

# UNDERSTANDING GEOECONOMICS IN A VOLATILE WORLD

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How new economics tools explain global  
power dynamics

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**T**hroughout history, powerful nations have used economic leverage to bend others to their will. Florence's Medici banking dynasty shaped Renaissance politics with its financial dominance, and imperial Britain used trade dominance to bind its empire together and wield power across the globe. Today, the United States freezes access to financial markets or urges its allies to impose export controls on essential technologies, and China threatens restrictions on rare earths to expand its influence. These are examples of geoeconomics, or the use of financial and trade relationships to achieve geopolitical and economic goals.

With the recent surge in great-power competition and increasing use of tariffs, sanctions, and export controls, understanding geoeconomics has become essential for policymakers navigating an increasingly volatile world. The use of geoeconomic power can increase cooperation and prosperity, but it can also cause fragmentation and disintegration. It is important to understand both its potential and its drawbacks.

The academic study of geoeconomics dates most prominently to 1945, when economist Albert Hirschman published *National Power and the Structure of Foreign Trade*. In it, he examines how Nazi Germany had structured its economy to maximize leverage over its neighbors during the interwar period. He rejected the naive view that because trade is voluntary and mutually beneficial, it is geopolitically harmless. Benefits can be mutual, Hirschman argues, without being symmetrical. And asymmetry is how power builds.

Since Hirschman's time, economists have left the study of global power dynamics largely to political scientists and historians, who have led the development of this area of research. Though almost every economics student encounters the Herfindahl-Hirschman Index, few know it was invented to measure the economic power of nations, not firms. Perhaps there was a sense that the postwar world order made such concerns obsolete.

Now, in the wake of increasing competition

between great powers, geoeconomics has become impossible to ignore, and economists have new tools at their disposal, including network analysis and modern macro, trade, and game theory. Our own research agenda aims to provide an economic modeling framework for geoeconomics. The goal is not only theoretical clarity on the sources and channels of power but also the ability to bring models to the data and discipline policy counterfactuals.

### **Geoeconomic power**

How do countries build geoeconomic power? Suppose Country A supplies intermediate goods to Country B. It could threaten to withhold those goods if Country B does not comply with its demand. If the intermediate goods are sufficiently important, and if it is sufficiently difficult to source them elsewhere, such that Country B would be better off acquiescing to Country A's demand than dealing with the realization of its threat, then Country B would comply.

Threats to withhold only one input can work; however, threats are more powerful when the imposing country controls multiple economic relationships. A country that controls many related inputs, such as intermediate goods and foreign capital, exerts greater power, because it can inflict greater losses on the target country. That is why countries such as the United States and China are often referred to as hegemons. A hegemon uses these joint threats to exert power over firms and governments in its network and ask them to take costly actions. These actions can take the form of monetary transfers, changes in markups on prices, and surcharges on loans but also policy actions such as trade restrictions (for example, tariffs and quotas) or political concessions.

Consider how China has structured its Belt and Road Initiative. Beijing provides developing economies with package deals that combine loans, infrastructure projects, and access to manufactured goods. If a borrowing country defaults, it risks losing all these relationships simultaneously. This bundling increases China's geoeconomic power. In exchange, Beijing might demand political concessions, such as closer alignment over key geopolitical issues.

Adding to the power of hegemons is their ability to sway countries outside their network, reshaping the world equilibrium to consolidate more power. For example, when the United States put pressure on European governments and firms to stop using Huawei's 5G technology, so-called network effects amplified the impact. Because the value of a telecommunications network increases the more widely it is adopted, getting some countries

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to reject Huawei made the technology less attractive for others, including countries the US could not directly pressure.

## Choke points and dependencies

Inputs are called choke points, or critical dependencies, if the hegemon controls a dominant market share of the input in the targeted economy and it is difficult to find alternatives to the hegemon's inputs. For example, the US and its allies control an overwhelming share of global financial services, upward of 80 to 90 percent in many countries. Payment systems, settlement infrastructure, and dollar-denominated lending are basic inputs in a functioning economy. The lack of viable alternatives to the US financial infrastructure gives the country considerable goeconomic power. Recently, it has wielded this power by imposing comprehensive financial sanctions on Iran and Russia, putting pressure on HSBC to disclose transactions linked to Huawei, and cutting Russian banks' access to the SWIFT messaging system for international financial transactions.

However, there is a catch. The relationship between control over a sector and goeconomic power is not linear; rather, power increases disproportionately as a hegemon approaches complete control. The difference between controlling 95 percent and 85 percent of an input is disproportionately large. At 95 percent, a target economy has almost no viable alternatives and must accept whatever terms the hegemon demands. At 85 percent, there is enough of an alternative to give the target meaningful options, and the hegemon's leverage dissipates rapidly.

US policymakers often take comfort in the fact that the dollar remains dominant and Chinese alternatives to the Western financial system remain marginal. By standard metrics, China accounts for a small fraction of global financial services. The argument goes that even if China provided 10 percent of world basic financial services, that would pale in comparison to US dominance.

This reasoning is correct about market shares but wrong about power. There is a difference between

macroeconomic relevance and goeconomic relevance. For a medium-sized economy, the existence of an alternative provider with even a 10 percent market share is enough to withstand much of the coercion that a dominant power can exert. A disproportionate part of the losses to US power would come from a Chinese alternative going from 1 percent to 10 percent, with further Chinese market gains causing progressively less power dilution for the US.

Russia's preparation for Western sanctions illustrates this dynamic. After its invasion of Crimea in 2014, Russia moved to reduce its dependence on the US-led coalition, further developing its domestic payment system and connecting to China-based systems. Consequently, the US-led coalition's financial power over Russia greatly diminished. This preparation helps explain the somewhat muted effect of the sweeping financial sanctions imposed after 2022: Russia had already built enough of an alternative to blunt the weapon's edge.

China and India are following Russia's example and building alternative payment and settlement systems. Granted, these are unlikely to replace the dollar-centric architecture. However, the question is not whether an alternative system can rival the dollar across all its uses, but whether it can be viable enough to significantly diminish US influence at the margin. Emerging markets aren't alone. Euro area countries are pushing forward a digital currency in the hope of gaining greater monetary sovereignty and reducing dependence on the US financial infrastructure.

## Risks of fragmentation

Our work shows that there is a trade-off between gains from trade and economic security. The same mechanisms that are the classic foundations of the gains from trade—economies of scale and specialization—also generate economic dependence. The domestic alternatives that countries did not build up are poor substitutes for globally dominant inputs, such as Chinese manufacturing or US financial services and technology. This lack of alternatives leaves the countries exposed to coercion. As the global economy increasingly relies on goods and

services that have strategic complementarities and economies of scale, these mechanisms are likely to increase in importance. This applies to payment systems, but also to information technology and artificial intelligence.

As geoeconomic power has risen to the forefront of international relations, hegemonies want to hyperglobalize the system to increase everyone else's dependence on what they control, while countries that are heavily dependent on hegemonies have begun pursuing anti-coercion policies to reduce their vulnerability to pressure. The Chinese alternative financial architecture is one example; another is the European Commission's European Economic Security Strategy, explicitly aimed at countering the weaponization of economic dependencies.

These policies might be individually optimal, and, as demonstrated by the nonlinearity of choke point sectors, are likely to be successful for the countries implementing them appropriately. However, taken together, they can lead to a troubling collective dynamic. When one country reduces its reliance on the global system, the system itself becomes less attractive to others, because its value often depends on the number and size of its participants. This shifts the calculus for other countries in favor of decoupling as well, triggering fur-

ther exits. The result is excessive fragmentation, a world where the gains from trade and financial integration degrade to a degree that leaves everyone, including the hegemon, worse off.

This dynamic leads to a somewhat surprising conclusion: Hegemonic powers can increase their own welfare by voluntarily and credibly constraining their use of coercion. A hegemon that commits to limiting its demands (for example, by submitting to the rules of international organizations) can dissuade other countries from pursuing costly anti-coercion policies. The hegemon gives up some of its flexibility to coerce, but in return it preserves the size and attractiveness of its economic network, which is the source of its power.

Viewed this way, the postwar liberal order, composed of institutions like the IMF, World Bank, and World Trade Organization, can be understood not as the opposite of hegemonic power but as one of its most sophisticated expressions. These institutions serve as commitment devices: By credibly promising not to exploit dominant positions too aggressively, the US and other hegemonies keep other nations within the same economic system. As these rules-based constraints weaken, if hegemonies are perceived as willing to exert their geoeconomic power unpredictably or erode their institutional commitments, other countries rationally



respond by developing their own economic security policies and accelerate disintegration from the hegemon's networks.

### Measurement challenges

While theoretical clarity is a necessary foundation, it must lead to testable implications and empirical guidance for policy. As world policymakers confront geoeconomic uncertainty, they must provide guidance driven by facts and data interpreted through the lens of models. There are at least two promising ways to bring existing theory to the data. The first uses advances in trade modeling and bilateral trade data to estimate how much a targeted country would suffer from losing access to hegemon-controlled inputs, measuring the quantitative importance of threats. Most threats are not powerful, and most industries are not strategic, either because the hegemon does not sufficiently control them or because it is easy for the target to find good substitutes. The same logic can be applied to capital flows, in addition to goods trade.

An obvious problem with measurement is that the most powerful geoeconomic threats will not materialize if targets comply. Recent advances in artificial intelligence point to a possible solution. Large language models (LLMs) can be used to analyze the text of analyst reports and earnings calls regarding the multinational corporations that dominate world trade and finance. This approach addresses part of the measurement issue because analysts and company executives discuss geoeconomic actions that have been threatened but not yet taken. It can also measure threats in quite granular detail. The demands of the hegemon might span multiple domains that are hard to specify in advance: Do not buy this, do not sell that, or give me a political concession.

In our work, we show that LLMs can extract signals about geoeconomic pressure down to a specific firm, instrument, and reaction. This can be done in near real time, enhancing the value for policymakers. More specifically, in this paper we applied LLMs to firm earnings calls and analyst reports to see how firms respond to tariffs, sanctions, and export controls. And our results were striking: Geoeconomic pressure indeed acts as a potent force that measurably affects firms' decisions regarding pricing, investment, and supply chains. Chinese firms responded to US export controls on semiconductors by increasing domestic research and development. Western firms largely reported complying with US demands to lower sales to China of specific technologies. US firms report being overall negatively affected by US tariffs and intending to raise sales prices while facing higher input prices.

### A path through the storm

In the short term, the world is unlikely to return to the era of globalization that preceded the heightened US-China rivalry. Geoeconomic competition is a defining feature of the current moment and almost certainly of the years ahead. However, the economics also offers a hopeful message. Through strategic and optimally targeted policy, it's possible to avoid total fragmentation.

For countries pursuing anti-coercion policies, targeted diversification in key sectors controlled by the hegemon can dramatically reduce a country's vulnerability without requiring wholesale decoupling. The policy challenge is to identify the true choke points—sectors where dependence is greatest and alternatives are scarcest—and concentrate diversification efforts there while preserving the broader benefits of integration.

For hegemon, maintaining power in a global environment that fears geoeconomic pressure will involve committing to limited use of power in the interest of encouraging smaller countries to remain in a system that benefits everyone. The most effective hegemonic strategy is one that maintains credible commitments to rules-based behavior, keeps the global system attractive to participants, and reserves coercive instruments for clear and limited purposes. This approach increases confidence in the hegemon's commitment to global cooperation and minimizes defensive responses that ultimately diminish the hegemon's power.

Geoeconomic competition will shape the next decades of international relations. Countries that understand the nonlinearity of power, the value of targeted diversification, and the principle of self-restraint will navigate this period more successfully than those that do not. The world does not need to fragment completely to give countries economic security, and hegemon do not need to abandon their leverage entirely to preserve it. It is a difficult balance to strike, but the alternative, a fractured global economy where everyone ends up poorer and less secure, makes the effort worthwhile. **F&D**

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