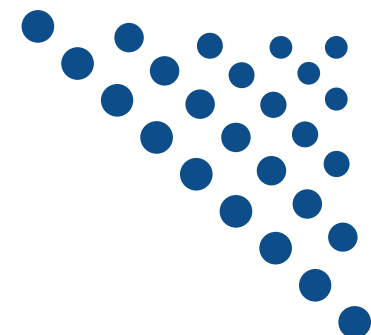
Source:
Zheng et al.
Oct 2021

Source: GTAP database and the list of additional tariffs published by China and the United States



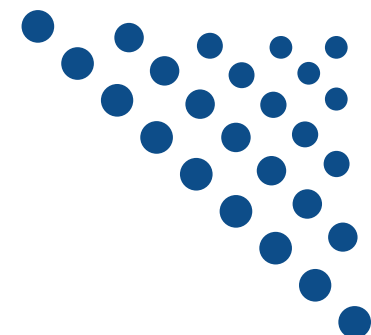
Effects of Tariffs





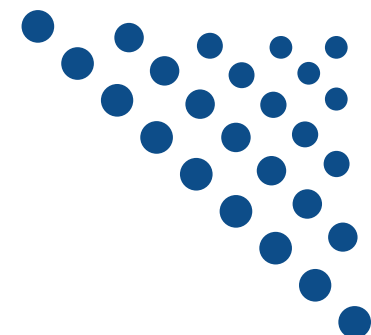
Effects of a tariff

- **A tariff is a tax on imports. It causes**
 - A rise in the price of the imported good in the importing country
 - A fall in the price of the imported good in the exporting country
 - The quantity imported to fall
 - The revenue of the tariff-levying government to rise
- **Almost always: the rise at home is much larger than the fall abroad**
 - That's especially true if importing country is small
 - But it's also true if importing country is as large as the U.S.
 - Example: President Trump's tariffs caused US prices to rise, with hardly any perceptible fall in prices abroad.



Effects of a tariff

- **The rise in price in the importing country causes**
 - A rise in price of competing goods produced there
 - Benefits to those producers
 - Harm to buyers of both the import and the competing goods
 - Including producers that use the higher-priced goods as inputs
 - Their prices also rise, hurting their buyers
 - Employment changes:
 - Increase in the protected industry
 - Decrease in industries that use the protected product as inputs
 - Example: President Trump's 25% tariff on steel
 - Helped US steel firms and their workers
 - Hurt US auto firms and workers
 - and many other industries that use steel



Effects of a tariff

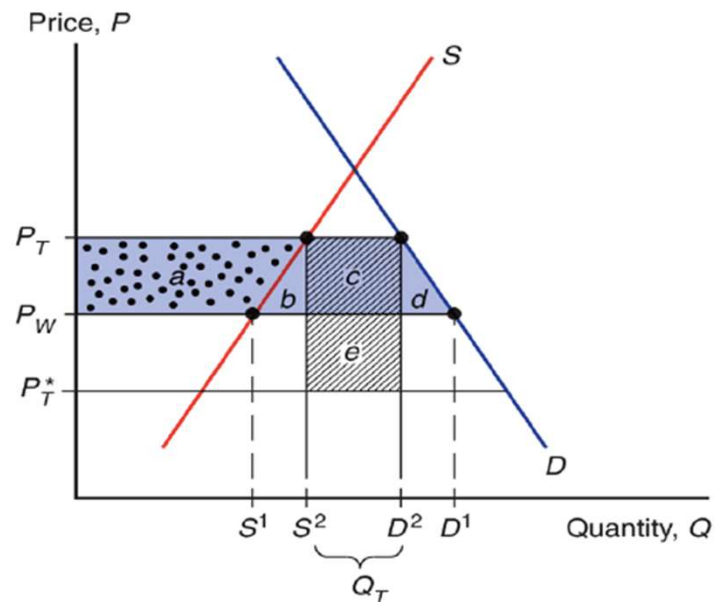
- **The fall in price in the exporting country causes**
 - Harm to sellers there
 - Benefit to buyers there
 - Shift of sales to other countries




- **If the tariff is on exports from only one country (e.g, China)**
 - Buyers shift to imports from other, more costly, countries (e.g., Vietnam)

Costs and Benefits of Tariffs: Paul Krugman's Illustration

Costs and Benefits of a Tariff for the Importing Country

The costs and benefits to different groups can be represented as sums of the five areas *a*, *b*, *c*, *d*, and *e*.

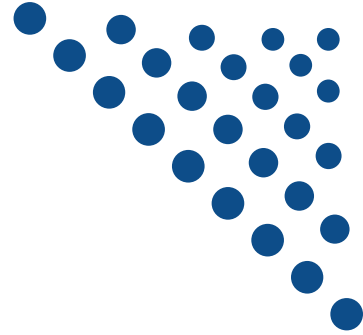


-  = consumer loss ($a + b + c + d$)
-  = producer gain (a)
-  = government revenue gain ($c + e$)

Arguments for tariffs

- Jobs
- Government Revenue
- National Security
- Protect against cheap foreign labor
- Fairness in trade
- Protect domestic standard of living
- Equalization of production costs
- Political and social reasons
- **Infant-industry protection**

Arguments against tariffs



- Arguments against tariffs

- Foregone gains from trade
- Tariffs prompt retaliation
- Even when beneficial, tariffs are politically hard to remove



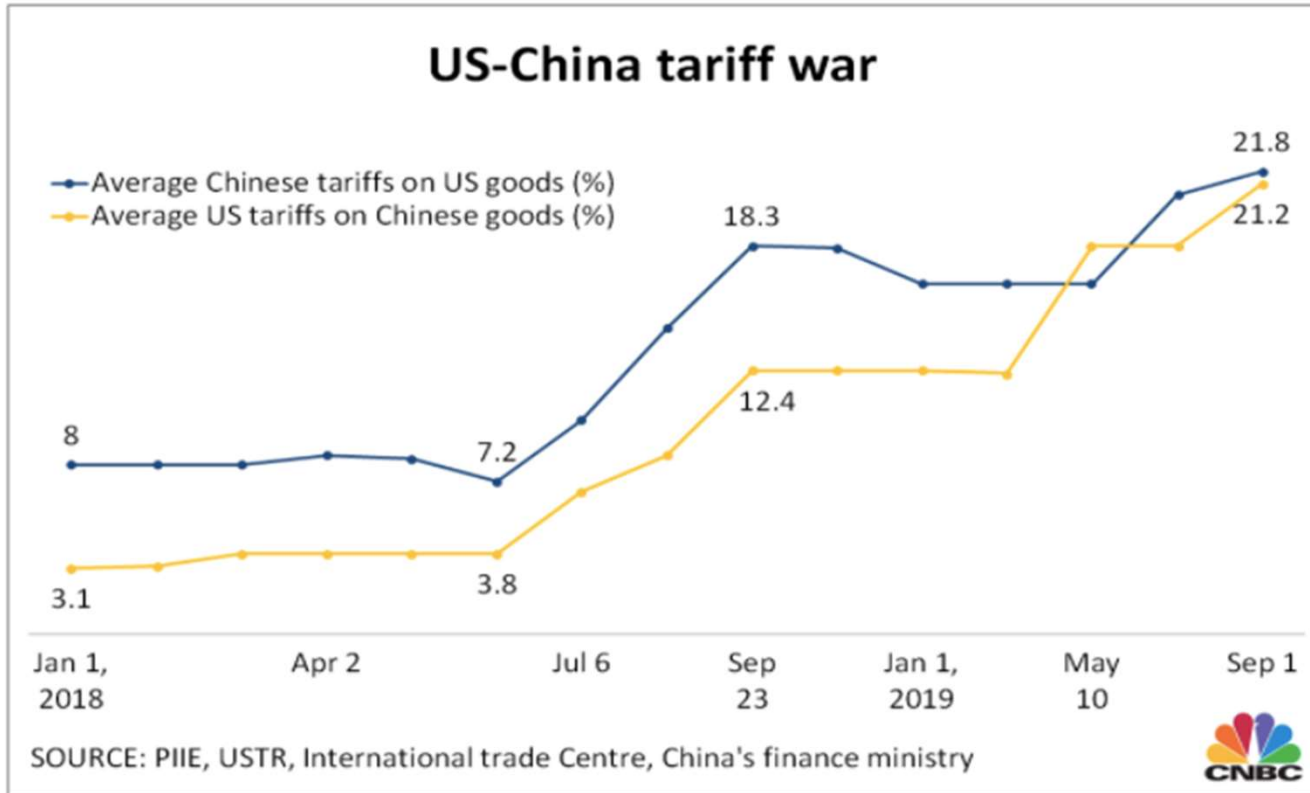
Co-Creation: The Future of Trade and Globalization



Co-creation is a process of jointly creating mutually valuable experience(s).

Ref. Chakrabarti, A. and Ramaswamy, V.. Rethinking Ricardian'Sum of Enjoyments': Gains from Trade in a Co-Creational Economy. Ross School of Business Paper No. 1211.

Next Week: US-China Tariff War – Tariff Rates



Source: CNBC.com

The first trade salvo was fired by the U.S. in early 2018, but the bilateral trade war between the U.S. and China really kicked into a higher gear in July 2018.

Thank you!

Any Questions?

www.NEEDEcon.org

Avik Chakrabarti, Ph.D.

chakra@uwm.edu

Contact NEED: info@NEEDEcon.org

Submit a testimonial: www.NEEDEcon.org/testimonials.php

Become a Friend of NEED: www.NEEDEcon.org/friend.php