

The Peace Project in an Era of Weaponized Interdependence

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Executive summary

Globalization has created vast economic networks that interlink countries in complex ways, resulting in both beneficial cooperation and precarious dependency. This interconnectedness poses several challenges to national economies, especially as states deal with regulatory inconsistencies, economic vulnerabilities, and geopolitical tensions.

As some global supply chain networks grow, a few intermediaries dominate, creating asymmetry. Notable examples include SWIFT, which plays a critical role in global finance. As these networks centralize exchanges, certain states can exert significant leverage over global economic flows, shifting power balances between states.

U.S. tariffs on EU goods and services can have broader implications. The automotive, pharmaceutical, and technological sectors exemplify the intertwined nature of U.S. and EU supply chains. Disruptions or changes in trade policies could force companies to reconfigure their supply chains, leading to increased operational costs and potential offshoring. The EU's energy reliance on the U.S. complicates the potential for retaliatory tariffs, as the losses incurred from trade disputes could outweigh their advantages, particularly in the energy sector.

China's dominance in the production of rare earth minerals presents strategic challenges for both U.S. and EU technological ambitions. China's control over these resources gives it considerable power in negotiations regarding trade and technology access. Geopolitical friction is likely to fragment global markets into U.S.-aligned and China-aligned supply chains. This bifurcation may force companies and countries to make strategic decisions about which market to serve, potentially leading to increased inefficiencies and higher costs.

The Dark Side of Global Supply Chains

Globalization has led to a series of economic networks with complex interdependencies across various countries. While this led to mutually beneficial cooperations, it created mutual dependencies, making domestic economies interconnected in ways that are difficult to untie, derisk or decouple.

Due to the interconnectedness and to the creation of the global networks and supply chains, states face multiple challenges when addressing their national economies. Some of these include regulatory issues as different countries might have quite divergent regulations, labor and employment laws, as well as environmental and social protection laws. Businesses might choose their headquarters or plants considering the ease of doing business, therefore states might need to adopt their legislative environment considering the interest of businesses. Balancing economic growth with social and environmental rights might pose a significant challenge for many countries. The COVID-19 pandemic has highlighted that natural disasters, economic changes, and geopolitical shifts can cause serious disruptions to domestic markets,

emphasizing that the vulnerability of supply chains are a serious challenge.¹ Additionally, supply chains increasingly depend on various digital platforms and states must address issues of cybersecurity and data privacy. Political conflicts often disrupt supply chains, leading to a search for new partners and sources.² Due to the aforementioned complexity of the networks and mutual dependencies, maintaining trade relationships is becoming more difficult. Geopolitical tensions can result in major changes regarding trade policies. Restrictive measures, increased tariffs, and cancelled trade agreements often lead to major disturbances in supply chains and affect the prices of domestic products and services.

Due to interconnected supply chains, new networks are emerging that tend to focus on more suppliers or dependencies, while smaller businesses are looking for reliable partners. As a result of globalization, domestic economies require that governments coordinate their efforts not only with other governments, but also with international organizations and businesses to ensure the security of the supply chain systems. In other words, the power that states traditionally exercised through their bilateral relations has been significantly diminished.

This phenomenon has an important effect on power distribution among states. Global economic networks create asymmetric topologies in which exchanges become centralized, and, in this process, a few specific intermediaries play a crucial role.³ In this context, asymmetric growth means that globalization generates networks with clear inequalities: as one network starts to grow, more and more businesses become drawn towards it since businesses are likely to find them more attractive than the networks in which fewer partners participate. One of the best examples of how asymmetric networks tend to emerge is the Society for Worldwide Interbank Financial Telecommunication, or SWIFT, which has become a crucial part of the global financial infrastructure. Currently, approximately 11,000 banks and financial institutions located in more than 200 countries and territories are using it.⁴ The more partner institutions it has, the more valuable and convenient it becomes for its users due to large scale efficiency. Alternative cross-border financial messaging systems have been introduced after the sanctions regime was introduced in Iran, however, relatively few institutions participate in these new networks. Similarly, several networks of monopolies or semi-monopolies are built in the globalized economy. Over the short and medium term, the asymmetry tends to grow, however, in the long run this might change.

¹ See for example: Sherman, E. (2020): *94% of the Fortune 1000 are seeing coronavirus supply chain disruptions: Report.* *Fortune*. Available online: <https://fortune.com/2020/02/21/fortune-1000-coronavirus-china-supply-chain-impact/>, or Sharma, M., Luthra, S., Joshi, S., & Kumar, A. (2022): “Developing a framework for enhancing survivability of sustainable supply chains during and post-COVID-19 pandemic.” *International Journal of Logistics Research and Applications*, 25(4-5), 433-453.

² Charpin, R., & Cousineau, M. (2024): Friendshoring: how geopolitical tensions affect foreign sourcing, supply base complexity, and sub-tier supplier sharing. *International Journal of Operations & Production Management*.

³ Henry Farrell, Abraham L. Newman; Weaponized Interdependence: How Global Economic Networks Shape State Coercion. *International Security* 2019; 44 (1): 42–79. doi: https://doi.org/10.1162/isec_a_00351.

⁴ See: What is Swift? Online: <https://www.swift.com/about-us/legal/compliance-0/swift-and-sanctions#:~:text=It%20is%20a%20member%20Downed,than%20200%20countries%20and%20territories.>

The asymmetric network structures create the potential for the so called “weaponized interdependence.” In these cases, some states have a leverage on interdependent relations and can coerce other actors and states. More precisely, states with political authority over the central point of the international networked structures – through which money, goods, and information travel – can impose severe costs on others. If states have the appropriate domestic institutions, coupled with legal and regulatory frameworks, they can weaponize networks to gather information or choke off economic and information flows, compel policy change, and deter unwanted actions.⁵

For example, in the 2010s, American and European policymakers used SWIFT to reinforce restrictive measures against Iran. First, they were able to gather information on which Iranian terrorist groups were using the system. In 2012, the Senate Banking Committee allowed the U.S. government to sanction SWIFT if it continued to allow Iranian institutions to use the SWIFT system.⁶ At the same time, the EU banned financial institutions from providing services to targeted institutions. As a result, SWIFT had to take action that seriously affected the banking sector in Iran.⁷ During the negotiations over Iran’s nuclear program, the access to SWIFT became an important bargaining point.

In other words, due to complex interconnectedness of trade, measures by states aiming to restrict the flow of goods, services, or materials to their adversaries can have direct negative effects on their domestic economies and even those of their political allies. Hence, these measures have the potential to backfire on the enforcer, causing disturbances to internal markets and sparking sudden inflation in others. However, if states maintain regulatory and legal control over monopolistic or near-monopolistic networks, they may gain an advantage over competitors. In the event of an intense trade war, weaponizing asymmetric networks is likely to become the most effective tool that states can use to drive policy change.

Tariffs and Global Supply Chains

1. Business Involved in the U.S. and the EU

President Trump promised that once in the Oval Office, he will increase the tariffs: 60% on goods shipped from China, including a 100% tariff on electric vehicles; 25% on Canada and Mexico if they don’t take more serious measures to stop the flow of illicit drug shipments; and

⁵ Henry Farrell, Abraham L. Newman; Weaponized Interdependence: How Global Economic Networks Shape State Coercion. *International Security* 2019; 44 (1): 42–79. doi: https://doi.org/10.1162/isec_a_00351 pp. 45.

⁶ Reuters: Banking's SWIFT working with US, EU on Iran measures. February 4, 2012. Online: <https://www.reuters.com/article/idUSTRE81300I/>.

⁷ Majd, M. (2018). The cost of a SWIFT kick: Estimating the cost of financial sanctions on Iran. In *The Political Economy of International Finance in an Age of Inequality* (pp. 175-193). Edward Elgar Publishing.

20% on goods from all over the world.⁸ Additionally, he stated that he will impose a 100% tax on all BRICS countries if they decide to renounce the US dollar as their reserve currency.⁹

Even though these measures are not in place yet and they might change, it is expected that President Trump will significantly change U.S. trade policies. A sharp increase in taxes will likely increase inflation rates in the U.S. This will have negative impacts on the European economy.

Increased prices due to higher tariffs could reduce the demand for European products and services. In 2023, the U.S. was the EU's largest partner for the export of goods (19.7%) and its second largest partner for the imports of goods (13.7%), according to Eurostat.¹⁰ EU exports to the U.S. are predominantly manufactured goods, with machinery and vehicles accounting for 41% of the total exports, followed by chemicals (27%) and other manufactured goods.

The three largest exporters to the United States in the EU were Germany (€157 732 million), Italy (€67 266 million) and Ireland (€51 621 million).¹¹ Germany¹² and Italy¹³ primarily export high-end vehicles – commercial vehicles and busses, respectively – which, if tariffs increased, will have a higher customer price on the U.S. market. The luxury automotive is a niche market, hence the demand will not be heavily affected by the purchasing power of the general population of the U.S. On the other hand, the demand for commercial vehicles and busses is likely to drop, primarily affecting the German economy and the economies involved in the supply chains of the targeted products.

However, due to the interconnectedness of the global supply chains, the unilaterally introduced U.S. measures are likely to have negative effects on their own automotive industry as well: Ford and General Motors have supply chains that involve European companies, such as Continental, Valeo, Bosch or Aptiv¹⁴, which supply U.S. companies with electronic parts or safety technologies. Additionally, pharmaceuticals and biotechnologies are the second largest

⁸ Bloomberg: "What Trump's New Tariff Push Means for Trade and the Economy". Online: [https://www.bloomberg.com/news/articles/2024-11-06/trump-s-threat-on-tariffs-who-pays-them-how-do-they-affect-the-economy?itm_source=record&itm_campaign=Trump%27s Second Term&itm_content=Tariff Threat-3](https://www.bloomberg.com/news/articles/2024-11-06/trump-s-threat-on-tariffs-who-pays-them-how-do-they-affect-the-economy?itm_source=record&itm_campaign=Trump%27s%20Second%20Term&itm_content=Tariff%20Threat-3).

⁹ BBC: "Trump threatens 100% tariff on BRICS nations if they try to replace dollar". Online: <https://www.bbc.com/news/articles/cgrwj0p2dd9o>.

¹⁰ Eurostat: "USA-EU - international trade in goods statistics. Highlights" Online: https://ec.europa.eu/eurostat/statistics-explained/index.php?title=USA-EU_-_international_trade_in_goods_statistics.

¹¹ Eurostat: "EU - United States most traded goods" Online: [https://ec.europa.eu/eurostat/statistics-explained/index.php?title=USA-EU_-_international_trade_in_goods_statistics#EU_-_United States most traded goods](https://ec.europa.eu/eurostat/statistics-explained/index.php?title=USA-EU_-_international_trade_in_goods_statistics#EU_-_United_States_most_traded_goods).

¹² Office of Technology and Evaluation: Analysis of U.S. Trade with Germany, 2022. Online: <https://www.bis.doc.gov/index.php/documents/technology-evaluation/ote-data-portal/country-analysis/3407-2022-statistical-analysis-of-us-trade-with-germany/file>.

¹³ Trading Economics: Italy Exports to United States. Updated in January 2025. Online: <https://tradingeconomics.com/italy/exports/united-states>.

¹⁴ See: Investopedia (2021): „Who Are Ford's Main Suppliers?" Online: <https://www.investopedia.com/ask/answers/052715/who-are-fords-f-main-suppliers.asp> or General Motors

industry where U.S. and EU companies work together, having an interconnected supply chain – tariffs introduced in this area will likely cause damage to the internal markets as well.¹⁵ Some of the largest companies working together on various stages of medicine and vaccine development, manufacturing, and distribution are Pfizer, Johnson & Johnson, and Merck & Co. which together with the European BioNTech, AstraZeneca, GlaxoSmithKline and Sanofi.¹⁶ Other industries that have both U.S. and EU supply chains are in the field of technology and electronics, with major companies such as Intel,¹⁷ Siemens;¹⁸ and the aerospace industry with Airbus¹⁹ and Boeing.²⁰

Disturbances to these supply chains can significantly reshape global trade routes and have various effects on businesses' decisions, leading to price increases for customers and the reconfiguration of supply chains to bypass tariffs. This could involve sourcing materials and supplies from alternative countries, disrupting established trade and logistic relationships. Some businesses might even consider reshoring production or development to avoid tariffs, though higher labor costs could impede innovation and investment in technology. Conversely, some EU companies may choose to relocate their development and production to the U.S., drawn by the incentives offered under the Inflation Reduction Act.²¹

Retaliatory measures or tariffs introduced by the European Union on U.S. products and services, or a tit-for-tat escalation are not the best option. None of these supply chains or networks are asymmetrical in a way that would greatly favor the EU. While the EU possesses some regulatory and industrial capacity to control some parts of this network, it lacks a near-monopoly or monopoly over any critical areas. Hence, its potential to use these networks as a means to achieve policy changes is minimal. Moreover, following the decoupling from Russian oil and gas, the EU's most imported goods from the U.S. in 2023 were oil and natural gas.²² The EU remains heavily dependent on U.S. energy, and any retaliatory measures imposed on the U.S. could escalate disputes, potentially allowing energy dependency to be leveraged

(2024): „General Motors Recognizes Top Global Suppliers at Supplier of the Year Event”. Online: <https://news.gm.ca/en/home/newsroom.detail.html/Pages/news/ca/en/2024/apr/0411-supplier.html>.

¹⁵ Eurostat (2024): EU - United States trade by type of goods, Online: [https://ec.europa.eu/eurostat/statistics-explained/index.php?title=USA-EU - international trade in goods statistics#EU - United States trade by type of goods](https://ec.europa.eu/eurostat/statistics-explained/index.php?title=USA-EU_-_international_trade_in_goods_statistics#EU_-_United_States_trade_by_type_of_goods).

¹⁶ See: Pfizer (2022): Pfizer and BioNTech Sign New Global Collaboration Agreement to Develop First mRNA-based Shingles Vaccine. Online: <https://www.pfizer.com/news/press-release/press-release-detail/pfizer-and-biontech-sign-new-global-collaboration-agreement>, or Labiotech (2024): From consumer health to pure biopharma: Inside Sanofi's strategic shift, Online: <https://www.labiotech.eu/in-depth/sanofi-investment-strategy/>.

¹⁷ Intel (2024): Intel around the world. Online: <https://www.intel.com/content/www/us/en/corporate-responsibility/community-global-sites.html#tab-blade-1-1>.

¹⁸ Siemens: Our locations, Online: <https://www.siemens-advanta.com/about-us/locations>.

¹⁹ Airbus: Our worldwide presence, Online: <https://www.airbus.com/en/about-us/our-worldwide-presence>.

²⁰ Boeing: Boeing in Europe. Online: <https://www.boeing.com/content/dam/boeing/boeingdotcom/global/pdf/Boeing-europe-backgrounder.pdf>.

²¹ US Department of the Treasury (2022): Inflation Reduction Act. Online: <https://home.treasury.gov/policy-issues/inflation-reduction-act>.

²² Eurostat (2024): EU imports of energy products continue to drop. Online: <https://ec.europa.eu/eurostat/web/products-eurostat-news/w/ddn-20240701-1>.

against the EU. In short, the losses that the EU might suffer from a trade dispute outweigh the losses that the U.S. would endure.

2. Business Involved in the U.S. and China

Similarly to the U.S.-EU supply chains, there are several global networks of companies involving both the U.S. and China. Some of the key interconnected sectors are the technology and electronics industry. Many U.S. tech companies, such as Intel or Apple are heavily reliant on Chinese manufacturing, just as many U.S. clothing brands (Nike, Gap, American Eagle Outfitters, or Calvin Klein) have outsourced manufacturing to China, accounting for 29.7% of total U.S. imports in this field. Additionally, China is a major source of U.S. imports for various consumer goods, such as furniture, bedding, lamps, toys, and other miscellaneous manufactured items, constituting 50.7% of total U.S. imports for such commodities.²³

In addition to a heavy reliance on Chinese manufacturing, the U.S. is facing another, indirect challenge: many U.S. partners have increased their reliance on China. For example, Germany, increased its share of goods imports from China from 10.2% to 12%, while Vietnam saw an even greater increase from 27.5% to 32.8%. Japan is the only exception, with a decline in China's share from 24.5% to 21%, which largely took place in 2022.²⁴ The partners' heavy reliance on China might help the Asian economy to circumvent some of the proposed tariffs.

In addition to a heavy reliance on Chinese manufacturing, some U.S. companies are heavily interconnected with Chinese market actors in the automotive industry,²⁵ most notably Tesla relying on Chinese manufacturing.

In contrast, the U.S. tech industry – particularly in chip and semiconductor production – holds asymmetric power in areas such as design, intellectual property, and export controls. However, in 2022, it accounted for only 10% of global semiconductor production and produced none of the most advanced chips, relying on East Asian producers for 75% of its needs.²⁶ The Biden administration actively encouraged companies to “friend-shore” the production among the U.S., Taiwan, Japan and South Korea, citing economic and national security interests. In 2022, it passed the Chips and Science Act to encourage reshoring manufacturing.²⁷ Furthermore, the

²³ U.S. Office of Technology Evaluation: “U.S. Trade with China. 2022”. Online: <https://www.bis.doc.gov/index.php/country-papers/3268-2022-statistical-analysis-of-u-s-trade-with-china/file>.

²⁴ Federal Reserve: “As the U.S. is Derisking from China, Other Foreign U.S. Suppliers Are Relying More on Chinese Imports” <https://www.federalreserve.gov/econres/notes/feds-notes/as-the-u-s-is-derisking-from-china-Other-foreign-u-s-suppliers-are-relying-more-on-chinese-imports-20240802.html>.

²⁵ Spectrumnews1 (2024): How (and when) Chinese cars could affect the U.S. market. Online: <https://spectrumnews1.com/ca/southern-california/transportation/2024/03/18/how--and-when--chinese-cars--could-affect-u-s--market>.

²⁶ The White House: “FACT SHEET: CHIPS and Science Act Will Lower Costs, Create Jobs, Strengthen Supply Chains, and Counter China” Online: <https://www.whitehouse.gov/briefing-room/statements-releases/2022/08/09/fact-sheet-chips-and-science-act-will-lower-costs-create-jobs-strengthen-supply-chains-and-counter-china/>.

²⁷ H.R.4346 - CHIPS and Science Act.

U.S. banned the export of this technology to a series of actors with the aim of limiting access to its technological advancements.²⁸

However, U.S. supply chains remain dependent on Chinese critical mineral production processes that are essential for various technological and industrial applications. The U.S. published a list of the critical materials needed for its economic and national security,²⁹ closely mirroring the ones published in the EU's Critical Raw Materials Act.³⁰ Currently, China produces 60% of the world's rare earth elements and processes nearly 90%, giving it a near-monopoly in this sector.³¹

China's specific political and economic structure enables it to leverage its near-monopoly position more effectively than the American or the European systems would allow. As a part of the so-called "Chips War," China has used its asymmetric power to limited the export of some of these minerals to the EU³² and, more recently, to the U.S.³³

China's dominance in these critical minerals poses strategic challenges for both the U.S. and the EU, which rely on them for technology, renewable energy, and defense capabilities. These interconnected supply chains illustrate the extensive economic ties between the U.S. and China, where changes in trade policies, tariffs, or geopolitical tensions can significantly affect both economies. The expected increase in tariffs on Chinese products are likely to accelerate the weaponization of these strategic supply chains on both parts.

Changes to Expect in Global Supply Chains

As the trade war between the U.S. and China is expected to intensify, both countries are likely to focus on weaponizing the networks over which they have legal and regulatory control.

²⁸ China Briefing: "US-China Relations in the Biden Era: A Timeline", Online: <https://www.china-briefing.com/news/us-china-relations-in-the-biden-era-a-timeline/>.

²⁹ The United States Geological Survey: 2022 List of Critical Minerals, Online: <https://www.usgs.gov/news/national-news-release/us-geological-survey-releases-2022-list-critical-minerals>.

³⁰ European Commission: Directorate-General for Internal Market, Industry, Entrepreneurship and SMEs, Grohol, M. and Veeh, C., Study on the critical raw materials for the EU 2023 – Final report, Publications Office of the European Union, 2023, <https://data.europa.eu/doi/10.2873/725585>.

Council of the European Union: "An EU critical raw materials act for the future of EU supply chains". Online: <https://www.consilium.europa.eu/en/infographics/critical-raw-materials/#0>.

³¹ Gracelin Baskaran: "What China's Ban on Rare Earths Processing Technology Exports Means". Center for Strategic and International Studies. Online: <https://www.csis.org/analysis/what-chinas-ban-rare-earths-processing-technology-exports-means#:~:text=At%20present%20China%20produces%2060,given%20China%20a%20near%20monopoly>.

³² Semi.org: "SEMI Europe Comments on the Export Controls on Gallium and Germanium" Online: <https://www.semi.org/sites/semi.org/files/2024-04/SEMI%20Europe%20Comments%20on%20the%20Export%20Controls%20on%20Gallium%20and%20Germanium.pdf>.

³³ Reuters: "China bans export of critical minerals to US as trade tensions escalate", Online: <https://www.reuters.com/markets/commodities/china-bans-exports-gallium-germanium-antimony-us-2024-12-03/>.

- Firstly, China will introduce countermeasure to U.S. tariffs and, since it is not a liberal democracy, the state has control over more asymmetric networks and will use it to its advantage.
- Second, Chinese products and goods exported to the U.S. market are likely to be rerouted through third countries. The trade between China and ASEAN countries have been rapidly increasing in recent years, making ASEAN China's largest trading partner, surpassing the EU in 2020.³⁴ As a result, it is likely that Chinese companies will reroute much of their products via these channels.
- Third, China will continue to limit access to critical raw materials needed by the U.S. The ban on selling them to U.S. markets through third parties will make it harder for the U.S. and its allies to secure its own supply chains that use these critical materials, causing market disturbances and an increase in prices.
- Fourth, banning trade between Chinese and U.S. companies is likely to create two different markets for certain products and commodities: one supply chain will be centered around markets oriented towards the U.S. and its allies, and another one around Chinese market. While companies may manage to serve both markets, supply chains that are centered around production of restricted goods will eventually have to choose between the two rival powers.

The weaponization of supply chains will encourage both businesses and states to isolate themselves from networks that are more vulnerable to manipulation, while securing supply chains that are less prone to such risks. This will lead to significant shifts in global trade networks where interdependencies are more difficult to be leveraged by state actors. However, China's unique political and economic structure may continue to be perceived as a persistent threat.

Conclusions and Recommendations

The complexities of global supply chains underscore the intricate web of interdependencies that have emerged in the age of globalization. As nations navigate the shifting landscape of international trade, the implications of asymmetric networks and weaponized interdependence become increasingly apparent.

States that hold strategic control over critical economic nodes can leverage this power to influence global markets, imposing costs on adversaries. In other words, state power increasingly depends on the capacity to weaponize global networks and supply chains. Since the EU does not control networks with monopolies or near-monopolies over certain products, it has less leverage in international disputes.

³⁴ China Briefing: "China-ASEAN Trade and Investment Relations", Online: <https://www.china-briefing.com/news/china-asean-trade-and-investment-relations/#:~:text=As%20a%20bloc%2C%20ASEAN%20is,percent%20from%20the%20previous%20year.>

Policy makers will have to balance the tasks of developing and fostering stable trade relationships and protecting national markets from asymmetric networks' effects. Tariffs or restrictions on raw material exports are likely to result in retaliatory measures which will lead to the realignment of supply chains. In some cases, this can shift towards less efficient or alternative suppliers that may not offer the same quality or price benefits as prior arrangements. This inefficiency not only undermines the competitiveness of domestic industries but also risks job losses in sectors that heavily depend on imports, exacerbating economic dislocation.

The overall trade environment is becoming less predictable, creating uncertainty for businesses engaged in international markets. This unpredictability can deter investment, hinder growth, and stall economic recovery, ultimately contributing to a stagnated global economy. By exacerbating international tensions and complicating trade negotiations, tariffs not only affect immediate economic interests but can also have long-lasting implications for global economic stability.