The Future of International Trade

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Lisbon: May 27, 2024

- Remarkable growth of world trade since WW II.
- Not a historically continuous process. Interwar period halted "first globalization" of 1870-1914.
- Trade in manufactures and services has grown particularly fast
- Merchandise exports were 22.2 trillion USD in 2021.
- Exports of services amounted to 5 trillion USD in 2020
- Leading exporters/importers are China, US, Germany, and Japan

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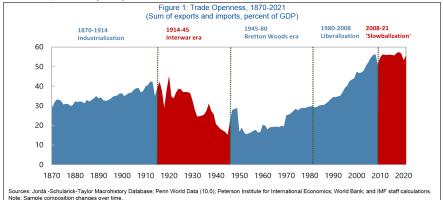
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Trade Relative to GDP

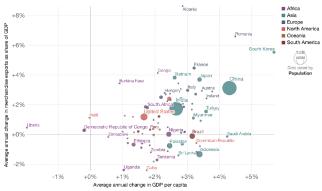
Source: Aiyar et al (2023)



Growth Correlation

Growth of GDP and trade, 1945 to 2014

Average annual change in real GDP per capita vs Average annual change in exports as share of GDP.



Source: Fouquin and Hugot (CEPII 2016), Maddison Project Database 2020 (Bolt and van Zanden, 2020)

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in Data

Global Value Chains

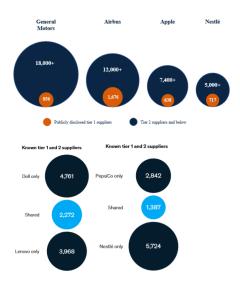
More than 2/3 of world trade is in intermediate inputs.

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



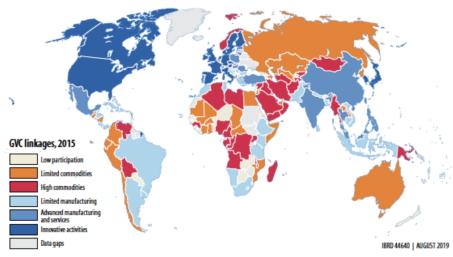
Sources: WDR 2020 team, using data from Eora26 database; Borin and Mancini (2015, 2019); and Johnson and Noguera (2017). See appendix A for a description of the databases used in this Report.

Examples of Supply Relationships (Lund et al., 2020)



GVC Map

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

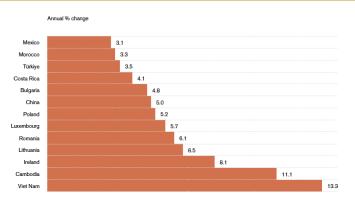


Source: WDR 2020 team, based on the GVC taxonomy for 2015 (see box 1.3).

GVC Participation

Source: WTO (2023)

Figure B.18: Average annual growth in GVC participation of selected economies, 2010-20



Source: WTO calculations based on the OECD TiVA database.

Note: GVC participation is measured as the sum of foreign value added in exports and domestic value added in other economies' exports. Preliminary data for 2020.

- While some inputs are purchased on anonymous world markets, many transactions with specialized inputs take place within GVCs.
- Made possible by fragmentation of production
- Require matching of compatible partners and impose substantial search costs.
- Often involve relationship-specific investments.
- Many durable relationships ("stickiness")
- Involve riskiness in the normal course of business.

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- Thai floods, 2011; hit hard the Japanese car industry. UNISDR estimated that they reduced the world's industrial production by 2.5%; see Haraguchi and Lall (2015).
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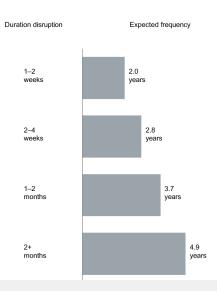
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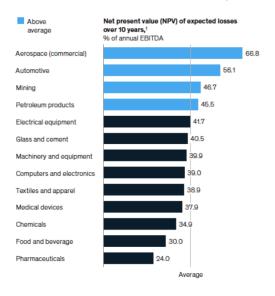
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Frequency of Supply Disruptions (McKinsey, 2020)

Expected frequency of a disruption, by duration, years Based on expert interviews, n = 35



Cost of Supply Disruptions (McKinsey, 2020)



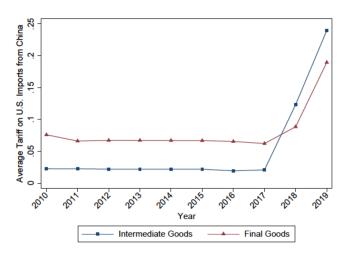
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 - MFN tariffs in G20 countries 70-75% higher on final goods than on intermediates (Bown and Crowley, 2018).
 - ② US average applied tariffs 2010-2017 on consumption goods more than 4 times as high as on intermediates.
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Average Tariffs Applied by US to Imports from China



Trade Diversion

Source: Grossman, Helpman and Redding (2024)

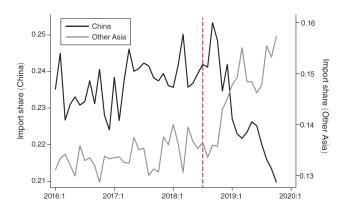


FIGURE 1. SHARE OF CHINA AND OTHER ASIA IN US IMPORTS

Executive Order on America's Supply Chains

FEBRUARY 24, 2021 • PRESIDENTIAL ACTIONS By the authority vested in me as President by the Constitution and the laws of the United States of America, it is hereby ordered as follows:

Section 1. Policy. The United States needs resilient, diverse, and secure supply chains to ensure our economic prosperity and national security. Pandemics and other biological threats, cyber-attacks, climate shocks and extreme weather events, terrorist attacks, geopolitical and economic competition, and other conditions can reduce critical manufacturing capacity and the availability and integrity of critical goods, products, and services. Resilient American supply chains will revitalize and rebuild domestic manufacturing capacity, maintain America's competitive edge in research and development, and create well-paying jobs.

Flaboration

• Secretary of the Treasure Janet Yellen (April 20, 2023):

- "... national security is of paramount importance in our relationship with China. ... The U.S. government's actions can come in the form of export controls. ... We also carefully review foreign investments in the United States for national security And we are considering a program to restric certain U.S. outbound investments in specific sensitive technologies..."
- "... We've mounted a historic expansion of American semiconductor manufacturing through the CHIPS and Science Act."
- "A top priority for President Biden is the resilience of our critical supply chains ... We are also pursuing a strategy called "friendshoring" that is aimed at mitigating vulnerabilities that can lead to supply disruptions. We are creating redundancies in our critical supply chains..."
- The Economist, May 2, 2024
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 - Macron calls for a European response in the form of industrial policy.

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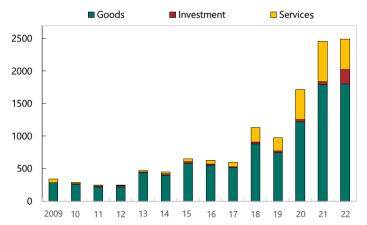
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Trade Restrictions

Source: Aiyar et al (2023)

Figure 7. Trade Restrictions Imposed (Number)

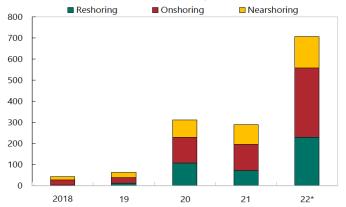


Sources: Global Trade Alert (2022), updated as of December 7, 2022

Key Terms

Source: Aiyar et al (2023)

Figure 9. Mentions of Key Terms in Corporate Presentations (Number)



Sources: 2022 IMF, Regional Economic Outlook: Asia and Pacific.

Tariffs and Supply Chain Policies

 Grossman, Helpman and Redding (2024) estimate the Trump tariff costs to be about 24 billion, three times higher than other estimates.

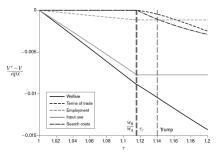


FIGURE 5. DECOMPOSITION OF WELFARE COSTS OF THE TRUMP TARIFFS

- Subsidies to diversification of supply chains or to reshoring are beneficial only in special circumstances; see Grossman, Helpman and Lhuillier (2023).
 - Companies may diversify too much
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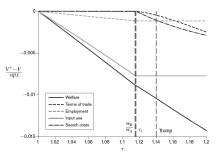


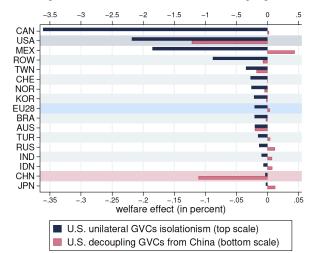
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US Decoupling

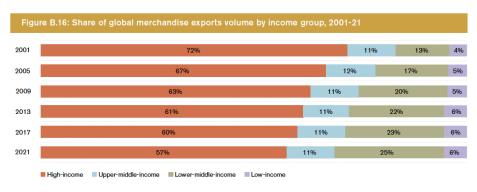
Source: Eppinger et al (2021)

Figure 3: Global welfare effects of U.S. decoupling



Potential Losers

Source: WTO (2023)



Source: WTO Trade Statistics.

Note: Income groups are based on the World Bank classification in 2001.

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- The spread of uncoordinated industrial and trade policies, together with geopolitical fragmentation into "clubs" of countries, threaten to harm foreign trade and investment.
- While global value chains may not be fully efficient, they have performed remarkably well in recent years.
 - Business firms internalize risks of supply disturbances, and it is not yet clear how governments can improve on their risk management.
- Existing estimates suggest potentially large losses from policies that diminish trade along supply chains, with lower-middle-income countries losing most.
- To avoid fragmentation into "clubs" of countries and contraction of highly beneficial trade, countries should seek cooperation in the design of policies
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