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Weaponization of Interdependence: Economic Dependency as a Tool of Global Power

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Abstrak
Artikel ini mengkaji konsep weaponization of interdependence (senjatisasi ketergantungan), yakni strategi di mana aktor negara memanfaatkan jaringan saling ketergantungan ekonomi global sebagai instrumen tekanan dan kekuasaan geopolitik. Studi ini menganalisis bagaimana aktor-aktor seperti Amerika Serikat, Tiongkok, dan Rusia menggunakan dominasi atas jaringan keuangan, rantai pasokan teknologi, dan infrastruktur energi untuk mencapai tujuan politik luar negeri mereka. Melalui pendekatan kualitatif dengan analisis literatur ilmiah terkini, ditemukan bahwa ketergantungan ekonomi kini tidak lagi bersifat netral, melainkan telah bertransformasi menjadi alat strategis dalam persaingan antar-kekuatan besar. Temuan ini memiliki implikasi signifikan bagi arsitektur tata kelola global dan ketahanan ekonomi negara-negara berkembang.
Kata Kunci: senjatisasi ketergantungan, geoekonomik, kekuatan besar, rantai pasokan, sanksi.

Abstract
This article examines the concept of weaponization of interdependence, a strategy whereby state actors exploit global economic interdependence networks as instruments of geopolitical pressure and power. The study analyzes how actors such as the United States, China, and Russia leverage dominance over financial networks, technology supply chains, and energy infrastructure to achieve their foreign policy objectives. Through a qualitative approach employing systematic analysis of recent scholarly literature, the study finds that economic interdependence is no longer neutral but has transformed into a strategic tool in great power competition. These findings carry significant implications for global governance architecture and the economic resilience of developing states.
Keywords: weaponization of interdependence, geoeconomics, great power competition, supply chains, economic coercion.

INTRODUCTION

The post-Cold War international order rested on the belief that deeper economic interdependence would reduce incentives for conflict and foster cooperation. This liberal optimism, captured in theories of complex interdependence, argued that as states became more tightly linked through trade, finance, and technology, the material and political costs of confrontation would rise, thereby encouraging peaceful relations (Luo, 2023). In practice, however, the contemporary geopolitical environment tells a different story: interdependence increasingly functions as a strategic vulnerability. Shared supply chains, cross-border data flows, and intertwined technology ecosystems create leverage points that states and firms can exploit during disputes, turning mutual dependence into channels for coercion, sanctions, and decoupling pressures. The result is a paradox in which the same networks that once promised stability now generate fragility, forcing policymakers and businesses to rethink how to balance the benefits of integration with the need for strategic hedging and resilience.

The concept of weaponized interdependence, as outlined by Farrell and Newman (2021), describes how states exploit asymmetric positions within global economic networks to coerce rivals, extract concessions, or punish noncompliance. Rather than relying on overt military force or conventional sanctions, this form of statecraft leverages the structural features of international markets themselves, control over financial clearing systems, dominance in semiconductor supply chains, or ownership of critical energy pipelines, to impose costs and shape behavior. By manipulating these chokepoints, powerful actors can interdict access to essential goods and services, disrupt transactions, or raise the political and economic price of certain actions, all while avoiding direct kinetic conflict. This dynamic transforms interdependence into a source of strategic leverage: network design, market concentration, and regulatory reach become instruments of power that can produce wide-ranging economic and geopolitical effects across multiple sectors.

This dynamic has accelerated sharply in the 2020s, propelled by intensifying US–China strategic rivalry, Russia's deliberate use of energy exports as a coercive tool, and the COVID-19 pandemic's stark revelation of fragile supply chains. Policy responses and market interventions during this decade illustrate a shift in mindset: states increasingly view interdependence as a controllable strategic asset to be managed, protected, or weaponized, rather than as an uncontested public good. Examples include the US CHIPS and Science Act of 2022, designed to reshape high-tech supply chains and onshore critical production; China's tighter export controls on rare earths and other strategic materials; and Russia's manipulation of natural gas flows to influence European political choices. Together, these measures demonstrate how governments now blend industrial policy, trade restrictions, and geopolitical signaling to secure technological advantage and strategic resilience, with profound implications for global trade, investment patterns, and the governance of cross-border networks (Luo & Van Assche, 2023).

This article aims to achieve three interrelated objectives. First, it seeks to theorize the mechanisms by which economic interdependence is deliberately weaponized, identifying the structural features, chokepoints, and policy tools that enable states to translate economic linkages into leverage. Second, it examines empirical cases across the financial, technological, and energy sectors to show how these mechanisms operate in practice and to highlight variation in tactics, targets, and effects. Third, it evaluates the consequences for global governance and the capacity of states, especially developing countries, to build resilience against coercive

economic measures. To accomplish these goals, the analysis synthesizes recent work from international political economy, international security studies, and business strategy, offering an integrated perspective that links theory, evidence, and policy implications for a world where interdependence has become a contested strategic resource.

METHODOLOGY

This study employs a qualitative systematic literature review methodology to examine the weaponization of interdependence. The research design encompasses three complementary analytical strategies. First, conceptual analysis is conducted through critical engagement with the theoretical frameworks developed by Farrell and Newman (2021), Luo (2023), and subsequent scholars who have refined and contested the weaponized interdependence thesis. This involves mapping the theoretical landscape and identifying key definitional debates regarding the mechanisms, scope conditions, and structural prerequisites for effective economic coercion.

Second, case study analysis examines three primary empirical domains: (1) financial network coercion, including US dollar hegemony and SWIFT exclusion; (2) technology supply chain weaponization, focusing on semiconductor restrictions; and (3) energy infrastructure as a geopolitical instrument, with emphasis on Russian gas diplomacy and its aftermath. Cases were selected based on their theoretical salience, empirical richness, and the availability of recent peer-reviewed scholarship.

Third, a comparative institutional analysis examines how major powers, the United States, China, Russia, and the European Union, have adapted their geoeconomic strategies in response to changing interdependence structures. The literature corpus was drawn from leading journals including the Journal of International Business Studies, International Security, Review of International Political Economy, and Journal of Common Market Studies, covering publications from 2021 to 2024.

RESULTS AND DISCUSSION

A. Theoretical Foundations: From Liberal Interdependence to Structural Power

The central proposition of weaponized interdependence is fundamentally structural: global economic networks are unevenly organized, and nodes that occupy central or gatekeeping positions can exert outsized power over others. Farrell and Newman (2021) distinguish between these central actors, capable of observing information flows, setting standards, and denying or throttling access, and peripheral actors that depend on uninterrupted connectivity to participate in trade, finance, and data exchange. Historically, the United States has exploited such centrality in systems like dollar clearing and critical internet infrastructure to pursue both "panopticon" strategies, which enable extensive surveillance and information control, and "chokepoint" strategies, which permit selective exclusion or disruption of access. These dual capabilities allow central actors to influence behavior across multiple domains, economic, political, and technological, without resorting to conventional military force, turning network architecture itself into a mode of statecraft.

Building on this logic, Luo (2023) contends that international business scholarship should treat geopolitical risk as an intrinsic characteristic of global markets rather than as an occasional external shock. Under this reconceptualization, states and firms design economic and industrial policies not only to promote growth but also to convert structural market advantages, control over critical technologies, standards, and supply-chain nodes,

into deliberate instruments of strategic influence. The US CHIPS and Science Act provides a clear example: its mix of subsidies, investment incentives, and export controls functions as more than traditional industrial policy; it is deployed to constrain rivals' access to advanced semiconductors, raise the costs of strategic technology development abroad, and channel the evolution of global technical capabilities in directions favorable to allied interests (Luo & Van Assche, 2023). By framing such measures as endogenous market strategies, Luo highlights how firms' competitive choices, states' regulatory designs, and international institutional arrangements become mutually reinforcing components of geopolitical competition, reshaping how scholars should analyze risk, firm strategy, and policy in an era of strategic economic fragmentation.

Schindler et al. (2023) extend the weaponized interdependence thesis to infrastructure competition, documenting how US–China rivalry now plays out across digital networks, manufacturing ecosystems, and global financial architecture, a constellation they term the "Second Cold War." Their analysis shows that contemporary geoeconomic competition is neither narrow nor confined to single sectors; instead, it is multi-domain and systemic. Control over physical ports and logistics hubs, undersea cables and data routes, advanced chip fabrication capacity, or payment rails and clearing systems translates directly into geopolitical leverage, because these infrastructures constitute the arteries of modern economic and security systems. By shaping access to these nodes, states can influence rivals' supply-chain choices, constrain technological diffusion, disrupt financial flows, and raise the political and economic costs of particular policies, all without engaging in kinetic conflict. This broadened framing underscores that resilience and strategic planning must now account for cross-sectoral dependencies: vulnerabilities in one infrastructure domain can cascade into others, and competitive moves to secure or throttle critical nodes will have ripple effects on alliance structures, market architectures, and long-term technological trajectories.

Table 1. Mechanisms of Weaponized Interdependence Across Major Domains

Mechanism	Key Actors	Primary Domain	Key Reference
Panopticon Effect	USA, EU	Financial Networks (SWIFT, USD)	Farrell & Newman, 2021
Chokepoint Control	USA	Semiconductors, Technology	Luo & Van Assche, 2023
Energy Blackmail	Russia	Natural Gas Pipelines	Szulecki & Overland, 2023
Informal Sanctions	China	Trade & Investment	Lim & Ferguson, 2021
Private Infrastructure	Multiple	Digital & Telecom Networks	Gjesvik, 2022
Supply Chain Coercion	USA, China	Critical Minerals, Manufacturing	Chen & Evers, 2023

***Note**. Compiled from reviewed literature (2021–2024).*

B. Financial Network Coercion: The Dollar as a Weapon

The US dollar's privileged status as the world's primary reserve currency, combined with the centrality of the SWIFT messaging network in cross-border payments, gives Washington a powerful tool for exerting economic coercion. Alami et al. (2022) document how this structural dependence, what they call international financial subordination, places peripheral states at risk: reliance on dollar-denominated trade, correspondent banking relationships, and dollar-clearing systems makes these countries vulnerable to measures that restrict access to global financial plumbing. The February 2022 decision to exclude many Russian banks from SWIFT after the invasion of Ukraine vividly demonstrated the reach and immediacy of this form of financial statecraft, showing how access to or exclusion from core networks can produce rapid, wide-ranging economic effects.

At the same time, deploying financial network power entails important costs and strategic limits. Schindler et al. (2023) observe that aggressive use of US financial levers has accelerated rival efforts to build alternative payment architectures, such as China's Cross-Border Interbank Payment System (CIPS), expanded bilateral currency-swap arrangements, and other de-dollarization measures, aimed at reducing exposure to dollar-centric networks. These responses illustrate a central paradox of weaponized interdependence: while control over key network nodes can deliver immediate coercive leverage, its persistent or heavy-handed use incentivizes targeted states to pursue exit strategies and substitute systems, thereby eroding the very network advantages that enable coercion in the first place.

The semiconductor industry exemplifies weaponized interdependence in the technological realm. Advanced chip fabrication is highly geographically concentrated, Taiwan Semiconductor Manufacturing Company (TSMC) alone produces the vast majority of the world's most advanced nodes, creating a structural bottleneck that both exposes global supply chains to disruption and confers strategic leverage to actors able to control access (Chen & Evers, 2023). This concentration means that a localized shock, natural disaster, political coercion, or targeted export restriction, can rapidly propagate through multiple industries that rely on high-end semiconductors, from defense systems and telecommunications to automotive and cloud services. Recognizing these risks, major powers have responded with a mix of protective and coercive measures: onshoring incentives, security-focused supply-chain diversification, export controls on key tooling and design software, and strategic investment in domestic fabrication capacity. Together, these actions reflect how semiconductor centrality transforms a technical manufacturing geography into a domain of geopolitical competition and policy intervention, with implications for industrial policy, alliance formation, and long-term resilience planning.

Luo and Van Assche (2023) interpret the US CHIPS and Science Act as marking a decisive break from the post-war liberal trade order by explicitly using industrial policy for geopolitical ends. The Act's mix of subsidies, research funding, and export controls is designed not only to rebuild domestic semiconductor capacity but also to restrict Chinese firms' access to cutting-edge chips and the equipment needed to produce them, while conditioning allied cooperation on shared market-access limitations. Tung et al. (2023) read these developments as evidence of a nascent "Tech Cold War," in which competing technology ecosystems are increasingly decoupled along geopolitical lines, shaping supply chains, standards, and investment flows according to strategic alignments rather than purely economic considerations.

Complicating a purely state-centric narrative, Gjesvik (2022) highlights the pivotal role of private infrastructure in this dynamic. Large technology firms, cloud providers, telecom equipment manufacturers, and platform companies occupy powerful structural positions within digital and physical networks; their assets and control over data flows make them both instruments and targets of state strategy. The US measures against Huawei illustrate this entanglement: actions against a private firm can serve national security objectives, while firms themselves must navigate regulatory pressures, export controls, and shifting alliance politics. Together, these threads show that geoeconomic competition now operates through a hybrid landscape where state policy, industrial strategy, and private corporate architectures interact to reshape technological order and strategic dependencies.

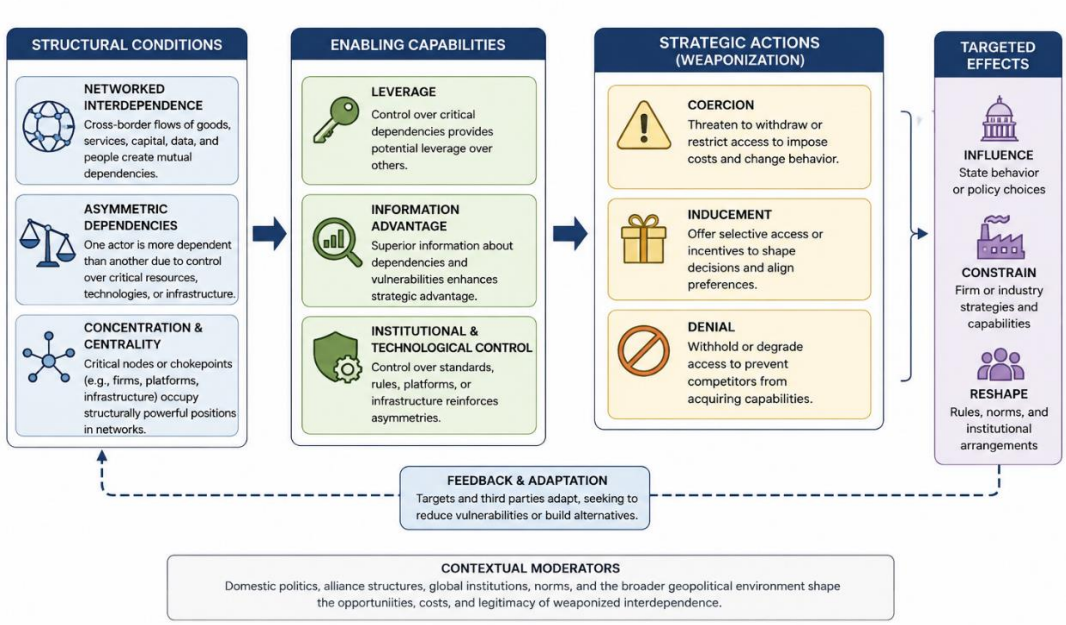

Figure 1. Structural Model of Weaponized Interdependence (Adapted from Farrell & Newman, 2021)

C. Energy Infrastructure and Geopolitical Leverage

Russia's manipulation of natural gas supplies stands as one of the clearest and most thoroughly documented examples of weaponized interdependence. By leveraging dominant positions in regional pipeline networks and long-term supply contracts, Moscow has been able to influence political decisions and extract concessions without resorting to direct military force. Szulecki and Overland (2023) extend this picture by examining Russian nuclear-energy diplomacy: Rosatom's construction and financing of nuclear power plants across Eastern Europe, the Middle East, and Africa creates durable infrastructure ties and long-term dependencies that can translate into political and economic leverage persisting for decades.

The 2022 invasion of Ukraine sharply accelerated Europe's drive to lessen its energy dependence on Russia, triggering rapid policy shifts and institutional mobilisation. Håkansson (2023) interprets these developments as part of the European Commission's emergence as a geopolitical actor: initiatives such as REPowerEU and the sped-up deployment of renewables, LNG imports, and strategic storage investments are intended to reduce exposure to coercive energy flows and enhance collective resilience. These

responses illustrate a broader dynamic of weaponized interdependence: while control over energy networks can provide immediate coercive advantages, attempts to wield that power often provoke investment in alternatives and diversification by targeted states, ultimately spurring structural change that can weaken the coercer's leverage over time.

D. The EU's Geoeconomic Turn and Institutional Innovation

The European Union offers a salient example of how targeted states can mount coordinated, institutional responses to weaponized interdependence. Danzman and Meunier (2024) show how the EU shifted from being perceived as a "policy laggard" to becoming an "institutional innovator" in geoeconomic tools, developing measures such as the Foreign Subsidies Regulation, the International Procurement Instrument, and the Anti-Coercion Instrument specifically to counteract economic coercion and protect strategic markets. Complementing this institutional innovation, Herranz-Surrallés et al. (2024) trace the progressive securitization of the Single European Market: the EU now routinely leverages regulatory standards, market-access rules, and procurement policy as instruments of geopolitical influence and strategic defence. McNamara (2023) situates these shifts within a wider transformation of European industrial policy, arguing that the EU's "geopolitical turn" marks a fundamental rebalancing between economic openness and strategic autonomy, prioritizing resilience and supply-chain security alongside market integration.

At the same time, Babić et al. (2022) remind us that the EU's geoeconomic response is not only externally driven; domestic political economy pressures shape which instruments are adopted and how burdens are distributed. Their analysis highlights internal distributional conflicts and debates over the costs of moving away from liberal trade norms, underscoring that responses to weaponized interdependence are as much about managing domestic trade-offs as they are about countering external coercion. Together, these studies illustrate that the EU's adaptation combines regulatory innovation, industrial strategy, and political negotiation, demonstrating both the promise and the complexity of building collective resilience in a geoeconomically contested world.

Table 2. Comparative Geoeconomic Strategies of Major Powers (2021–2024)

Actor	Primary Instrument	Target Domain	Defensive Response	Key Reference
United States	Export Controls, SWIFT	Tech, Finance	Ally Network, Dollar Reserve	Luo & Van Assche, 2023
China	Informal Sanctions, Rare Earths	Trade, Resources	Dual Circulation Policy	Pearson et al., 2022
Russia	Gas Pipelines, Nuclear Diplomacy	Energy	Pivot to Asia	Szulecki & Overland, 2023
European Union	Market Power, Regulations	Digital, Trade Norms	Open Strategic Autonomy	Danzman & Meunier, 2024

***Note**. Adapted from reviewed literature. Strategies reflect observed patterns in 2021–2024.*

E. Chinese Party-State Capitalism and International Backlash

Pearson et al. (2022) provide a crucial corrective to analyses that focus solely on state-to-state tools by showing how China's model of "party-state capitalism" can itself generate

insecurity among trade partners. They argue that the blurred lines between state, party, and market, manifested in opaque governance of state-owned enterprises and increasing party oversight of private firms, create uncertainty about whether commercial actions are driven by market logic or political objectives. That ambiguity raises the perceived risk that ordinary economic interactions could be repurposed for strategic ends, prompting defensive reactions from other states and firms and thereby feeding a cycle of mistrust and countermeasures that resembles weaponized interdependence.

Lim and Ferguson (2021) illustrate this dynamic with a detailed case study of Chinese economic coercion during the THAAD dispute with South Korea. Their analysis documents a range of "below-threshold" tactics, informal trade restrictions, coordinated consumer boycotts, regulatory inspections, and curbs on tourism and cultural exchange, deployed to impose economic and political costs on Seoul without formal legal declarations or triggering WTO procedures. Together, these studies show that weaponized interdependence often operates through ambiguous, incremental measures that exploit economic linkages while staying short of overt legal or military confrontation, making it harder for affected parties to attribute intent and to mobilize clear multilateral responses.

CONCLUSION

The weaponization of interdependence represents one of the defining features of contemporary international relations, marking a fundamental transformation in how economic integration is understood and practiced by major powers. This article has demonstrated that economic interdependence networks, financial, technological, and energetic, have been progressively repurposed from instruments of mutual prosperity into tools of strategic leverage and coercion.

Three principal findings emerge from this analysis. First, the structural asymmetries inherent in global economic networks create persistent opportunities for exploitation by central hub states, with the United States, China, and Russia demonstrating different but equally consequential weaponization strategies. Second, the exercise of coercive network power generates its own countertendencies, defensive adaptation, network fragmentation, and the construction of alternative architectures, that progressively erode the coercive potential of existing interdependencies. Third, the EU's institutional evolution suggests that multilateral regulatory frameworks can constitute effective responses to weaponized interdependence when sufficiently coordinated.

For developing states, these dynamics present acute challenges. Structural financial subordination, technology dependencies, and energy vulnerabilities leave peripheral economies exposed to coercive pressure from multiple directions simultaneously. The imperatives of economic resilience, diversifying supply chains, developing alternative payment systems, investing in indigenous technology capabilities, impose significant resource costs that may conflict with development priorities.

Future research should examine the conditions under which targeted states successfully resist weaponized interdependence strategies, the role of private sector actors in mediating state coercion, and the implications of progressive network fragmentation for global governance institutions designed for an era of open economic interdependence.

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