From Innovation to Security: The Securitization of Intellectual Property in the Global Trading System

Introduction: Economic Security Is National Security

The traditional distinction between economic policy and national security has eroded at an accelerating pace in the twenty-first century, giving way to a new paradigm in which the two are inextricably linked. The principle that "economic security is national security" now serves as a central pillar of modern trade governance, reshaping how states approach international commerce, investment, and technological competition .

In this evolving landscape, a nation's global competitiveness and its ability to project power are increasingly determined by its capacity to generate, control, and protect foundational intangible assets—most notably intellectual property (IP). No longer confined to its traditional role as a legal mechanism for incentivizing private innovation, IP has undergone a fundamental transformation into a strategic instrument of national security and geopolitical competition.

Recent developments reinforce this transformation. In 2024–2025, the United States expanded export controls on advanced semiconductors and AI-related technologies targeting China, while also tightening outbound investment screening mechanisms. Similarly, the European Union has advanced its "economic security strategy," emphasizing technological sovereignty and resilience in critical sectors such as AI and clean energy. These measures illustrate a broader global trend: trade policy is no longer neutral, but actively shaped by security concerns. As nations vie for technological supremacy, the control and protection of intangible assets have become as vital as the control of physical territory or natural resources. The race to lead in foundational technologies like AI and quantum computing, for instance, is widely seen as a zero-sum contest where the winner will gain "towering national security advantages, including in economic and military power" .

However, this paradigm shift introduces severe systemic risks. The expanding use of national security exceptions—such as Article XXI of the GATT—combined with the ongoing paralysis of the World Trade Organization's (WTO) dispute settlement mechanism, threatens to normalize protectionism under the guise of security. As the global economy risks fragmenting into rival technological blocs, the resulting restrictions on knowledge flows and cross-border R&D threaten to reduce economic efficiency and slow the pace of innovation.

This article argues that the securitization of intellectual property is fundamentally reshaping the structure and function of international trade law. As states increasingly deploy trade measures to control the cross-border flow of IP-intensive technologies, the traditional boundaries between trade regulation, economic policy, and national security are collapsing.

In this context, legal instruments such as GATT Article XI, the national security exception under Article XXI, and the TRIPS Agreement are no longer operating as neutral frameworks of economic governance, but as mechanisms through which states pursue strategic competition.

As a result, intellectual property operates as the critical nexus through which economic security is translated into national security, redefining the foundations of power in the modern international system.

I. The Convergence: Economic Security Is National Security

Before examining the legal and strategic mechanisms of IP weaponization, it is necessary to understand the conceptual merger of economic and national security. Historically, national security was defined in strictly military and geopolitical terms—defending borders, deterring armed conflict, and maintaining alliances. Economic policy, meanwhile, was viewed as a separate domain focused on maximizing GDP, consumer welfare, and market efficiency through comparative advantage.

Today, that bifurcation has collapsed. The modern consensus among major powers is that economic security is national security. This convergence is driven by the realization that a nation's ability to project power, defend its interests, and maintain domestic stability is entirely dependent on its economic resilience and technological capacity.

When the U.S. National Security Strategy explicitly states that "economic security is national security," it reflects a profound policy shift. It acknowledges that vulnerabilities in critical supply chains—whether for semiconductors, active pharmaceutical ingredients, or rare earth minerals—are not merely market inefficiencies, but direct threats to national survival. If a state cannot secure the components necessary to build advanced weapons systems, power its electrical grid, or provide life-saving medicines during a crisis, its military strength is rendered hollow. Consequently, economic statecraft—including tariffs, export controls, and industrial subsidies—has been elevated from the realm of commerce to the highest levels of national security strategy.

II. The International Legal Framework: Trade Law and National Security

A. Origins of the Multilateral Trading System

The multilateral trading system, established in the aftermath of the Second World War, was fundamentally premised on the belief that economic interdependence fosters international peace. The architects of the 1947 General Agreement on Tariffs and Trade (GATT) sought to prevent the protectionist policies that had exacerbated the Great Depression and contributed to global conflict. Within this framework, trade liberalization was conceptually and legally separated from national security concerns. The Bretton Woods system operated on the assumption that domestic security and international economic cooperation could be managed

in distinct spheres, a paradigm that Benton J. Heath has characterized as the "Cold War Settlement" .

However, this historical separation has experienced a gradual erosion amid the complexities of modern globalization and intensifying technological rivalry. As the boundaries between economic competitiveness and national security blur, states increasingly view supply chain vulnerabilities, critical infrastructure, and technological dominance as existential security matters. This paradigm shift challenges the foundational GATT assumption that trade and security can be neatly compartmentalized, leading to a resurgence of security-based trade interventions.

B. The Prohibition of Non-Tariff Trade Restrictions (GATT Article XI)

A cornerstone of the WTO is the general prohibition on non-tariff trade restrictions. Under GATT Article XI, WTO members are generally prohibited from using quotas, import or export licenses, bans, or other non-tariff barriers to restrict trade. The system was designed to prioritize tariffs as the primary and transparent means of protection, reflecting the underlying assumption that trade policy should remain economically rational and insulated from broader geopolitical considerations.

However, this foundational assumption is increasingly incompatible with the contemporary reality in which intellectual property (IP) has become a core component of economic and national security. In today's knowledge-based economy, restrictions on trade in goods—particularly high-tech goods—are in fact indirect controls over the transfer, diffusion, and exploitation of IP embedded within those goods. Advanced semiconductors, AI systems, and telecommunications equipment are not merely physical products; they are carriers of proprietary technologies, trade secrets, and strategically sensitive know-how.

As a result, when states impose export bans, licensing requirements, or import prohibitions in these sectors, they are not simply regulating trade flows—they are actively safeguarding national technological capabilities and economic security interests. This creates a direct structural tension between modern security-driven trade measures and Article XI. Measures that appear, in formal legal terms, to be prohibited quantitative restrictions are, in functional terms, tools of IP protection and national security policy.

The securitization of trade therefore directly collides with Article XI. As states increasingly "weaponize" intellectual property and foundational technologies, they rely precisely on the types of measures that Article XI was designed to eliminate. Consequently, because these measures would otherwise constitute clear violations of WTO obligations, states are compelled to seek legal justification under the national security exception in Article XXI. In this sense, Article XI operates as the legal pressure point where the convergence of intellectual property, economic security, and national security becomes most visible within the multilateral trading system. In effect, the stricter the protection of intellectual property and technological advantage, the greater the deviation from the core disciplines of Article XI.

C. National Security Exceptions in WTO Law

To accommodate sovereign security interests without undermining the trading system, the GATT included Article XXI, which provides a national security exception. Article XXI(b) states that nothing in the agreement shall prevent a contracting party from taking "any action which it considers necessary for the protection of its essential security interests". For decades, the self-judging language and the inherent ambiguity of "essential security interests" led to a systemic reluctance to invoke or adjudicate the exception, fearing it could become an unreviewable trump card that would unravel WTO obligations .

However, in the contemporary era defined by the convergence of intellectual property, economic security, and national security, Article XXI has moved from the margins to the center of trade law. As discussed in the context of Article XI, states increasingly rely on export controls, licensing regimes, and import prohibitions to regulate the cross-border flow of IP-intensive technologies. Because such measures would otherwise constitute clear violations of the prohibition on quantitative restrictions, Article XXI has become the primary legal justification for their use.

In effect, Article XXI functions as a legal bridge between trade law and security policy, enabling states to reframe what would traditionally be considered protectionist trade barriers as legitimate safeguards of technological sovereignty and economic resilience. Measures targeting semiconductors, artificial intelligence systems, and telecommunications infrastructure are justified not merely as economic interventions, but as essential actions to prevent strategic dependency and protect sensitive intellectual property from foreign exploitation.

The landmark 2019 WTO Panel report in Russia – Measures Concerning Traffic in Transit is significant. In this dispute, the Panel asserted jurisdiction over Article XXI, rejecting the argument that the exception was entirely self-judging and beyond review . The Panel rejected the view that the provision is entirely self-judging and established that its invocation is subject to a limited good-faith review, including the requirement that an “emergency in international relations” must objectively exist. While this decision introduced important legal constraints, its practical impact has been limited by the ongoing paralysis of the WTO Appellate Body.

As a result, the contemporary use of Article XXI reveals a fundamental transformation of the multilateral trading system. Rather than serving as a narrowly tailored exception, it is increasingly operating as a systemic justification for the securitization of trade and the protection of intellectual property as a strategic asset. This shift raises a critical concern: if the protection of IP and technological leadership can be framed as an “essential security interest,” the boundary between legitimate security measures and disguised protectionism becomes increasingly difficult to sustain.

In this sense, Article XXI no longer merely qualifies the rules of the system—it increasingly defines their limits.

D. IP in Trade Agreements and Disputes

The Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) established a global minimum standard for IP protection, integrating IP into the multilateral trading system . Traditionally, TRIPS has been understood as a framework designed to incentivize private innovation by granting exclusive rights to creators and firms, thereby promoting technological progress and economic efficiency.

However, in the contemporary landscape—where intellectual property is deeply intertwined with economic and national security—this traditional understanding is increasingly inadequate. Intellectual property is no longer merely a private commercial asset; it has become a strategic resource that underpins national resilience, technological sovereignty, and geopolitical influence.

This transformation is most visible in the evolving interpretation and use of TRIPS flexibilities, particularly compulsory licensing under Article 31. Historically, compulsory licensing was primarily justified on public health grounds, as reflected in the 2001 Doha Declaration on TRIPS and Public Health, which affirmed the right of WTO members to ensure access to essential medicines during health crises.

Yet recent developments suggest a broader reconceptualization. The COVID-19 pandemic marked a critical turning point, as debates over a proposed TRIPS waiver for vaccines and therapeutics reframed access to intellectual property not only as a public health issue, but as a matter of national and global security. Governments increasingly argued that dependence on foreign-controlled IP for critical technologies—whether vaccines, semiconductors, or artificial intelligence systems—constitutes a strategic vulnerability.

In this context, TRIPS flexibilities are being repurposed as instruments of economic security policy. This shift fundamentally alters the balance embedded within the TRIPS Agreement. What was once a system primarily concerned with protecting private rights and facilitating global trade in knowledge is increasingly being adapted to accommodate state-driven objectives of security and resilience. As a result, the boundary between legitimate public interest exceptions and security-driven industrial policy becomes increasingly blurred.

Moreover, this securitization of intellectual property feeds back into the broader tensions within the WTO system. Just as states invoke Article XXI of the GATT to justify trade restrictions on security grounds, they are increasingly framing deviations from TRIPS obligations as necessary to protect essential national interests. This parallel evolution highlights a systemic transformation: intellectual property law and trade law are no longer operating as neutral frameworks of economic governance, but as arenas of strategic competition among states.

In this evolving framework, control over intellectual property is no longer simply a matter of innovation policy—it is a determinant of power in the international system.

III. Intellectual Property as a Strategic Trade Asset

A. IP as a Cornerstone of National Competitiveness

In the context where economic security is national security, intellectual property emerges as the ultimate cornerstone of a nation's global competitiveness. The wealth of modern nations is no longer primarily derived from manufacturing physical goods or extracting raw materials; it is generated through the creation, ownership, and commercialization of intangible assets.

IP is the legal architecture that transforms raw human ingenuity into exclusive, monetizable, and strategically deployable assets. A nation's IP portfolio—its patents, trade secrets, copyrights, and proprietary algorithms—dictates its position in the global value chain. Countries that generate and protect high-value IP capture the lion's share of global profits, while nations that merely manufacture or assemble products based on foreign IP are relegated to low-margin, highly replaceable roles in the global economy. Furthermore, IP ownership allows a nation to set global technological standards. When a country's firms hold the foundational patents for 5G telecommunications, artificial intelligence frameworks, or next-generation battery technology, they force the rest of the world to adopt their technological paradigms. This standard-setting power translates directly into geopolitical leverage. Therefore, cultivating a robust domestic IP ecosystem is not just an economic policy goal; it is a vital national security imperative designed to ensure that a nation remains a rule-maker rather than a rule-taker in the 21st-century global order.

B. IP Protection and Innovation Security

Robust intellectual property protection serves as the fundamental catalyst for high-risk research and development (R&D) investment. In sectors characterized by immense capital requirements and long development cycles—such as semiconductors, artificial intelligence (AI), biotechnology, and clean energy—patents and other IP rights provide the temporary exclusivity necessary for firms to recover their investments and attract future capital . Without the assurance that their innovations will be safeguarded against unauthorized appropriation, the incentive for private enterprises to engage in high-risk R&D is severely diminished.

Consequently, IP is the bedrock of technological leadership. Nations that dominate the global IP landscape gain significant economic and diplomatic leverage. They possess the power to set industry standards, dictate terms in global trade negotiations, and reap the economic benefits of high-value exports and licensing . In this context, IP functions as geopolitical capital, enabling states to maintain a competitive edge in the technologies that will define the future global economy.

Furthermore, IP is critical to defense and dual-use innovation. Modern military capabilities are deeply reliant on advanced technologies that often originate in the commercial sector. Innovations in AI, quantum computing, and autonomous systems serve both civilian and military purposes. Protecting the IP associated with these dual-use technologies is essential to maintaining military superiority and ensuring that adversaries do not gain tactical or strategic

advantages through the exploitation of commercial research . As the U.S. Department of Defense has emphasized, security and innovation are co-foundational components of national defense, necessitating a "security-by-design" approach to safeguard the defense industrial base from IP theft and malign foreign influence .

C. The Strategic Risks of Weak IP Regimes

Conversely, weak IP regimes expose nations to profound strategic vulnerabilities. When IP protections are inadequate or poorly enforced, it enables systemic IP theft and state-sponsored economic espionage. This environment facilitates forced technology transfer, a practice where foreign multinational corporations are compelled to surrender their proprietary technologies to domestic entities as a condition of market access . Such practices not only undermine the competitiveness of the innovating firms but also erode the technological advantage of their home countries.

The cumulative effect of weak IP protection and forced technology transfer is the development of strategic dependency on foreign suppliers. Countries that fail to protect and cultivate their own IP portfolios often find themselves reliant on foreign-controlled technologies, a condition sometimes described as "digital colonization". This dependency creates critical vulnerabilities in essential supply chains, from telecommunications infrastructure to pharmaceutical manufacturing. In times of geopolitical conflict or global crisis, adversaries can weaponize this dependency, leveraging their control over critical IP and technologies to exert economic coercion and restrict market access.

In response to these threats, the discourse surrounding IP protection has been fundamentally reframed. It is no longer viewed solely through the lens of private economic rights; rather, it is recognized as an imperative for national resilience. Policymakers increasingly treat sensitive IP as a strategic asset, implementing measures to restrict foreign access, scrutinize cross-border investments, and heavily subsidize domestic innovation to mitigate the risks of strategic dependency . A revitalized and secure IP system is therefore essential not only for driving innovation but for securing economic resilience and long-term national security in an era of intense strategic competition.

IV. Technology, Trade Controls, and National Security

A. Export Controls and Technology Denial

The intersection of trade policy and national security is perhaps most visible in the aggressive expansion of export controls targeting dual-use technologies. Historically designed to prevent the proliferation of conventional weapons and weapons of mass destruction, export control regimes have been fundamentally repurposed to maintain technological supremacy and deny strategic competitors access to foundational innovations. This shift is driven by the recognition that modern military capabilities are increasingly derived from commercial, dual-use technologies rather than bespoke defense research.

The United States has led this paradigm shift, most notably through the sweeping export controls implemented by the Bureau of Industry and Security (BIS) beginning in October 2022. These regulations explicitly target the advanced computing and semiconductor sectors of strategic rivals, particularly China . The controls restrict the export of advanced logic and memory chips, the specialized semiconductor manufacturing equipment required to produce them, and the commodities containing such chips. Crucially, these restrictions are not merely about controlling physical hardware; their true targets are the underlying intellectual property (IP) and the transfer of technical know-how. By restricting U.S. persons from supporting the development or production of advanced integrated circuits at foreign fabrication facilities, the regulations effectively embargo the human capital and tacit knowledge that are essential for technological advancement .

This aggressive posture introduces profound trade-offs. While these measures are justified as necessary to protect national security and prevent adversaries from developing advanced military AI and supercomputing capabilities, they simultaneously restrict global market access for domestic technology firms. By cutting off lucrative foreign markets, these controls threaten to reduce the revenue streams that domestic firms rely upon to fund the very high-risk R&D necessary to maintain technological leadership. Furthermore, such unilateral technology denial accelerates the efforts of targeted nations to achieve technological self-sufficiency, potentially bifurcating the global technology ecosystem and undermining the long-term efficacy of the controls themselves.

These developments mark a significant shift in trade policy. Rather than merely protecting domestic industries, such measures seek to actively shape the global technological landscape by slowing competitors' progress. However, their breadth raises serious legal and systemic concerns, particularly regarding compatibility with WTO obligations. By targeting entire technological ecosystems, these controls test the limits of the national security exception under Article XXI of the GATT.

B. Industrial Policy and IP Localization

In tandem with export controls, governments are increasingly deploying security-justified industrial policies to mandate the localization of critical IP and manufacturing capacity. The era of frictionless globalization, characterized by the pursuit of economic efficiency through geographically dispersed supply chains, has been superseded by a paradigm prioritizing supply chain resilience and national security.

The most prominent example of this shift is the U.S. CHIPS and Science Act of 2022. The legislation authorizes roughly $280 billion in funding to revitalize domestic semiconductor research, development, and manufacturing . However, this massive infusion of state subsidies is heavily conditioned. The Act includes stringent "guardrails" that prohibit funding recipients from expanding advanced semiconductor manufacturing capacity in "countries of concern," such as China, for a period of ten years .

This policy framework establishes a direct and inextricable link between IP ownership, geographic production, and supply chain security. The underlying logic is that possessing the IP for advanced technologies is insufficient if the physical manufacturing of those technologies is concentrated in geopolitically vulnerable or adversarial regions. By tying

financial incentives to domestic production, the CHIPS Act aims to onshore not only the manufacturing facilities but also the critical IP, trade secrets, and engineering know-how associated with advanced fabrication. This localization strategy reflects a broader economic nationalism where states actively intervene in markets to ensure that the foundational technologies of the 21st century are developed, protected, and produced within their sovereign borders or those of trusted allies.

V. Threats to IP Security

A. Supply Chain Dependencies

The weaponization of trade and the securitization of IP have exposed severe vulnerabilities stemming from the hyper-concentration of global supply chains. Decades of optimization for cost efficiency have resulted in critical dependencies in several key sectors, rendering nations highly susceptible to geopolitical coercion and systemic disruption.

In the semiconductor industry, the concentration of advanced manufacturing capacity in Taiwan—specifically within the Taiwan Semiconductor Manufacturing Company (TSMC)—represents a profound geopolitical vulnerability. TSMC produces the vast majority of the world's most advanced logic chips, creating a single point of failure in the global technology ecosystem . A conflict or blockade involving Taiwan would immediately cripple the supply of chips essential for everything from consumer electronics to advanced military systems, highlighting the severe risks of geographically concentrated IP and production.

Similar vulnerabilities exist in the pharmaceutical sector. The United States and other Western nations are heavily dependent on China for active pharmaceutical ingredients (APIs) and key starting materials (KSMs). China controls approximately 41% of KSMs and holds near-monopolies on essential auxiliary chemicals used in API synthesis, including those for critical antibiotics This concentration grants Beijing significant latent leverage; the ability to restrict the export of life-saving drug components constitutes a potent form of economic coercion that directly threatens public health and national security.

Furthermore, the transition to clean energy and advanced electronics is constrained by dependencies in critical minerals. The extraction and, more importantly, the processing and refining of rare earth elements and critical minerals like lithium and cobalt are heavily dominated by China. This dominance allows for the potential weaponization of supply chains, as demonstrated by previous export restrictions on rare earths, forcing dependent nations to scramble for alternative sources and invest heavily in developing independent processing IP and infrastructure.

B. IP Theft and Technology Transfer

The strategic competition for technological dominance has elevated IP theft and forced technology transfer to primary national security threats. Adversarial states employ a

comprehensive ecosystem of espionage to acquire proprietary technologies, bypassing the time and capital required for indigenous R&D.

Cyber-enabled IP theft is a pervasive and highly damaging vector. State-sponsored advanced persistent threat (APT) groups routinely target IP-intensive industries—including defense contractors, pharmaceutical companies, and high-tech manufacturers—to exfiltrate trade secrets, blueprints, and proprietary data. The "Five Eyes" intelligence alliance has publicly identified China as an unprecedented threat to global innovation, engaging in systemic economic cyber-espionage for commercial purposes .

Beyond cyber intrusions, state-backed acquisition of foreign technology occurs through both legal and illicit human channels. This includes the exploitation of insider threats, where foreign talent programs recruit researchers and engineers within Western firms and universities to act as conduits for trade secrets . Additionally, forced technology transfer remains a significant issue, where foreign companies are compelled to surrender IP to domestic partners as a condition of market access.

These practices have triggered severe trade retaliation and accelerated pressures for economic decoupling. The imposition of tariffs, investment screening mechanisms (such as CFIUS in the United States), and the aforementioned export controls are direct responses to systemic IP theft. As cybersecurity threats to IP-intensive industries escalate, the global economic landscape is increasingly characterized by a defensive posture, where the protection of intellectual property is viewed as synonymous with the preservation of national security.

VI. Systemic Risks and Policy Challenges

The profound integration of intellectual property and national security into trade policy has generated a new paradigm of global economic relations. However, this paradigm shift introduces severe systemic risks and policy challenges that threaten the stability of the global economy and the pace of technological advancement.

A. Over-Securitization and the Rise of Protectionism

The most immediate risk is the over-securitization of trade and IP, which provides a convenient, legally ambiguous pretext for traditional economic protectionism. As states increasingly invoke national security to justify tariffs, export controls, and investment restrictions, the boundary between legitimate security imperatives and mercantilist industrial policy becomes blurred. The expansive use of the "national security exception" (such as GATT Article XXI or U.S. Section 232 tariffs) allows governments to shield domestic industries from foreign competition under the guise of protecting critical technologies . This dynamic creates a moral hazard: when any IP-intensive sector—from steel to semiconductors to pharmaceuticals—can be classified as critical to national security, the exception threatens to swallow the rule of free trade.

B. Fragmentation into Rival Technological Blocs

This over-securitization is driving the fragmentation of the global economy into rival technological blocs. Driven by mutual suspicion and the desire for supply chain resilience, major powers are actively pursuing "strategic decoupling." This involves dismantling integrated global value chains and attempting to onshore or "friend-shore" the production of critical technologies. The International Monetary Fund (IMF) has warned that such geoeconomic fragmentation—where the world divides into distinct U.S.-centric and China-centric blocs with restricted trade and technology diffusion between them—could result in permanent global GDP losses of up to 7% in severe scenarios.. This fragmentation forces third-party nations to navigate a complex web of competing export controls and incompatible technological standards, effectively ending the era of a unified global market for innovation.

C. Erosion of Multilateral Norms and Institutions

Consequently, the multilateral trading system, anchored by the WTO, is experiencing severe erosion. The WTO was designed for an era that presumed the separation of trade and security, relying on the good faith of its members not to abuse security exceptions. The current environment of unilateral tariffs, retaliatory escalations, and the paralysis of the WTO's Appellate Body has undermined the credibility and disciplinary power of multilateral norms. When major powers routinely bypass WTO dispute settlement mechanisms in favor of unilateral economic statecraft to protect their IP and technological advantages, the rules-based international order gives way to a power-based system where legal uncertainty prevails.

D. Reduced Global Innovation

Ultimately, the weaponization of IP and the fragmentation of markets pose a severe threat to global innovation. Innovation thrives on the cross-border flow of ideas, capital, and human talent. When technology diffusion is artificially restricted by export controls, and when researchers are siloed into competing geopolitical blocs, the global R&D ecosystem is degraded. The IMF notes that reduced technological diffusion resulting from fragmentation will severely dent innovation and lead to significant productivity losses, particularly for emerging economies that rely on technology transfer for development . Furthermore, the legal uncertainty surrounding international IP rights and the threat of sudden market access restrictions disincentivize the massive, long-term capital investments required to achieve breakthroughs in fields like artificial intelligence, quantum computing, and biotechnology.

VII. Policy Implications and Future Directions

Looking forward, the central challenge for policymakers lies in managing the tension between security and openness. As intellectual property becomes increasingly intertwined with national and economic security, states face mounting pressure to protect critical technologies without undermining the foundations of the global trading system.

Achieving this balance will require a more disciplined and transparent use of security-based measures. First, greater clarity is needed regarding the scope and limits of national security exceptions, particularly under GATT Article XXI, to prevent their overexpansion into de facto tools of economic protectionism. Second, renewed efforts to restore and strengthen multilateral dispute settlement mechanisms are essential to ensure that such measures remain subject to legal constraint rather than unilateral interpretation. Third, enhanced coordination among like-minded states—through plurilateral agreements or shared governance frameworks—may help establish common standards for the protection and transfer of sensitive technologies while preserving a degree of openness in global innovation systems.

Ultimately, the goal is not to eliminate the role of security in trade policy, but to ensure that it is exercised in a manner consistent with long-term economic stability and technological progress.

Conclusion

The erosion of the boundary between economic policy and national security marks a defining transformation of the twenty-first-century global order. As this article has demonstrated, intellectual property has emerged as the central mechanism through which economic security is operationalized as national security, making control over IP a decisive source of geopolitical power.

However, the increasing securitization of intellectual property risks undermining the very foundations of the international economic system. The expansion of security-based trade measures and the fragmentation of global technology ecosystems threaten to erode multilateral discipline, restrict knowledge flows, and diminish long-term innovation.

Absent meaningful constraints, intellectual property will no longer function primarily as a catalyst for innovation, but as an instrument of geopolitical division. The challenge for policymakers is therefore not only to protect critical technologies, but to ensure that the governance of intellectual property remains compatible with an open, stable, and cooperative global economic order.

References

[1] The White House. (2022). National Security Strategy. https://www.whitehouse.gov/wp-content/uploads/2022/10/Biden-Harris-Administrations-National-Security-Strategy-10.2022.pdf

[2] Iancu, A., & Kappos, D. J. (2021, July 12). U.S. Intellectual Property Is Critical to National Security. Center for Strategic and International Studies. https://www.csis.org/analysis/us-intellectual-property-critical-national-security

[3] The White House. (2022). National Security Strategy.

[4] World Trade Organization. "The history of multilateral trading system." Available at: https://www.wto.org/english/thewto_e/history_e/history_e.htm

[5] Lapa, Viktoriia. "The WTO Panel Report in Russia – Traffic in Transit: Cutting the Gordian Knot of the GATT Security Exception?" Questions of International Law, May 12, 2020. Available at: https://www.qil-qdi.org/the-wto-panel-report-in-russia-traffic-in-transit-cutting-the-gordian-knot-of-the-gatt-security-exception/

[6] General Agreement on Tariffs and Trade 1994, Article XXI.

[7] Lapa, Viktoriia. "The WTO Panel Report in Russia – Traffic in Transit: Cutting the Gordian Knot of the GATT Security Exception?" Questions of International Law, May 12, 2020. Available at: https://www.qil-qdi.org/the-wto-panel-report-in-russia-traffic-in-transit-cutting-the-gordian-knot-of-the-gatt-security-exception/

[8] World Trade Organization. "DS512: Russia — Measures Concerning Traffic in Transit." April 5, 2019. Available at:https://www.wto.org/english/tratop_e/dispu_e/cases_e/ds512_e.htm

[9] Lapa, Viktoriia. "The WTO Panel Report in Russia – Traffic in Transit: Cutting the Gordian Knot of the GATT Security Exception?" Questions of International Law, May 12, 2020. Available at: https://www.qil-qdi.org/the-wto-panel-report-in-russia-traffic-in-transit-cutting-the-gordian-knot-of-the-gatt-security-exception/

[10] Center for Strategic and International Studies. "The World Trade Organization: The Appellate Body Crisis." Available at: https://www.csis.org/programs/economics-program-and-scholl-chair-international-business/world-trade-organization

[11] World Trade Organization. "TRIPS and public health." Available at: https://www.wto.org/english/tratop_e/trips_e/pharmpatent_e.htm

[12] World Trade Organization. "TRIPS and public health." Available at: https://www.wto.org/english/tratop_e/trips_e/pharmpatent_e.htm

[13] Council on Foreign Relations. "The Debate Over a Patent Waiver for COVID-19 Vaccines." May 26, 2021. Available at: https://www.cfr.org/articles/debate-over-patent-waiver-covid-19-vaccines-what-know

[14] Krishna & Saurastri Associates LLP. (2025). Intellectual Property in Geopolitics: The New Frontier of Global Power. Lexology.

[15] IP Business Academy. "IP Protection in the Life Sciences: Turning Innovation into Market Success." October 31, 2025. Available at: https://ipbusinessacademy.org/ip-protection-in-the-life-sciences-turning-innovation-into-market-success

[16] Krishna & Saurastri Associates LLP. "Intellectual Property in Geopolitics: The New Frontier of Global Power." Lexology, September 16, 2025. Available at: https://www.lexology.com/library/detail.aspx?g=5462436c-1591-4892-8690-45ebbaf111d6

[17] Nelson, A.J. "Innovation and Its Discontents: National Models of Military Innovation and the Dual-Use Conundrum." National Defense University, 2020.

[18] Institute for National Strategic Studies. "Fortifying Technologic Innovation in National Defense: Strategic Security Imperatives for Research and Acquisition."National Defense University, January 13, 2026. Available at: https://inss.ndu.edu/Media/News/Article/4376772/fortifying-technologic-innovation-in-national-defense-strategic-security-impera/

[19] Brown, Michael, and Pavneet Singh. "China's Technology Transfer Strategy: How Chinese Investments in Emerging Technology Enable A Strategic Competitor to Access the Crown Jewels of U.S. Innovation." Defense Innovation Unit Experimental (DIUx), January 2018.

[20] IP LeadershIP. "Protecting Intellectual Property for National Security: A Transition Report for the New Administration." March 26, 2025. Available

at:https://ipleadership.org/protecting-intellectual-property-for-national-security-a-transition-report-for-the-new-administration/

[21] Baker McKenzie. "BIS Issues New Export Controls Targeting China's Advanced Computing and Semiconductor Sectors." Global Sanctions and Export Controls Blog, October 24, 2022. Available at: https://sanctionsnews.bakermckenzie.com/bis-issues-new-export-controls-targeting-chinas-advanced-computing-and-semiconductor-sectors/

[22] Baker McKenzie. "BIS Issues New Export Controls Targeting China's Advanced Computing and Semiconductor Sectors." Global Sanctions and Export Controls Blog, October 24, 2022. Available at: https://sanctionsnews.bakermckenzie.com/bis-issues-new-export-controls-targeting-chinas-advanced-computing-and-semiconductor-sectors/

[23] Baker McKenzie. "BIS Issues New Export Controls Targeting China's Advanced Computing and Semiconductor Sectors." Global Sanctions and Export Controls Blog, October 24, 2022. Available at: https://sanctionsnews.bakermckenzie.com/bis-issues-new-export-controls-targeting-chinas-advanced-computing-and-semiconductor-sectors/

[24] “CHIPS and Science Act." Available at: https://en.wikipedia.org/wiki/CHIPS_and_Science_Act

[25] PwC. "The CHIPS Act: What it means for the semiconductor ecosystem." Available at: https://www.pwc.com/us/en/library/chips-act.html

[26] Martin, B., et al. "Supply Chain Interdependence and Geopolitical Vulnerability: The Case of Taiwan and High-End Semiconductors." Defense Technical Information Center, 2023.

[27] Graham, Niels. "Pharmaceuticals are China's next trade weapon."Atlantic Council, November 7, 2025. Available at: https://www.atlanticcouncil.org/blogs/econographics/pharmaceuticals-are-chinas-next-trade-weapon/

[28] Australian Strategic Policy Institute (ASPI). "State-sponsored economic cyber-espionage for commercial purposes: Governmental practices in protecting IP-intensive industries." February 19, 2025. Available at: https://www.aspi.org.au/report/state-sponsored-economic-cyber-espionage-commercial-purposes-governmental-practices/

[29] Tromblay, Darren E. "From Outside Assaults to Insider Threats: Chinese Economic Espionage." Information Technology and Innovation Foundation (ITIF), November 3, 2025. Available at: https://itif.org/publications/2025/11/03/from-outside-assaults-to-insider-threats-chinese-economic-espionage/

[30] Zafar, Ammar. "Protectionism, power, and the erosion of WTO discipline: Legal and economic lessons from the trade wars." Social Sciences & Humanities Open, Vol. 12, 2025. Available at: https://www.sciencedirect.com/science/article/pii/S2590291125007119

[31] Bolhuis, Marijn A., Jiaqian Chen, and Benjamin Kett. "The Costs of Geoeconomic Fragmentation." Finance & Development, International Monetary Fund (IMF), June 2023. Available at: https://www.imf.org/en/publications/fandd/issues/2023/06/the-costs-of-geoeconomic-fragmentation-bolhuis-chen-kett

[32] Zafar, Ammar. "Protectionism, power, and the erosion of WTO discipline: Legal and economic lessons from the trade wars." Social Sciences & Humanities Open, Vol. 12, 2025. Available at: https://www.sciencedirect.com/science/article/pii/S2590291125007119

[33] Bolhuis, Marijn A., Jiaqian Chen, and Benjamin Kett. "The Costs of Geoeconomic Fragmentation." Finance & Development, International Monetary Fund (IMF), June 2023. Available at: https://www.imf.org/en/publications/fandd/issues/2023/06/the-costs-of-geoeconomic-fragmentation-bolhuis-chen-kett