May 1, 2025

In a world rife with trade tensions, the China-U.S. dispute stands out as the most significant

By Angelo Katsoras

Introduction

To say that the global tariff situation is in flux would be an understatement. The United States imposed tariffs on many countries and then temporarily suspended most of them to allow for negotiations, while maintaining a 10% base tariff on most imports. Meanwhile, Canada and Mexico are set to begin contentious trade negotiations on the USMCA with the United States.

As for China, the United States imposed tariffs of up to 145% on imported goods, while the Middle Kingdom responded with a 125% counter-tariff. Hopes for a deal to further reduce tariffs were recently boosted when Washington eliminated tariffs on certain Chinese electronics, such as cell phones, while Beijing did the same for certain U.S. imports, such as engine parts and pharmaceuticals.

However, it is important to note that long before the recent trade tensions between the United States and the West, China-U.S. relations were a major driver of protectionism. While many U.S. lawmakers criticize tariffs on Canada and other countries, there is broad bipartisan support in the United States for taking a tougher stance against China.

Driving the growing tensions between the two countries is a great power rivalry, radically different economic models, increasingly separate communications and Internet systems, conflicting financial regulations and, above all, a lack of mutual trust.

Both nations are using trade restrictions, financial sanctions, and tariffs to gain strategic advantages, with a particular focus on exploiting vulnerabilities in each other's supply chains. To strengthen their positions, they are seeking not only compliance from their own companies, but also cooperation (forced or otherwise) from as many countries as possible.

Even if both sides agree to somewhat lower tariffs, their economies will continue to decouple. The only question is whether the process will be longer and more orderly or shorter and more chaotic.

The global economy was built for the high-trust environment of the 1990s, not the low-trust landscape of today. This means that as the superpower rivalry escalates, globally integrated supply chains are being perceived more and more as vulnerable instead of efficient. This report will show how these developments are resulting in more fragmented and costly supply chains.

The geopolitics of undersea cables

Over 95% of the world's Internet traffic relies on a vast network of undersea fibre-optic cables stretching thousands of miles across the oceans.

Until recently, private cable companies were able to maintain and expand these networks with little difficulty, even in disputed areas such as the South China Sea. But rising geopolitical tensions, particularly those being stoked by China's efforts to assert control over this strategic waterway, are now delaying and even canceling both cable repairs and the construction of new infrastructure.[1]

The gradual creation of two separate undersea cable systems

In addition, the United States has turned up the pressure to get companies and governments not to work with Chinese firms, citing concerns about China's ability to monitor communications transmitted through undersea cables.

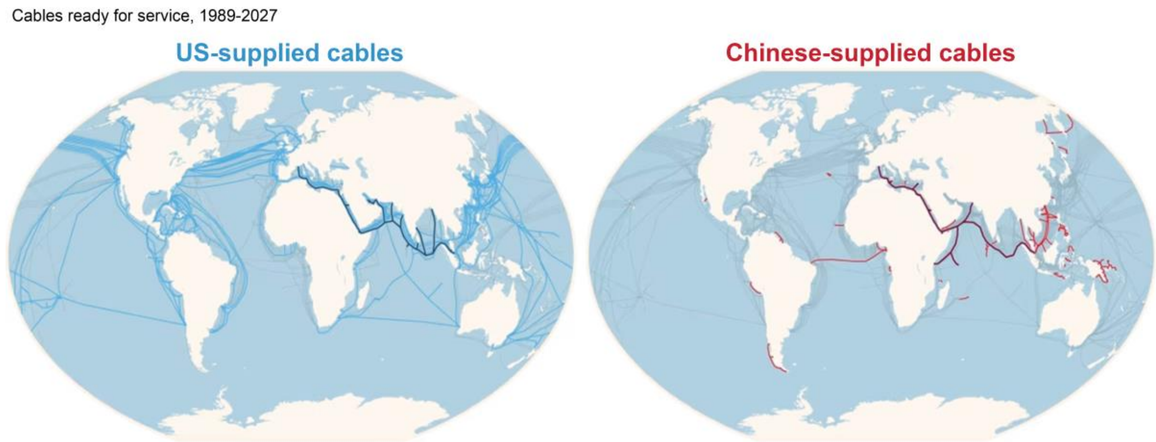
At the centre of these concerns is China's HMN Technologies, an emerging player in the specialized field of undersea cable laying. Until recently, the industry was dominated by three major companies: U.S.-based SubCom, France's Alcatel Submarine Networks, and Japan's Nippon Electric Company.

In the past four years, the United States has blocked at least three undersea cable projects that would have connected the United States to Hong Kong. As a result, thousands of miles of cables already installed have been abandoned.

The United States has intervened also in the $600-million project to install the Southeast Asia-Middle East-Western Europe 6 (SEA-ME-WE-6) cable system to connect Singapore to France via countries such as Malaysia, India, and Pakistan. Under U.S. pressure, governments along the route awarded the contract to the American company SubCom. Moreover, Washington is pushing Vietnam to exclude Chinese firms from the planned development of ten new undersea cables by 2030.[2]

[1] "Escalating contest over South China Sea disrupts international cable system," Washington Post, October 3, 2024
[2] "Can globalization survive the US-China rift?" Financial Times, September 6, 2024

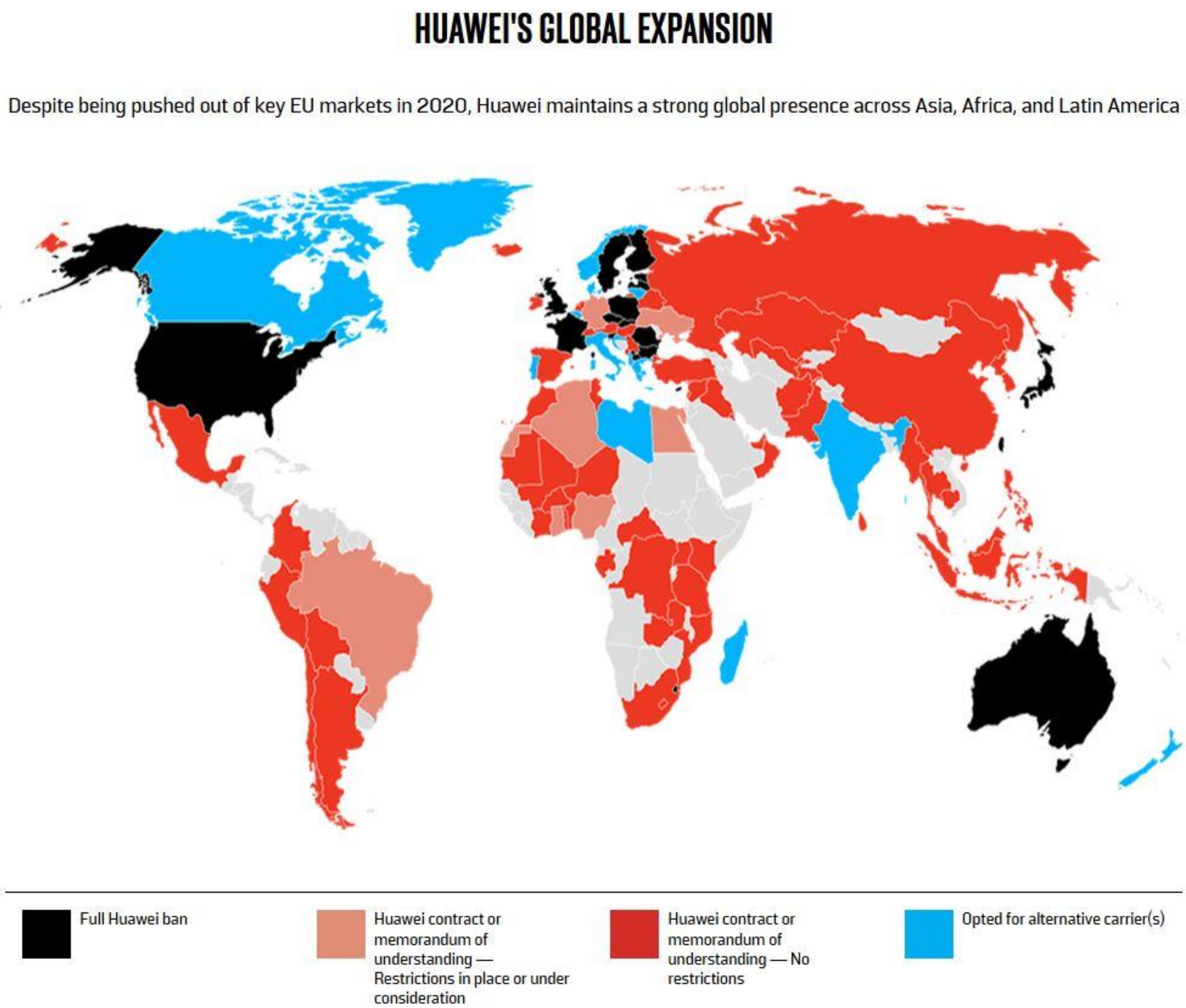
These moves are accelerating the pace at which the global undersea cable network is splitting into separate American/Western and Chinese spheres of influence.



Source: "Can globalization survive the US-China rift?" Financial Times, September 6, 2024

Telecom infrastructure sector already split into two distinct spheres

Beginning in 2019, many countries banned or restricted Huawei equipment from their telecommunications infrastructure for security reasons. These include the United States, Canada, Australia, New Zealand, the United Kingdom, Germany, Japan, India, and Portugal. The major countries that continue to allow using Huawei equipment without restrictions include Russia, Brazil, South Africa, Nigeria, Saudi Arabia, and much of Southeast Asia. (Please note that the chart below is from 2021, and updates have been made since then.)



Source: "5G Explained," Foreign Policy, February 2021

United States seeking to leverage AI for geopolitical gains

The United States has steadily tightened restrictions on China's access to advanced semiconductors. It first blocked direct access to high-performance chips essential for AI development, then restricted access to the software and machinery needed to design and manufacture these chips. Most recently, it has cut off China's supply of key components needed for semiconductor equipment production.

Exports of advanced AI chips are subject to varying controls: Close allies of the United States receive these chips without restrictions, whereas they are completely off limits to adversaries like China, Iran, Russia, and North Korea. More than 100 other countries fall into a middle category, where exports require a licence.

The United Arab Emirates was among the first to seek a licence to build the region's fastest supercomputer. As part of the agreement to secure Nvidia's advanced chips, the UAE's leading AI company, G42, pledged to phase out Huawei telecom equipment and prevent China from accessing the AI chips in question.[3]

China's rapid advances in AI have raised concerns about the adequacy of current U.S. export restrictions on AI technology. In 2022, the Biden administration restricted the export of Nvidia's top AI chip to China. Nvidia responded by modifying this chip, the H100, to fall below the threshold of U.S. government controls. This manoeuvre resulted in the H20 chip tailored specifically to China. Recently, the Trump administration tightened these restrictions by requiring Nvidia to obtain a licence to sell any AI chips to China, effectively banning the sale of the H20 chip.[4]

As more nations and companies are forced to choose between Chinese and American AI systems, the emergence of two competing AI technology blocs seems increasingly inevitable.

Legacy chips: The next (low) tech battle with China

While the United States has prioritized advances in semiconductor technology, it has come to realize that it has neglected the lower end of the market. For example, the Chips and Science Act of 2022 focused primarily on supporting America's production of advanced chips. By August 2024, the Commerce Department had allocated only $3.4 billion in financial support for legacy chip production, compared to $30.8 billion for advanced chips. Legacy chips are defined by the Act as those manufactured using 28-nanometre or older technology.[5]

These chips are essential to industrial manufacturing and the automotive, defence, and consumer electronics sectors, among others. For example, the U.S. auto industry relies on them for 95% of its semiconductor needs and, in a typical smartphone, only about three of the 160 to 170 chips are classified as advanced.[6]

Chinese companies have been rapidly expanding their production of mature chips. By the end of 2023, China held 31% of the global market—a share that is expected to grow to 39% by 2027.[7] In addition, Chinese suppliers have undercut U.S. competitors by offering their chips at prices 30% to 50% cheaper.[8]

In December, the Biden administration launched an investigation into China's legacy semiconductor industry. Its purpose was to determine whether China's practices warranted the imposition of tariffs or other measures to restrict imports. The decision to act on the findings would be left to the Trump administration.[9] **For more expensive American-made legacy chips to be competitive, however, substantial subsidies or tariff protections will be required.**

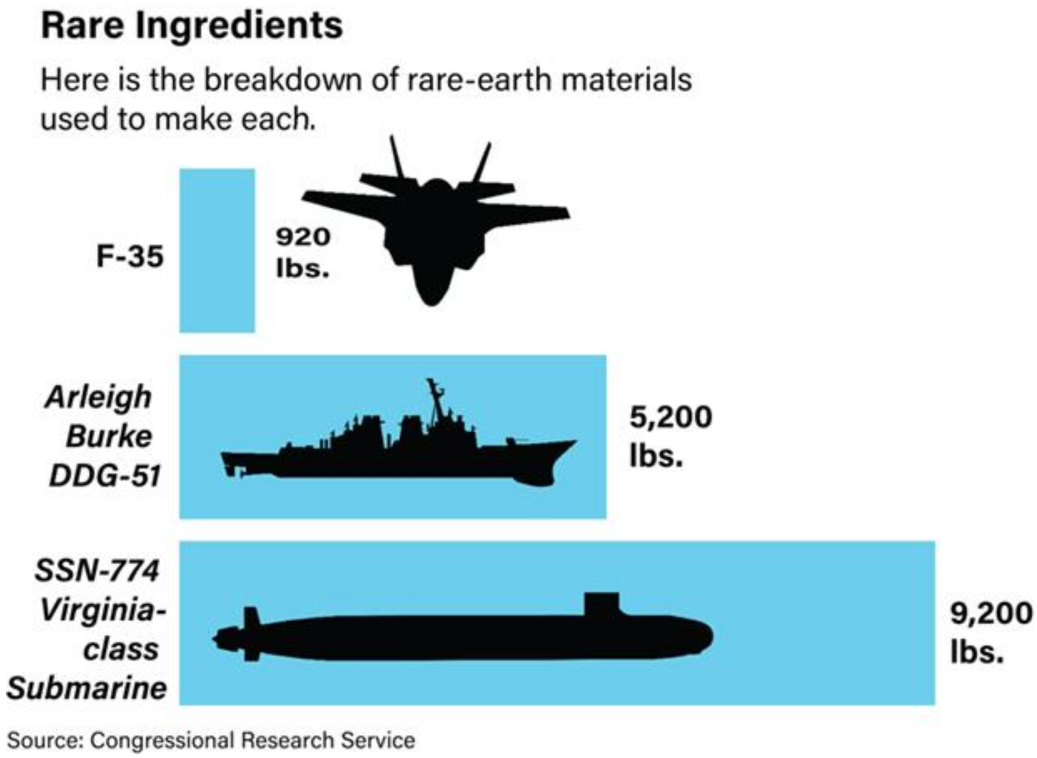
China squeezing America's access to rare earth minerals and technology

As the United States expands its restrictions on exports of advanced semiconductor chips and other key technologies to China, Beijing has retaliated by limiting U.S. access to its rare earth minerals and related technology.

In 2023, China banned the export of rare earth mining and separation technologies to the United States.[10] In 2024, China ordered companies to disclose detailed information about the use of rare earth metals in Western supply chains and classified some mining and refining activities as state secrets. So far in 2025, the Chinese government has imposed export restrictions on seven types of rare earth minerals to America, requiring all companies to obtain government permission to export the minerals and special magnets made from them. Magnets made of rare earths are used in smartphones, car and jet engines, MRI machines, and weaponry.

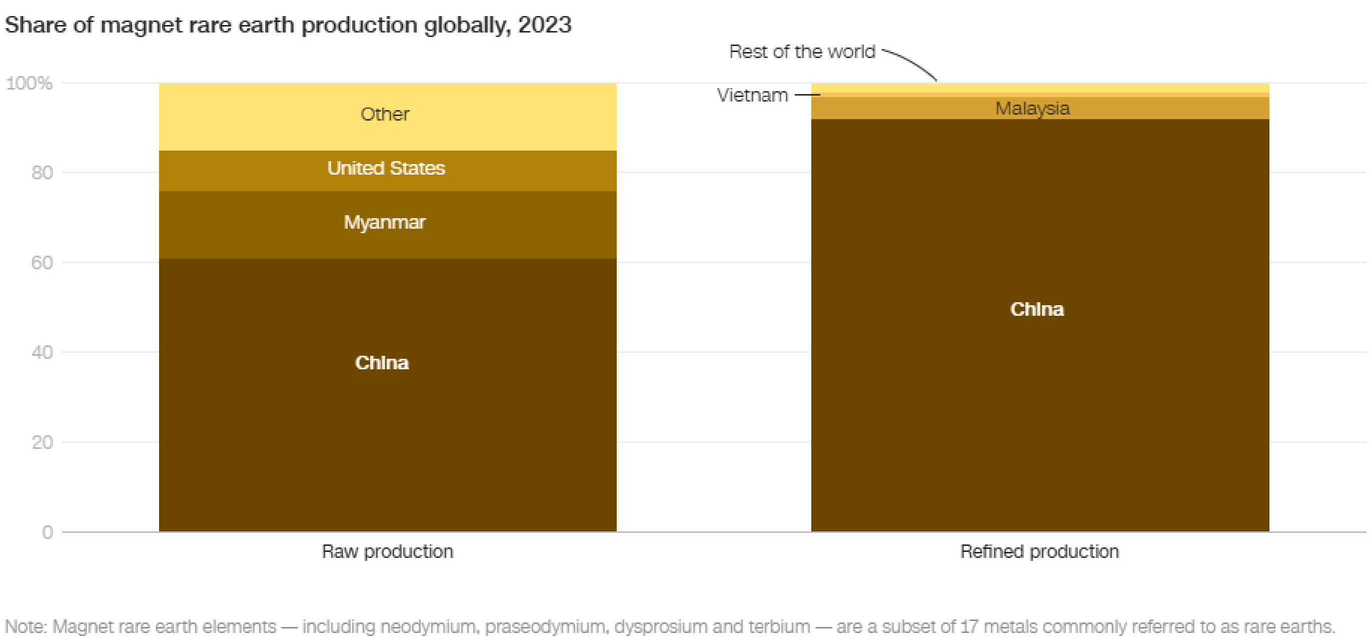
The illustration below highlights the extent of the United States' dependence on China, its primary geopolitical adversary, for rare-earth materials critical for military purposes. They are present in almost every form of American defence technology.

[3] "Nvidia's Booming A.I. Business Collides With U.S.-Chinese Tensions," New York Times, December 19, 2024
[4] "Nvidia Says U.S. Will Restrict Sales of More of Its A.I. Chips to China," New York Times, April 15, 2025
[5] "US crackdown on advanced chips gives China an opening on old technology," Yahoo Finance, August 23, 2024
[6] "US crackdown on advanced chips gives China an opening on old technology," Yahoo Finance, August 23, 2024
[7] "China's legacy chips to survive with price advantage," Asia Times, March 21, 2024
[8] "U.S. Takes Aim at China's Production of Essential Computer Chips," New York Times, December 23, 2024
[9] "Biden launches new Chinese chips trade probe, will hand off to Trump," Reuters, December 23, 2024
[10] "What China's Ban on Rare Earths Processing Technology Exports Means," CSIS, January 8, 2024



Source: "Rare-Earth Uncertainty," Air & Space Forces Magazine, December 2017

China currently accounts for 61% of global mined rare earth production and 92% of the global rare earth processing capacity.[11] This is why even minerals mined outside China often need to be shipped there for refining.



Source: "China has a powerful card to play in its fight against Trump's trade war," CNN, April 15, 2025 (Via International Energy Agency)

As of March 2025, the United States accounted for about 15% of the world's rare earth production thanks to a single mine in California. This was up from about 12% in 2023, as shown in the chart above. However, the country as yet has no refining capacity, though some projects are in the pipeline.[12]

Since 2020, the U.S. Department of Defense has granted more than $439 million to create a rare earth mine-to-magnet supply chain capable of supporting all U.S. defence requirements by 2027.

[11] "Outlook for key minerals," International Energy Agency, 2024
[12] "Not Just 'Rare Earths': U.S. Gets Many Critical Minerals From China," New York Times, April 15, 2025

The challenge of ramping up rare mineral production

Rare earth minerals are not actually rare, but they are difficult to extract and refine, and this comes at a significant environmental cost. This partly explains the historical reluctance of Western countries to engage in this industry.

In 2020, Janice Zinck, director of green mining innovation at Natural Resources Canada, used a food analogy to describe the challenge of mining rare earths. She explained that mining traditional metals such as gold was like removing chocolate chips from a cookie because these deposits are concentrated and relatively easy to extract. Rare earth minerals, instead, were like the individual grains of sugar scattered throughout a cookie, making them much more difficult to find in sufficient concentrations to make mining economical.[13]

Although much of the technology originated in the United States, Japan and Europe, decades of inactivity in the sector have led to a loss of knowledge, while China has made significant advances in these processes. "We've lost the know-how, we've lost the human resource capability," said Stan Trout, founder of rare earth and magnetic materials consultancy Spontaneous Materials.[14]

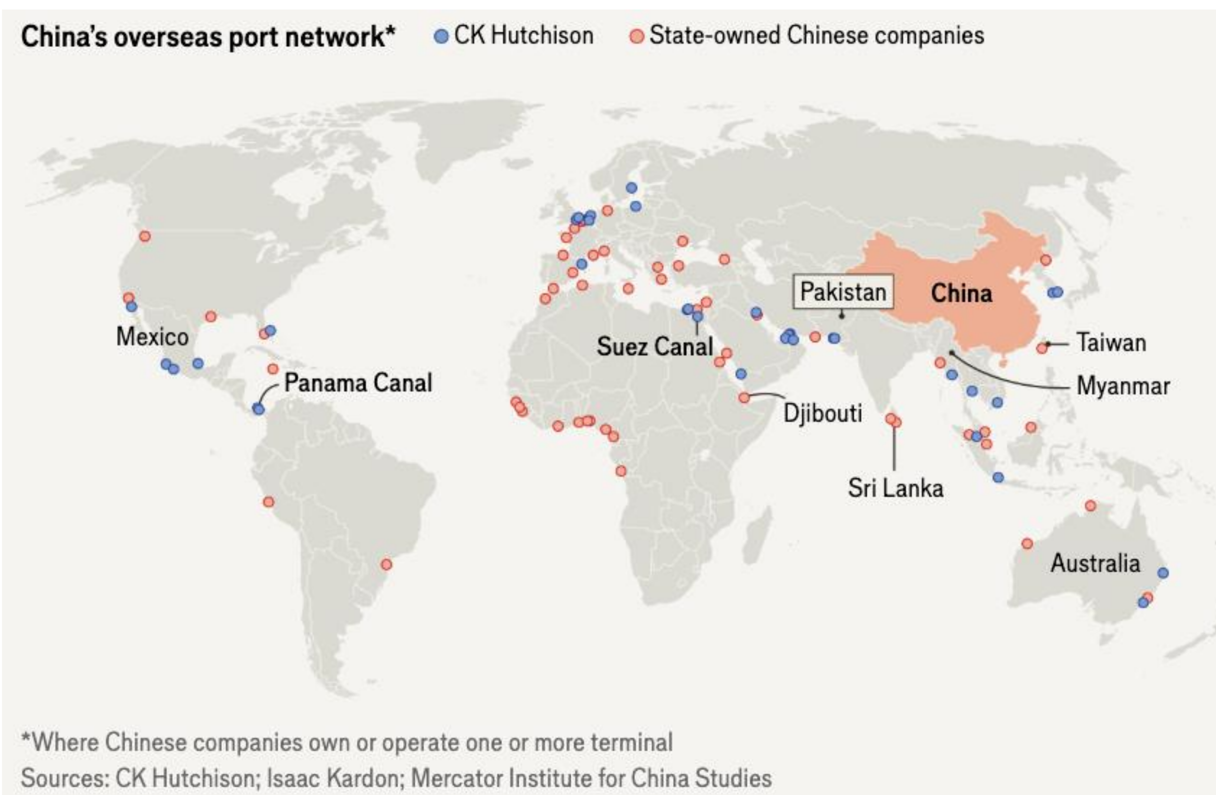
The following quote underscores this challenge: "China has 39 universities with programs to train engineers and researchers for the rare earths industry. Universities in the United States and Europe have offered only occasional courses."[15]

Ports and shipbuilding

U.S. officials are also increasingly alarmed by China's growing influence over global shipping and ports. A major concern revolves around two strategic seaports located at each end of the Panama Canal. —a crucial route that handles 40% of U.S. container traffic. The facilities have long been operated by Hong Kong-based CK Hutchison Holdings, one of the world's largest port operators.[16] U.S. Secretary of State Marco Rubio warned that Beijing "has the ability to turn the canal into a choke point in a moment of conflict".

In early March, CK Hutchison Holdings, possibly responding to pressure from the United States, agreed to sell its controlling stake in the Panama Canal ports to a consortium led by BlackRock. The deal involved 43 ports in 23 countries, including Mexico. However, the situation has hit a snag. Beijing recently expressed opposition to the deal, rendering the outcome uncertain.

Chinese companies currently own or operate more than 90 ports worldwide, raising concerns that these Chinese-controlled entities could potentially spy on American ships. However, if the sale to BlackRock goes through, the number of ports under the control of Chinese companies would drop significantly. **This situation speaks to the increasing pressure that companies around the world will face as they navigate the competing demands of these two global powers.**



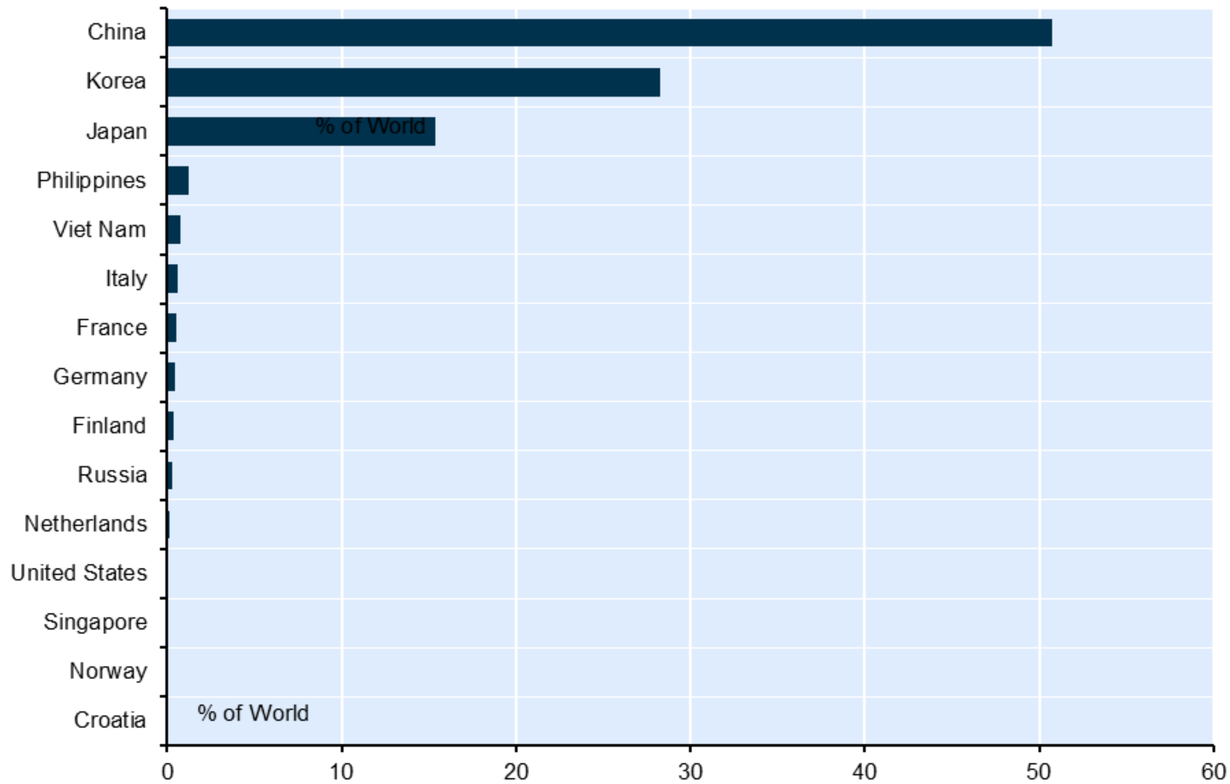
Source: "Why China hates the Panama Canal deal, but still may not block it," The Economist, March 20, 2025

[13] "Can the West's economies ever escape China's magnetic pull?" Globe & Mail, August 9, 2020
[14] "China Tightens Its Hold on Minerals Needed to Make Computer Chips," New York Times, October 26, 2024
[15] "China has a powerful card to play in its fight against Trump's trade war," CNN, April 15, 2025
[16] "Trump's Falsehoods Aside, China's Influence Over Global Ports Raises Concerns," New York Times, January 2, 2025

Shipbuilding is another sector of major concern. In 1975, the United States was the world leader in this industry. Fifty years later, the country accounts for less than 1% of the world's commercial shipbuilding compared to over 50% for China.[17] A U.S. Navy briefing estimated China's shipbuilding capacity at 230 times that of the United States.[18]

The U.S. is not a significant player in the global shipbuilding industry

Percentage of global gross tonnage built, 2022, ranked by country of origin



NBC Economics and Strategy (Data via UNCTADstat)

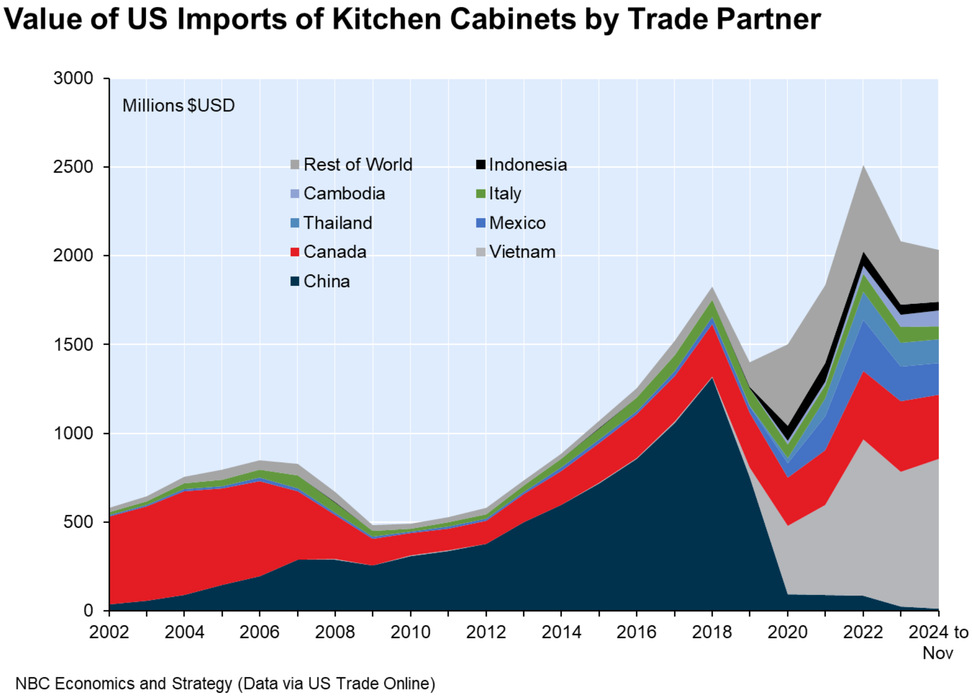
In an attempt to curb China's dominance, the U.S. Trade Representative has announced that beginning Oct. 14, Chinese-owned ships will be charged $50 per net ton for each voyage to the U.S., rising to $140 by 2028. Chinese-built ships owned by non-Chinese carriers will face a lower fee of $18, which will also increase over time. Vessels traveling 2,000 nautical miles or less from foreign ports are exempt from these fees. Fortunately for Canada and Mexico, this exemption covers most of their shipments.

However, gaining market share from China will require significant government financial or tariff support to mitigate China's strong competitive advantage in this sector. For example, a ship under construction in Philadelphia that can carry 3,600 20-foot containers costs $333 million to build, while a similar ship in China costs only $55 million, according to recent ship orders.[19]

An example of how trade tensions are fragmenting global supply chains

U.S. imports of kitchen cabinets are valued at $37 billion annually. In 2018, the Trump administration imposed tariffs on Chinese-made cabinets and, in 2020, the Biden administration raised those tariffs further.[20] Chinese companies responded by shifting final assembly or building new facilities in Vietnam and Thailand. This prompted the United States to impose retaliatory tariffs on imports from those countries as well. **This cat-and-mouse game ultimately complicates matters and increases operating costs for both buyers and sellers. It is but one example of how supply chains are fragmenting.**

[17] "Shipbuilding: the new battleground in the US-China trade war," Financial Times, March 12, 2024
[18] "Unpacking China's Naval Buildup," CSIS, June 5, 2024
[19] "In Shipbuilding, the U.S. Is Tiny and Rusty," Wall Street Journal, March 5, 2025
[20] "The Not-So-Secret Way Around U.S. Tariffs," Wall Street Journal, December 22, 2024



To complicate matters, the United States is targeting countries like Vietnam through which Chinese companies have been secretly channeling products to the United States. In an effort to avoid punitive U.S. tariffs, Vietnam is reportedly willing to crack down on Chinese goods secretly shipped through its territory. Some analysts believe that the United States and Vietnam will try to create a system that distinguishes between goods made mostly in Vietnam and those assembled in Vietnam with Chinese components, but this is no easy feat.

Vietnam has ended up in a tight spot. It is seeking trying to maintain trade with the United States, its largest export market and a security partner, while trying not to anger China, a major source of investment.

Conclusion

In sum, the escalating rivalry between China and the United States is reshaping global supply chains and economic policy. This intense competition is resulting in supply chains splitting into two networks, one dominated by the Chinese and the other by the United States and the West.

However, rebuilding supply chains that the United States and other Western countries allowed to wither over the course of many years will be costly. This is especially true given that one-third of global manufacturing and most of the world supply chains depend on components or machines made in China.

The problem is compounded by the fact that, unlike the first wave of diversification when Western companies simply moved assembly operations out of China, the current wave involves relocating entire factories back home or in other countries. This makes the move out of China much more expensive and permanent.

As for China, in addition to attempting to circumvent trade restrictions by setting up facilities in third countries to gain backdoor access to markets like the United States, it has also committed to building manufacturing facilities in other regions, such as Latin America, Southeast Asia, and even Europe, in order to maintain market access in those regions.

This strategy, however, places China in a difficult position. It forces its companies to expand production in higher-cost countries while already having excess capacity in lower-cost facilities at home. These pressures will further strain the financial viability of Chinese industrial companies. About 30% of industrial firms were already operating at a loss in June 2024, according to China's National Bureau of Statistics.[21] As a result, China will likely need to provide additional financial support to its companies. This will exacerbate even more the trade tensions with the United States and other nations.

Finally, while recent trade tensions between the United States and its traditional allies such as the EU have made it more difficult for these allies to cooperate with the United States against China, this will not necessarily lead to increased cooperation between China and the EU. China's reduced access to American consumers could encourage its companies to ramp up exports to the EU, and this would inevitably aggravate trade tensions between China and the EU.

Bottom line: All this means that in sectors considered strategic, more and more countries and companies, especially in the West, will find it difficult to maintain access to both Chinese and American markets. To varying degrees, this will force countries and companies to choose between one and the other.

Many existing supply chains in countries like China took decades to perfect. Moving these operations to new regions is likely to entail higher costs on account of stricter regulations, higher wages, worker retraining, and often the need to build ecosystems from scratch. This is why assessing the willingness of governments to support key sectors has become a critical part of investment analysis in today's global landscape.

21 "China's manufacturers are going broke," The Economist, August 8, 2024

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