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REPROGRAMING GEOPOLITICAL FIREWALLS: TECHNOLOGICAL NON-PROLIFERATION AND THE FUTURE OF INVESTOR-STATE DISPUTE SETTLEMENT

by Jason Czerwiec

I. INTRODUCTION

"Moore's Law" is a popular euphemism for Dr. Gordon Moore's 1965 hypothesis regarding the advancement of integrated circuit technology.[1] Dr. Moore, then Director of R&D Laboratories at Fairchild Semiconductor, correctly predicted that every two years the number of components that could be fitted into an integrated circuit would double, that the cost of circuits would halve, and that electronic devices would enter into nearly every facet of modern life as a result. Moore's hypothesis would go on to drive the research and development ("R&D") model of the microchip industry for over 50 years, and he would go on to co-found and grow Intel Corporation ("Intel") into one of the US' largest, most successful semiconductor companies.[2]

Semiconductors are considered a foundational technology, advances in which lay the groundwork for the development, commercialization, and manufacture of a whole host of other electronics-dependent "high technologies."[3] Since at least the 1980s,

[1] Dr. Gordon E. Moore, 38 ELEC. MAG. 8 (April 19, 1965).

[2] Comparing the first microprocessor, Intel's 4004 released in 1971, to the smallest processor commercially available in 2014 (containing 14 nanometer width transistors), performance had improved 3,500 times, energy efficiency 90,000 times, and cost per transistor had fallen 60,000 times. If automotive technology had progressed at the same rate since 1971, cars would travel at speeds of 30,000 mph, traverse over two-million miles per gallon, and cost $0.04 on average. Moore's Law 50 Years Later, Intel, https://www.intel.com/content/www/us/en/silicon-innovations/moores-law-technology.html. Today's smallest functional chips are imprinted on four-nanometer-thick silicon wafers. For scale, a human hair is between 60 and 120 nanometers wide. Nanometer Laboratory Safety, Stanford National Accelerator Lab, https://www-ssrl.slac.stanford.edu/content/sites/default/files/documents/nano-lab-safety.pdf. No commercial product has come close to this level of technological advancement in the past half-century. Although Moore's "law" of circuit shrinkage has slowed in recent years, the exponential growth of the semiconductor industry has fundamentally changed society and the global economy in the 55 years since Gordon Moore first published his seminal article. David Rotman, *We're not prepared for the end of Moore's Law*, MIT TECH. REV. (Feb. 24, 2020).

[3] The term "semiconductor" refers to a class of materials that have a conductivity performance, which mediates between electrical conduction and electrical insulation. The semiconductor industry today

semiconductor manufacture has also been considered by the US government to be a foundational component of national security.[4] As such, the loss of domestic manufacturing capacity is deemed a potential "threat", and so the tools of governance adapt accordingly.

In addition to guarding its manufacturing base for *foundational* technologies, the US national security establishment has grown increasingly concerned about the economic and military implications of innovative *emerging* technologies.[5] Technological innovation is fundamentally tied to continued economic growth and geostrategic advantage, what Kennedy and Lim describe as the "innovation imperative" for developing states.[6] With this phenomenon in mind, the US security community has turned a keen eye toward China. They have documented a pattern of behavior by which Chinese firms with government assistance identify technological concepts with dual-use military implications, procure them through licit and illicit

largely traces its origins to the point-contact and junction transistors, pioneered by physicist William Shockley in 1947 and 1951, respectively. The move from geranium-based to silicon-diffused transistors was pioneered by eight of Shockley's acolytes (including Gordon Moore) at Fairchild Semiconductor in Mountain View, California in 1957, with the integrated circuit, and the birth of America's 'Silicon Valley' following shortly thereafter. Daniel Holbrook et al., *The Nature, Sources, and Consequences of Firm Differences in the Early History of the Semiconductor Industry*, *in* THE SMS BLACKWELL HANDBOOK OF ORGANIZATIONAL CAPABILITIES 47-49, 55-59 (Constance E. Helfat ed., 2003). Transistors were the foundational technology for integrated circuits, which were foundational for microprocessors, permutations, and evolutions of which enable the incredible expanse of computational technology that powers the global economy of today.

[4] *See* William C. Rempel & Donna KH Walters, *The Fairchild Deal: Trade War: When Chips Were Down*, LA TIMES (Nov. 30, 1987).

[5] These two categories, "foundational" and "emerging" technologies, are terms of art under the new US dual-use tech export control regime created by the ECRA. *See*, US Department of Defense (DoD), SUMMARY OF THE 2018 US NATIONAL DEFENSE STRATEGY 3, https://dod.defense.gov/Portals/1/Documents/pubs/2018-National-Defense-Strategy-Summary.pdf. The following language clarifies the DoD's priorities with regard to technology and security:

The drive to develop new technologies is relentless, expanding to more actors with lower barriers of entry, and moving at accelerating speed. New technologies include advanced computing, "big data" analytics, artificial intelligence, autonomy, robotics, directed energy, hypersonics, and biotechnology–the very technologies that ensure we will be able to fight and win the wars of the future. The fact that many technological developments will come from the commercial sector means that state competitors and non-state actors will also have access to them, a fact that risks eroding the conventional overmatch to which our nation has grown accustomed. Maintaining the department's technological advantage will require changes to industry culture, investment sources, and protection across the National Security Innovation Base. *Id.*, at 3.

[6] Andrew B. Kennedy and Darren J. Lim, *The Innovation Imperative: Technology and US-China Rivalry in the Twenty-first Century*, 94(3) INT. AFF. 553, 556 (2018).

means, and commercialize them at a speed and cost beyond the capabilities of their western counterparts.[7] This merger of economics and security thinking has manifest as one strain of an ascendant "geoeconomic" policy worldview, with manifold impacts on global trade and investment.[8]

In response to China's competitive threat, the US government has engaged in a concerted effort to decouple the US' tech industry and its public infrastructure from Chinese government interests and Chinese nationals' capital.[9] In 2018, the US Congress put forward dual amendments to the Defense Production Act ("DPA"), each aimed at curbing Chinese technology acquisition. The first amendment, the Export Control Reform Act ("ECRA"), updated the power of the Commerce Department to place export controls, in the form of licensing requirements, on "emerging" and "foundational" dual-use technologies.[10] The second, the Foreign Investment Risk Review Modernization Act ("FIRRMA"), expanded CFIUS' jurisdiction to review and to block non-controlling but non-passive capital investments in US companies that produce, design, test, manufacture, fabricate, or develop one or more "critical technologies" and/or maintain or collect sensitive personal data of US citizens.[11] FIRRMA also provided CFIUS no less than US$80 million in appropriations over a four-

[7] Michael Brown & 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) (Jan. 2018) at 2, n.2 ("The rapidity at which dual-use technologies are developed in the commercial sector has significant impact on the nature of warfare; mastering them ahead of competitors will "ensure that we will be able to win the wars of the future").

[8] *See* Anthea Roberts et al., *Geoeconomics: the U.S. Strategy of Technological Protection and Economic Security*, LAWFARE BLOG (Dec. 11, 2018); Paulo Triolo & Kevin Allison, *The Geopolitics of Semiconductors*, EURASIA GROUP (Sept. 2020).

[9] *See* Keith Johnson & Robbie Gramer, *The Great Decoupling*, FOREIGN POLICY (May 14, 2020).

[10] *See* Export Control Reform Act ("ECRA"), 50 U.S.C. § 4817.

[11] *See* Foreign Investment Risk Review Modernization Act of 2018 ("FIRRMA"), 50 U.S.C. § 4565. Although the precise definition of 'critical technology' will be developed with specificity over time and through an inter-agency process, the policy community generally considers technology with national security implications to broadly include advances in: artificial intelligence ("AI"), quantum computing, 5G, autonomous vehicles, unmanned systems and robotics, internet of things applications ("IoT"), space-based remote sensing, additive manufacturing and 3D printing, synthetic biology, genetic engineering, biocomputing, nanomaterials, hypersonics, batteries, and next-generation microelectronics. *Twin Pillars: Upholding National Security and National Innovation in Emerging Technology Governance*, CSIS Global Security Forum Report (Jan. 2020).

year period.[12] This is the first direct, non-discretionary funding for the Committee in its 45-year history.

These laws have been followed by a global wave of proposals to strengthen domestic laws and regulations scrutinizing foreign investment on national security grounds.[13] A policy race to erect regulatory firewalls is now taking shape.[14] The contours of a transnational Technological Non-Proliferation ("TNP") policy are now relatively visible. The application of this policy is likely to have serious implications for multinational companies ("MNCs") and other foreign investors operating across the global economy and financial markets: from semiconductors and micro processing to seed and venture capital, robotics and data analytics to growth equity and distressed debt, and from artificial intelligence to mergers and acquisitions.

There is a corpus of international and transnational designed to protect foreign investors and their property against arbitrary and discriminatory conduct of states targeting their investments.[15] In practice, it is not difficult to see how TNP mechanisms might discriminate against otherwise benign Chinese investments,[16] or

[12] 50 U.S.C. § 4565(p)(1).

[13] *See* Joachim Pohl & Nicolas Rosselot, *Acquisition- and ownership-related policies to safeguard essential security interests Current and emerging trends, observed designs, and policy practice in 62 economies*, OECD RESEARCH NOTE (May 2020), http://oe.cd/natsec; see also, *e.g.*, Nicole Kar et al., *CFIUK? UK introduces National Security and Investment Bill*, LINKLATERS PUBLICATIONS (Nov. 11, 2020) (discussing the newly introduced National Security and Investment Bill (NSIB) that creates first ever standalone foreign investment regime in UK); National Security and Investment Bill, 2020 (Bill 210, 58/1), https://publications.parliament.uk/pa/bills/cbill/58-01/0210/20210.pdf.

[14] *See generally* Tomoko Ishikawa, *Investment Screening on National Security Grounds and International Law: The Case of Japan*, 7 J. INT'L & COMP. L. 71 (2020) (describing FIRRMA-like upgrades to Japanese, UK, German, French, and EU-wide investment screening regimes) [hereinafter "Ishikawa"]; *see also* Tomoko Ishikawa, *Global Trend of Tightening FDI Screening: A Race to Build Walls?*, KLUWER ARBITRATION BLOG (Aug. 27, 2020).

[15] *See generally* RUDOLF DOLZER & CHRISTOPH SCHREUER, PRINCIPLES OF INTERNATIONAL INVESTMENT LAW (2d ed. 2012).

[16] *See* 50 U.S.C. § 4565(f)(i) (presenting CFIUS with the imperative to consider as its first factor in analyzing national security risk, "[w]hether a transaction involves a country of special concern that has strategic goal of acquiring tech that would affect US tech leadership in that area"). Further, President Trump made public his desire to utilize CFIUS to block Chinese investment and to unwind transactions of Chinese investors. *See* David Lawder & Diona Chiacu, *Trump to use US security review panel to curb China tech investment*, REUTERS, June 27, 2018. It remains to be seen if the Biden Administration will maintain this approach. US Trade Representative, Ambassador Katherine Tai previously commented that bi-partisan political consensus may necessitate a continued "aggressive" trade and investment

seem arbitrary and heavy-handed to multi-national firms who wish to continue their business relationships in China.[17] The problem of targeted discrimination is especially acute with the TNP strategy, because of the non-distributed nature of market share in many emerging technologies.[18]

However, the vital sovereignty concerns implicated in these measures,[19] along with the technical specificity with which they are shaped and deployed, militate in favor of a presumption of their validity and legitimacy *vis-à-vis* the broader investment liberalization commitments of particular capital-importing states.[20] Indeed, this should be the presumption of the law as well,[21] even with regard to general TNP policy actions that impact already established foreign investments.[22] But a TNP-adjacent policy applied specifically to a particular industry, technology, or

strategy *vis-à-vis* China, even in a more progressive administration. Simon Lester, *Katherine Tai on Various Trade Policy Issues: China, Supply Chains, A Biden Administration Trade Agenda*, USMCA, WTO, ISDS, INTERNATIONAL ECONOMIC LAW AND POLICY BLOG (Nov. 29, 2020 8:14 AM), https://ielp.worldtradelaw.net/2020/11/katherine-tai-on-various-trade-policy-issues.html.

[17] *See*, *e.g.*, *TSMC head warns of industry risks from US, China trade spat*, REUTERS FRANCE, June 5, 2018.

[18] Take the case of ASML, a Dutch company which has a market capitalization of almost US $180 billion and is the sole manufacturer of US$120 million machines which use Extreme Ultraviolet Lithography to etch transistors into the smallest commercially available microchips. Because of its dominance in a key supply chain segment for this literal 'cutting edge' technology, it has become the clear target of an otherwise facially neutral US export control policy program. *See* ASML, *From one of Many to Market Leader*, Medium, Dec. 16, 2016; *Dutch Firm Caught in US-China Row*, TECH XPLORE, Jan. 17, 2020.

[19] For a discussion of sovereignty in international investment law, *see* J. E. Vifluales, *Sovereignty in Foreign Investment Law*, *in* THE FOUNDATIONS OF FOREIGN INVESTMENT LAW (Zachary Douglas et al. eds., 2014).

[20] Investment liberalization commitments refer to obligations undertaken to refrain from erecting barriers to establishment of investments, differing from investment protection obligations, which offer post-establishment protections. See UNCTAD, Investment Liberalization and Promotion Feature Prominently in New Investment Policies, Press Release (2016). Key public international law instruments in this sphere almost uniformly provide exceptions to soft law prescriptions and general rules where state actions that contravene these rules relate to public order or essential security interests. *OECD Code of Liberalisation of Capital Movements* (2020), art. 3; *see also infra* Section II.B.2 for more on the BIS critical tech classification system.

[21] *See* Ishikawa, *supra* note 14 (calling for the use of deference strategies, akin to the Precautionary Principle in international environmental law, to shift evidentiary burdens of proof away from the State invoking its essential security interests as a defense to liability for internationally wrongful acts).

[22] Investment protection commitments are the traditional ambit of bilateral investment treaties ("BITs"). They establish obligations to refrain from abuse of foreign investment or investors after an investment is established, generally as evidenced by deduction of: a sufficient duration of time, the contribution of capital or other forms of economic value within the territory of the host state, and risk to the foreign investor. *See* generally Salini Costruttori SpA v. Morocco, ICSID Case No. ARB/00/4, Decision on Jurisdiction ¶¶ 52-58 (July 23, 2001); Alcoa Minerals of Jamaica, Inc. v. Jamaica, ICSID Case No. ARB/74/2, Decision on Jurisdiction and Competence (July 6, 1975), *in* 4 Y.B. COM. ARB. 206 (1979) (excerpts).

foreign firm might violate a state's obligations to protect foreign investors and investments if it is applied arbitrarily or discriminatorily.[23] Once an understanding of the shape and scope of the policy and laws governing foreign technology investments is achieved, it becomes easier to identify anomalous or politically motivated state action. TNP thus can be read simultaneously as a blueprint for the state's security objectives and as a disclaimer for all related future state actions. It is the legal effect of this "disclaimer", in the marginal instances of *abus du droit* (abuse of right), which this paper seeks to analyze.

As it stands, the proliferation of TNP policies across the globe threaten to create an untenable multiplication of political risk for MNCs, which rely on investment outside of their home jurisdiction for critical segments of both their supply chains and downstream sales.[24] States have already begun more frequently to deploy national security prerogatives as a means to supersede their international commitments in the realm of economic law.[25] This troubling trend, overlaid with the indefinite legal boundaries of long dormant security exceptions clauses in international economic treaties, presents an enigma for future legal practitioners to decode.

Commentators such as J. Benton Heath have expressed the need to harmonize international standards on the meaning of "national security" and "essential security" in order to bring coherence to these concepts within the larger corpus of

[23] TODD WEILER, THE INTERPRETATION OF INTERNATIONAL INVESTMENT LAW: EQUALITY, DISCRIMINATION AND MINIMUM STANDARDS OF TREATMENT 453 (2013) ("Customary international law permits unequal and/or discriminatory results from measures of general application, but it does not permit what might be characterized as arbitrary or discriminatory exercises of administrative, regulatory or judicial discretion"); *see also* Alec Stone-Sweet et al., *Arbitral Lawmaking and State Power: An Empirical Analysis of Investor–State Arbitration*, 8(4) J. INT'L DISPUTE SETTLEMENT 579 (2017) (finding that, "in most disputes, investors do not challenge general state measures", and that they are far more likely to prevail when they contest acts specifically targeting their investments).

[24] Joachim Pohl, *Is International Investment Threatening or Under Threat?*, COLUMBIA FDI PERSPECTIVES, No. 246 (Feb. 25, 2019) ("A principle problem in this new world is the overlap of jurisdiction and the potential for asymmetries between the review processes of different States. One could easily imagine a single acquisition by a multinational enterprise triggering reviews in each of the jurisdictions which it has operations, which would likely be an untenable situation from a political risk and operational standpoint.").

[25] *See*, J. Benton Heath, *The New National Security Challenge to the Economic Order*, 129 YALE L.J. 1020 (2020) [hereinafter "Heath"].

international trade and investment law.[26] Within the "order" of security anxieties identified by Heath, concern about relative national advancements in computational and electronic technologies forms its own particular "genus". And each particular technology brings with it a separate "species" of unique concerns.[27]

Given the political weight and diffuse nature of these issues, reaching such a semantic consensus on "security" presents a long-term challenge. In the interim, foreign investors are left out in the cold. But a risk mitigation tool for this constituency already exists. This paper argues that ISDS can help address the growing legal market for political risk mitigation brought on by the advance of TNP—so long as its stakeholders promote its use and are cognizant and respectful of the political anxieties informing TNP.

In this way, ISDS can serve at once to ease political risk concerns for multinational firms,[28] and to prevent politicized economic disputes from escalating ad infinitum. This presents an opportunity for what Janet Koven Levit describes as a "bottom up" approach to lawmaking in the face of the prevailing top-down and state-centric narrative.[29] Indeed, as experience has demonstrated, consent-based international

[26] *Id.* Heath's analysis of the multiple vectors of threats to the prevailing economic order is excellent, but in labeling this challenge "new" it suffers from an ahistoricism that is prevalent in most calls to defend the prevailing liberal world order. *See* Timothy Stanley & Alexander Lee, *It's Still Not the End of History*, THE ATLANTIC (Sept. 1, 2014). Benton Heath himself recognizes this dynamic in another recent article in which he critiques the conceptual linkage between industrial planning and national security as a "return of the past". J. Benton Heath, *Trade and Security Among the Ruins*, 30 DUKE J. COMP. & INT.'L L. 223, 229-234 (2020).

[27] For example, in the realm of cross-border data transfer, *see* Andrew D. Mitchell & Jarrod Hepburn, *Don't Fence Me In: Reforming Trade and Investment Law to Better Facilitate Cross-border Data Transfer*, 19 YALE J. OF L. & TECH. 183, 216-229 (2018) (analyzing conceptual and practical difficulties in using ISDS to contest potential state restrictions on data transfer as violative of IIA commitments). Regarding the role of international investment law in protecting digital assets from cybercrime, *see* Julian Chaisse & Cristen Bauer, *Cybersecurity and the Protection of Digital Assets: Assessing the Role of International Investment Law and Arbitration*, 21(3) VAND. J. ENT. & TECH. L. 549 (2019).

[28] *See* Srividya Jandhyala, *The Politics of Investor-State Dispute Settlement: How Strategic Firms Evaluate Investment Arbitration*, *in* HANDBOOK OF INTERNATIONAL INVESTMENT LAW AND POLICY 647 (J. Chaisse et al. eds., Aug. 2021) (describing the depoliticization benefits of ISDS as well as the often-underappreciated benefits of ISDS to private multinational firms).

[29] *See* Janet Koven Levit, *A Bottom-up Approach to International Lawmaking: The Tale of Three Trade Finance Instruments*, 30 YALE J. INT'L L. 125, 126 (2005):

Bottom-up lawmaking tales do not feature state policymakers but rather the very practitioners-both public and private-who must roll up their sleeves and grapple with the day-to-day technicalities of their

dispute resolution is both possible in times of political hostility and preferable to strong-arm political bartering.[30] The access of foreign investors, in particular, to arbitration of their disputes with host states gives meaning to international investment commitments and performs a crucial role in "stabilizing and enabling economic exchange in the investment context".[31]

It should be disclosed at the outset that the theory and ideas promoted by this paper rest on the assumption that fair and free trade, based on Ricardian principles of mutual advantage, are prerequisite for lasting international peace and security.[32] Furthermore, the author subscribes to the view, much evolved since the time of Kant, that international law is "law" in both a moral and practical sense.[33] In this regard,

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trade. On the basis of their experiences on the ground, these practitioners create, interpret, and enforce their rules. Over time, these initially informal rules blossom into law that is just as real and just as effective, if not more effective, as the treaties that initiate the top-down processes.

[30] Perhaps the best example in modern times is the relative success of the Iran-US Claims Tribunal in de-escalating an incredibly tense political conflict and rapid financial decoupling between the US and Iran following the 1979 Iranian Revolution. Abner Katzman, *Despite Diplomatic Freeze, U.S. and Iran Keep Talking at Tribunal*, AP, Mar. 20, 1996. Iran continues to provide an apt case study for the functionality of private international law in times of economic hostility. *See* Farshad Ghodoosi, *Combatting Economic Sanctions: Investment Disputes in Times of Political Hostility, a Case Study of Iran*, 37 FORDHAM INT'L L.J. 1731 (2014) (narrating Iran's historical role in the development of the law governing foreign investment and scrutinizing the clash between sanctions compliance and investment law using Iran as a case study).

[31] Charles N. Brower & Stephan W. Schill, *Is Arbitration a Threat or a Boon to the Legitimacy of International Investment Law?*, 9(2) CHI. J. INT'L L. 471, 477 (2009).

[32] *See generally*, IMMANUEL KANT, PERPETUAL PEACE: A PHILOSOPHICAL SKETCH (1795), https://www.mtholyoke.edu/acad/intrel/kant/kant1.htm; *see also* ZACHARY CARTER, THE PRICE OF PEACE: MONEY, DEMOCRACY, AND THE LIFE OF JOHN MAYNARD KEYNES (2020); Dwight D. Eisenhower, *Special Message to the Congress on Foreign Economic Policy* (Mar. 30, 1954),

> Great mutual advantages to buyer and seller, to producer and consumer, to investor and to the community where investment is made, accrue from high levels of trade and investment [...] [T]he American economy has evolved from such a system of mutual advantage. In the press of other problems and in the haste to meet emergencies, this nation—and many other nations of the free world—have all too often lost sight of this central fact.

(as quoted in preamble to FIRRMA legislation, *supra* note 11); *but see*, Barry Buzan, *Economic Structure and International Security: The Limits of the Liberal Case*, 38 INT'L ORG. 597 (1984).

[33] *See* Oona Hathaway & Scott Shapiro, *Outcasting: Enforcement in Domestic and International Law*, 121 YALE L. J. 252, 255-258 (2012) [hereinafter "Hathaway & Shapiro"]. The authors rebut Realist and legal positivist critics of international law, arguing that international law effectively utilizes externalized enforcement and outcasting such that it has meaningful, empirical impact on states' behavior. This, despite a lack of enforcement mechanisms utilizing the "threat and exercise of physical force". Using this frame of reference, ISDS can be understood as a particularly effective form of externalized enforcement, which states have voluntarily internalized, by waiving elements of sovereign immunity through treaty practice and domestic arbitration laws, in an effort to avoid economic outcasting. *Id.* at 327-329.

bridging the yawning divide between advocates of free trade and the national security establishment is a fundamental concern. As technological, capital, informational, and political diffusion continue to accelerate the post-modern trends etching away at the edifice of state power and redefining the concept of state sovereignty,[34] the emergence of novel and multifaceted "threats" to the vitality of the nation-state model will continue to widen this divide.[35]

With this in mind, a significant problem that this paper intends to address is the atomization of the international law and national security thought communities.[36] On the question of national security exceptions to international law commitments, an emphasis on legal theory over factual analysis has led the discussion into deep abstraction. For their part, the national security community is often distrustful, disinterested, or dismissive of the basic assumptions behind global investment and

[34] *See* Louis Henkin, *That S Word: Sovereignty, and Globalization, and Human Rights, Et Cetera*, 68 FORDHAM L. REV. 1 (1999); Anne-Marie Slaughter, *Sovereignty and Power in a Networked World Order*, 40 STAN. J INT'L L. 283 (2004) (describing a "networked" world order in which sovereignty is gradually delegated by states to the international networks in which they participate); Dan Sarooshi, *Sovereignty, Economic Autonomy, the United States and the International Trading System: Representations of a Relationship*, 15 EUR. J. INT'L L. 651, 653-55 (2004) (describing sovereignty as an "essentially contested concept", which is continually subject to semantic revision based on the prevailing political, social, and economic conditions of the time); Morad Eghbal & K. C. O'Rourke, *Post-Brexit: A Continuum for State Sovereignty U.K.'s Challenge to Balance Legitimacy, Capital Development and Human Needs*, 23 ILSA J. INT'L & COMP. L. 1 (2016); Sean Watts & Theodore Richard, *Baseline Territorial Sovereignty and Cyberspace*, 22 LEWIS & CLARK L. REV. 771 (2018).

[35] Risvas identifies a similar albeit more pronounced conflict between ideological camps during the period leading up to WWII. He writes:

For [US Secretary of State] Hull, "unhampered trade dovetailed with peace; high tariffs, trade barriers, and unfair economic competition with war." JOAN E. SPERO & JEFFREY A. HART, THE POLITICS OF INTERNATIONAL ECONOMIC RELATIONS 3 (7th ed. 2010). That is unsurprising because "[t]he foremost proponent and practitioner of discriminatory trade restrictions was Nazi Germany, which regarded the principle of the most-favoured-nation treatment as a particularly vicious offshoot of a discredited liberalismus. It utilized all kinds of trade controls to make the German economy self-sufficient and provide it with the implements for war." First Report on the Most-Favoured-Nation Clause, [1969] 2 Y.B. Int'l L. Comm'n 157, 163, U.N. Doc. A/CN.4/213.

Michail Risvas, *Non-Discrimination in International Law and Sovereign Equality of States: An Historical Perspective*, 39(1) HOUSTON J. INT'L L. 79, 106, n.121 (2018).

[36] A failure to analyze and communicate effectively across ideological boundaries is a common precursor to political atomization and conflict escalation. *See* E.H. CARR, THE TWENTY YEARS CRISIS: 1919-1939 (1940) (highlighting the divide between Utopian and Realist schools of IR theory during the inter-war period, precipitating WWII).

international law.[37] Fortunately, this disconnect is largely owing to a general dearth of national security challenges to the prevailing international economic order since the end of the Cold War. This state of affairs is already changing.[38] As free trade law and national security policy ellipse toward repeated future collisions, neither side can afford to ignore the trajectory of the other any longer.

Developing a comprehensive and effective system to manage the conflicts presented by these global trends is a task far beyond the scope of this paper. However, this paper serves two specific functions that are antecedent to this task. First, it serves the descriptive function of connecting the TNP strategy to its various manifestations and predicting the ways in which this strategy will impact global economic relations in the near future. Second, it serves the normative function of promoting international law generally and ISDS specifically as a means to mitigate the adverse impacts of technological non-proliferation on international private industry.

The paper proceeds in three parts. First, it examines technological non-proliferation as a geopolitical strategy. It uses US domestic law to describe the blueprint for a comprehensive and advanced TNP regime, *i.e.*, the kind that is now being adopted by many other advanced economies.[39] This section also reveals the means by which the US has incentivized other states to adapt their own domestic laws to adopt the TNP strategy, and it discusses the impacts TNP is already having on

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[37] *See* Tim Bakken, *Legal Takeovers of Nations: The Value and Risks of Foreign Direct Investment in a Global Marketplace*, 40 U. DAYTON L. REV. 259 (2016) (presenting skepticism regarding the popularly avowed "benefits" of inward FDI). The author is a professor of law at West Point. *See also* Stewart Baker, *Episode 313: Is the International law of cyberwar a thing?*, THE CYBERLAW PODCAST, Apr. 27, 2020, https://www.steptoe.com/feed-Cyberlaw.rss (questioning whether international law has any functional content or relevance to cybersecurity and accusing international law scholarship of posing "angels on the head of a pin" theories in this regard). The host is the former General Counsel of the National Security Agency (1992-94) and was the first Assistant Secretary of Homeland Security for Policy (2005-09). The genesis of this modern view may be found in Clausewitz. He trained a keen eye on the relationship between technology, military power, and international law. On the first page of his magnum opus, *Vom Krieg*, he remarked: "Force, to counter opposing force, equips itself with the inventions of art and science. Attached to force are certain self-imposed, imperceptible limitations hardly worth mentioning, known as international law and custom, but they scarcely weaken it." CARL VON CLAUSEWITZ, ON WAR 75 (1832) (Ed. & Trans. by Michael Howard & Peter Paret, 1976).

[38] *See* Benton Heath, *supra* note 25 (2020); *accord* Georgios Dimitropoulos, *National Sovereignty and International Investment Law: Sovereignty Reassertion and Prospects of Reform*, 21(1) J. WORLD INV. & TRADE 71 (2020).

[39] Ishikawa, *supra* note 14.

global investment. Next, it considers the security taboo in domestic and international law; what has been described variously as a "vanishing point of law",[40] and as a regulatory "black hole", through which no law can pass.[41] This section: (1) looks at the ways in which international economic law instruments approach this taboo, (2) considers the policy foundations of TNP, and (3) questions whether the various novel and retrograde security rationales used to justify elements of the TNP strategy can all fit the paradigm of "essential security" exceptions.

Finally, the paper presents an argument in favor of utilizing ISDS to "reprogram" the political imbroglios at the core of many TNP-adjacent measures. It discusses the benefits of ISDS for foreign investors and for states, and argues that international investment law is a flexible, complex, and adaptive system that is well suited: (1) to mitigate the frictional costs of geopolitical competition on private industry, and (2) to depoliticize economic disputes and to set guidelines for international commerce involving state-owned and parastatal commercial entities. In order to provide a meaningful forum for TNP dispute resolution, practitioners must do the utmost to understand the species of concerns informing TNP, and to advocate to all relevant stakeholders the benefits of ISDS.

II. TECHNOLOGICAL NON-PROLIFERATION AS A GEOPOLITICAL STRATEGY

A. *The Levers of US Regulatory Power*

1. The Committee on Foreign Investment in the United States

The most important screening mechanism for foreign capital entering the US is the Committee on Foreign Investment in the United States (CFIUS). CFIUS is an interagency committee headed by the Treasury Department that is authorized to review certain transactions involving foreign investment in the US in order to determine the effect of such transactions on national security. CFIUS has its genesis in political controversy, and its powers have grown over the decades in moments of

[40] Nicolas Lamp, *At the Vanishing Point of Law: Rebalancing, Non-Violation Claims, and the Role of the Multilateral Trade Regime in the Trade Wars*, 22 J. OF INT'L ECON. L. 721 (2019) [hereinafter "Lamp"].

[41] Ji Li, *Investing near the National Security Black Hole*, 14 BERKLEY BUS. L.J. 1 (2017).

economic turmoil and in eras of heightened fear of foreign investors.[42] CFIUS was created to examine the potential for predatory investments from cash-rich OPEC countries in the aftermath of the 1973-1974 oil embargo.[43] It was established by Executive Order of President Ford in 1975 as a monitoring and advisory board for the President of the United States ("POTUS"), tasked with gauging the impact of foreign investment in the US.[44] CFIUS did not gain a mandate to block transactions involving foreign parties until the late 1980s when, in the midst of an overestimated Japanese challenge to US technological and economic supremacy, the Fujitsu conglomerate attempted an acquisition of the Fairchild Semiconductor Company.[45] Political pressure from the Reagan administration nixed the purchase attempt, and Congress passed an amendment to the DPA in following year.[46]

The 1988 Exon-Florio Amendment strengthened congressional oversight of transactions involving "strategic assets" and gave POTUS explicit authority to investigate foreign investments, to block certain transactions, and to set conditions on the approval of acquisitions involving foreign persons.[47] CFIUS was incorporated into this statutory framework by President Reagan shortly thereafter.[48] The Exon-Florio Amendment was an important step in the consolidation of government powers

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[42] *See* C.S. Eliot Kang, *U.S. Politics and Greater Regulation of Inward Foreign Direct Investment*, 51 INT'L ORG. 301, 315 (1997); Matthew J. Baltz, *Institutionalizing Neoliberalism: CFIUS and the Governance of Inward Foreign Direct Investment in the United States Since 1975*, 24 REV. INT'L POL. ECON. 859 (2017).

[43] *See* Memorandum from C. Fred Bergsten to Robert Carswell, *The Operations of Federal Agencies in Monitoring, Reporting on, and Analyzing Foreign Investments in the United States: Examination of the Committee on Foreign Investment in the United States, Federal Policy Toward Foreign Investment, and Federal Data Collection Efforts*, 96th Cong. 334-35 (1979).

[44] *See* Exec. Order No. 11858, 40 F.R. 20263 (May 7, 1975).

[45] Susan Chira, *International Report: Fujistu, A Match for I.B.M., Making Further Inroads in U.S.*, N.Y. TIMES, Nov. 3, 1986. It is worth noting that the importance of Fairchild at this point in time was largely symbolic. It had begun to lag its competitors in product output and market share by the late 1960s. Although it did maintain some of its original edge in the form of an innovative research department, Fairchild was sold to the French conglomerate Schlumberger in 1979. *See* Daniel Holbrook et. al., *supra* note 3, at 56.

[46] David E. Sanger, *Japanese Purchase of Chip Maker Cancelled After Objections in US*, N.Y. TIMES, Mar. 17, 1987.

[47] Omnibus Trade and Competitiveness Act of 1988, Pub. L. No. 100-418, 102 Stat. 1107, 1425 (1988) (amending the Defense Production Act of 1950 ("DPA")). *See* George S. Georgiev, The *Reformed CFIUS Regulatory Framework: Mediating Between Continued Openness to Foreign Investment and National Security*, 25 YALE J. ON REG. 125, 127 (2008).

[48] Exec. Order No. 12661, 54 Fed. Reg. 779 (Dec. 27, 1988).

to review and block foreign direct investments, but the fusion of legislative and executive powers was not completed until the passage of the Foreign Investment and National Security Act ("FINSA") in 2007, by which Congress finally incorporated CFIUS into the DPA in 50 U.S.C. §4565. This particular bill was inspired by the political fallout from the 2006 Dubai Ports World scandal, an incident that underscores the exposure of foreign investment to national-origin-based political headwinds.

Dubai Ports World, a majority state-owned entity of the UAE purchased a British company, Peninsular and Oriental Steam Navigation Co. ("P&O"), which held contracts to manage and operate six US ports. Though the transaction initially cleared the Bush Administration's CFIUS review, it provoked an intense backlash from members of Congress who vaguely pointed to the UAE as the home state of two of the hijackers involved in the September 11 attacks that had occurred only five years prior. Some criticized the clearance of the deal at the time as "politically tone deaf".[49] Dubai Ports World eventually agreed to divest the US assets which had formed a substantial basis for their initial transaction with P&O.[50] In addition to pulling CFIUS closer to the legislative branch, FINSA broadened the conceptual focus of its national security mandate to include: (a) a broad critical technology consideration; (b) the record of the investor's country of origin in cooperating with counterterrorism efforts; (c) the potential for transshipment or diversion of critical technology with dual use applications; and (d) long term energy-supply issues which may be implicated by the transaction.[51] The overwhelming focus of these updates was on counter-terrorism, not state-to-state competition. In hindsight, these statutory provisions clearly track the geopolitical priorities of the time. As such, they demonstrate the difficulty in legislating a universal standard for national security review that is uncolored by the anxieties and political tensions of the day.

Under the Trump Administration, CFIUS moved beyond its traditional merger

[49] *US lawmakers criticise ports deal*, BBC NEWS, Feb. 21, 2006 (quoting Sen. Lindsay Graham (R-SC)).

[50] Neil King Jr. & Greg Hitt, *Dubai Ports World Sells US Assets*, WSJ, Dec. 12, 2006.

[51] Foreign Investment and National Security Act of 2007 ("FINSA"), Pub. L. No. 110-49.

control role to review investments of smaller percentage stakes.[52] The passage of FIRRMA provided a statutory basis for this all-encompassing review. FIRRMA also markedly increases Congressional oversight and involvement in the CFIUS process.[53] In this sense, FIRRMA represents the apex of a troublesome trend in the development of CFIUS legislation.[54] As demonstrated by the Dubai Ports World controversy, Congressional involvement increases the risk of politicization of the process, because it brings diffuse legislative priorities into what was designed to be a somewhat rote administrative process.[55] The presence of a clear and negative bi-partisan public bias towards particular foreign governments amplifies this problem. In the wake of the COVID-19 pandemic, public bias toward China may have impacts under FIRRMA similar to those experienced by investors from the UAE under FINSA.[56]

CFIUS has also traditionally operated as a gap-filler, providing a basis for executive action in high-profile acquisitions of US companies only where no other provisions of law provide adequate and appropriate executive authority.[57] Increasingly, CFIUS has become the vanguard of the TNP strategy, and its most attentive sentinel.[58] It is now the regulatory body of first concern for most all

[52] Even before FIRRMA passed, CFIUS review contributed to the abandonment of Tencent's attempted purchase of a 10% stake in a Dutch Software company with a US presence. Reuters Staff, *Chinese investors buy stake in mapping firm HERE*, REUTERS, Dec. 27, 2016; Trade Practitioner, *CFIUS Filing Withdrawn, Deal Abandoned: NavInfo, Tencent, GIC Pte, and HERE International*, SQUIRE PATTON BOGGS, Oct. 3, 2017, https://www.tradepractitioner.com/2017/10/navinfo-tencent-gic-here/.

[53] *See* 50 U.S.C. § 4565(m) (detailing requirement of annual reports to Congress); 50 U.S.C. § 4565(g)(1) (detailing on-request briefing requirement to Congress with regard to specified transactions).

[54] *See* Brian J. Farrar, *To Legislate or to Arbitrate: An Analysis of U.S. Foreign Investment Policy after FINSA and the Benefits of International Arbitration*, 7 J. INT'L BUS. & L. 167 (2008).

[55] *See* Jonathan C. Stagg, *Scrutinizing Foreign Investment: How Much Congressional Involvement is Too Much?*, 93 IOWA L. REV. 325, 349 (2007).

[56] *See* Kat Devlin et al., *US Views of China Increasingly Negative Amid Coronavirus Outbreak*, PEW RESEARCH CENTER, Apr. 21, 2020.

[57] Brandt J.C. Pasco, *United States National Security Reviews of Foreign Direct Investment: From Classified Programmes to Critical Infrastructure, This Is What the Committee on Foreign Investment in the United States Cares About*, 29(2) ICSID REVIEW 350, 357 (2014).

[58] Theodore H. Moran, *CFIUS reforms must be reformed*, COLUMBIA FDI PERSPECTIVES No. 231 (July 30, 2018) [hereinafter "Moran"] (noting that FIRRMA expands CFIUS authority to review commercial sales, joint venture arrangements and normal business licensing of intellectual property by US companies to foreigners. "FIRRMA permits CFIUS to screen commercial practices even if the sales and licenses involved are not covered for national security reasons by the US export control regime").

commercial transactions involving foreign investors in Technology, Infrastructure, and Data ("TID") in US businesses.[59]

The CFIUS review process itself is straightforward on paper, even if it is opaque in practice.[60] However, the decision whether or how to begin this process is variable and complex.[61]

Furthermore, the mitigation measures demanded by CFIUS can be exacting, and can often undermine the central commercial purpose behind a given transaction.[62] Confusion surrounding the filing process is further compounded by justiciability gaps

[59] Department of the Treasury, *Final Rule: Provisions Pertaining to Certain Investments in the United States by Foreign Persons*, 31 C.F.R. 800 RIN 1505-AC68 (Sept. 15, 2020). The TID US business is defined by FIRRMA and Treasury regulations as any firm that (1) produces, designs, tests, manufactures, fabricates, or develops one or more "critical technologies" as defined by BIS regulations; (2) owns operates, manufactures, supplies or services any of 28 identified categories of critical infrastructure; or (3) maintains or collects sensitive data of US citizens, *i.e.* certain categories of "identifiable" data (*e.g.* financial, health, geolocation), and either tailors their services to US agencies with intelligence, national security, or homeland security responsibilities, or collects such data on more than one million individuals within a twelve-month period.

[60] Once CFIUS has jurisdiction over a "covered transaction", it can review that transaction with or without voluntary notification. There is statute of limitations restricting CFIUS from engaging in review after a set period of time. However, once review has determined the lack of a threat to national security, a "safe harbor" is received by the transacting parties. Because voluntary submissions begin a process by which CFIUS must conduct initial review within a period of 30 days and, if necessary, secondary review within 45 days, parties generally will make voluntary filings if they expect CFIUS to take an interest in their transaction. If mitigation measures fail, CFIUS may make a recommendation to the President that he suspend or prohibit a transaction that threatens to impair the national security of the US. Johnathan Wakely & Andrew Indorf, *Managing National Security Risk is an Open Economy: Reforming the Committee on Foreign Investment in the United States*, 9 HARV. NAT'L SEC. J. 1, 8-9 (2018).

[61] *See* REID WITTEN, THE CFIUS BOOK (2d ed., 2020). For visual representation of filing variability, *see* filing decision tree, *available at* https://cfiusbook.com/.

[62] CFIUS Annual Report to Congress for FY2019 26-29, Public / Unclassified Version (2020). Examples of mitigation measures demanded in FY2019 include: (1) prohibiting or limiting transfer or sharing of certain intellectual property, trade secrets or 'know-how'; (2) ensuring that only authorized persons have access to certain tech, certain USG, company, or customer info, and that no direct or remote access exists by foreign acquirer to systems that hold this info; (3) ensuring that only US citizens handle certain products and services, and that certain activities and products are located only in the US; (4) establishing a Corporate Security Committee and other mechanisms to ensure compliance with all required actions, including the appointment of a USG-approved security officer or member of the board of directors and requirements for security policies, annual reports, and independent audits; (5) notifying, for approval, security officers or relevant USG parties in advance of foreign national visits to the US business; (6) assurances of continuity of supply for defined periods, and notification and consultation prior to taking certain business decisions, with certain rights in the event that the company decides to exit a business line. Establishing meetings to discuss business plans that might affect USG supply or national security considerations; (7) exclusion of certain sensitive assets from the transaction; (8) ensuring that only authorized vendors supply certain products or services; (9) prior notification to and approval by relevant USG parties in connection with any increase in ownership or rights; and (10) divestiture of all or part of the US business.

within the CFIUS regime. Final determinations by the President are not subject to judicial review,[63] but evidence in the administrative record is at least nominally available, after opportunity for in-camera review.[64] CFIUS determinations that are rendered by the statutorily prescribed method have the combined weight of executive and legislative authority, meaning a court will likely grant them an extraordinary measure of deference.[65] Furthermore, there is a wealth of credible authority that suggests policy determinations made pursuant to the President's foreign affairs power should not (and even functionally *cannot*)[66] be challenged by judicial review in the administrative law context.[67] Still, in theory, a failure of CFIUS to follow the procedures mandated by the DPA may invite an aggrieved party to vitiate their rights on procedural grounds.

Indeed, this was the conclusion reached by the US Court of Appeals for the DC Circuit in *Ralls Corp. v. Comm. on Foreign Inv. in the U.S.*[68] The facts of the *Ralls Corp.* case involved Sany Group, China's largest producer of construction equipment. Sany

[63] 50 U.S.C. § 4565(e)(1).

[64] 50 U.S.C. § 4565 (e)(3).

[65] *See generally Youngstown Sheet & Tube Co. v. Sawyer*, 343 U.S. 579, 643-44 (1952) (Jackson, J., concurring).

[66] *See, e.g.*, Richard A. Posner, *Reply: The Institutional Dimension of Statutory and Constitutional Interpretation*, 101 MICH. L. REV. 952, 957 (2003); *but see N.Y. Times Co. v. United States*, 403 U.S. 713,719 (1971) (Black, J., concurring) (opposing the use of a vague notion of security to defeat First Amendment rights in the context of the publication of the already leaked Pentagon Papers, detailing executive deliberations regarding security determinations during the Vietnam War). This line of doctrine may become relevant as WeChat and TikTok continue to lodge judicial challenges based in part upon the First Amendment rights of their users. *See WeChat Users Alliance v. Trump*, No. 3:20-CV-05910-LB (N.D. Cal. Sept. 19, 2020); *TikTok Inc. v. Trump*, No. 1:20-CV-02658-CJN (D.D.C. Sept. 27, 2020).

[67] *See, e.g.*, Eric A. Posner & Cass R. Sunstein, *Chevronizing Foreign Relations Law*, 116 YALE L.J. 1170, 1227-28 (2007); *but see* Ganesh Sitaraman & Ingrid Wuerth, *The Normalization of Foreign Relations Law*, 128 HARV. L. REV. 1897 (2015) (advocating for the "normalization" of US foreign affairs law through the application of the US administrative law principles regarding delegation and deference). Claussen enters the fray in a recent article examining the separation of powers of issues inherent in US Trade Law, revealing a structural imbalance between established presidential powers: on the one hand to eliminate international trade barriers (requiring congressional approval), and on the other to erect them based on the needs of US economic security (generally taken to be exercised unilaterally). Kathleen Claussen, *Trade's Security Exceptionalism*, 72 STAN. L. REV. 1097, 1160-62 (2020) (describing the origins of the nondelegation doctrine and its use in 19th century tariff litigation). Claussen concludes that, "[T]rade's unique position at the intersections of domestic and international policy, commerce, and security means that finding the constitutionally and practically appropriate separation of powers will remain a work in progress".

[68] 758 F.3d 296, 312 (D.C. Cir. 2014).

purchased a wind farm operation in Oregon through a Delaware-incorporated subsidiary, Ralls Corp. According to the plaintiffs in *Ralls Corp.*, the intention of the investment was to utilize Sany wind turbines to demonstrate their quality and reliability to the US wind power industry.[69] After the acquisition was completed, CFIUS reviewed the transaction and found that the proximity of the turbines to a US Naval weapons testing site and the ability of the windmills to interfere with radar operations necessitated the acquisition be unwound. President Obama ordered as such, and Ralls filed a lawsuit in federal court challenging the order as a taking without due process of law.[70] Notably, a number of foreign investors of different nationalities running wind farms in the area were not asked to similarly divest.[71]

The District Court ruled against the plaintiff, pointing to its failure to file advance notice of the transaction with CFIUS and to the prescription against review of presidential determinations in the DPA.[72] On appeal, however, the DC Circuit held in favor of Ralls Corp.[73] It found, specifically, that foreign investors do have constitutionally protected property rights that vest after the close of a transaction, and that those rights could not be deprived without due process protections, such as a notice of deprivation, access to unclassified evidence, and the opportunity for rebuttal.[74] The substantive question of expropriation was not addressed, as Ralls Corp. eventually agreed to divest its ownership of the windfarm in a settlement agreement with the government.[75] Importantly, it was not the presidential determination that was held to be lacking, but the failure of CFIUS to involve Ralls Corp. whatsoever in its decision-making process leading up to its presidential recommendation. This Committee review procedure remains the only aspect of the

[69] *Id.* at 313.

[70] *Id.*

[71] *Id.*

[72] *Id.* at 314-15.

[73] *Id.* at 318.

[74] *Id.*

[75] Stephen Dockery, *Chinese Company Will Sell Wind Farm Assets in CFIUS Settlement*, WSJ, Nov. 4, 2015.

CFIUS process that is open to challenge.[76]

Yet even under this longshot approach, the US Treasury Department and other CFIUS member agencies are not held to the normal rigorous procedural standards prescribed by the Administrative Procedure Act (APA),[77] because administrative actions that are authorized under the Defense Production Act are not subject to the provisions of the APA.[78] Beyond the ability to obtain non-classified information, and perhaps an in-camera review of other information used in CFIUS determinations, there is likely little of substance to be won by an aggrieved foreign investor in US courts. Despite courts struggling for years with conflict between due process and national security in the War on Terror era, the submission of national security power to law arguably remains stochastic in the US legal system.[79]

To be sure, instances of abuse or of political "horse trading" represent a small minority of the hundreds of transactions reviewed by the Committee in a given year.[80] Still, *sans* concrete standards, *sans* even a consistent pattern of action for which the shape and direction of power is visible, the potential for abuse is apparent. If CFIUS' goal is to decouple US technology firms completely from Chinese investment, then its amorphism is its greatest asset. Indeed, FIRRMA and ECRA have already had an enormous chilling effect on Chinese investment in US electronics-reliant companies.[81] Much as with Bentham's ruthlessly efficient panopticon, the institutional design of CFIUS has a psychological impact far exceeding the practical

[76] FINSA's denial of judicial review of presidential determinations is repeated verbatim in 50 U.S.C. 4565(e)(1) as amended by FIRRMA. Therefore, the prescriptions for due process given in *Ralls* should apply with equal force to any future litigation on similar facts.

[77] *See* 5 U.S.C. §§ 551-559 (Administrative Procedure Act codified).

[78] 50 U.S.C. § 4559(a); *accord* Sitaraman & Wuerth, *supra* note 67.

[79] *See* Jack. L. Goldsmith & Neal Katyal, *The Terrorists Court*, N.Y. TIMES, July 11, 2007; *accord* Neal K. Katyal, *Stochastic Constraint*, 126 HARV. L. REV. 990 (2013); Jack L. Goldsmith, *A Reply to Professor Katyal*, 126 HARV. L. REV. F. 188 (Apr. 22, 2013).

[80] CFIUS Annual Report FY2019, *supra* note 62, at 37. According to the report, 231 written notices of transactions were filed with CFIUS in 2019 that CFIUS determined to be covered transactions. CFIUS conducted subsequent investigations with regard to 113 of these notices. Of these 113 notices, 28 were cleared after parties adopted mitigation measures pursuant to §721 to resolve national security concerns. Eight transactions fell apart after CFIUS and the parties failed to reach agreement on mitigation measures and four "fell apart for commercial reasons unrelated to CFIUS review".

[81] *See infra* Section II.C.

capabilities of the agencies staffing it.[82] Furthermore, statistics from CFIUS' most recent report to Congress make clear that it is not only Chinese funders and acquirers caught up in the process.[83] In theory, this investment screening mechanism could be turned against the firms and nationals of any state depending on the direction of prevailing political headwinds.[84]

2. Export Controls: Commerce, the ECRA, and BIS

If CFIUS is the face of the TNP strategy, then the ECRA is its backbone. At its core, the TNP strategy is about restricting trade in technology: both directly through product export controls, and indirectly through limiting foreign investment rights to control of and to information sharing in US businesses. Despite the prevalent risk of overregulation presented by new rules on dual-use "emerging" and "foundational" technologies, [85] this US export control regime still compares favorably to its counterpart in China in terms of its transparency and emphasis on producing

[82] *See Panopticon*, ENCYCLOPEDIA BRITANNICA, https://www.britannica.com/technology/panopticon. Describing the panopticon as a prison architecture, "consist[ing] of a circular, glass-roofed, tanklike structure with cells along the external wall facing toward a central rotunda; guards stationed in the rotunda could keep all the inmates in the surrounding cells under constant surveillance"; *see also* Michel Foucault, *Panopticism*, *in* DISCIPLINE & PUNISH: THE BIRTH OF THE PRISON 195-228 (Alan Sheridan trans., Vintage Books 2d ed. 1995) (1977):

> Hence the major effect of the Panopticon: to induce in the inmate a state of conscious and permanent visibility that assures the automatic functioning of power. So to arrange things that the surveillance is permanent in its effects, even if it is discontinuous in its action; that the perfection of power should tend to render its actual exercise unnecessary; that this architectural apparatus should be a machine for creating and sustaining a power relation independent of the person who exercises it [...]. In view of this, Bentham laid down the principle that power should be visible and unverifiable. Visible: the inmate will constantly have before his eyes the tall outline of the central tower from which he is spied upon. Unverifiable: the inmate must never know whether he is being looked at at any one moment; but he must be sure that he may always be so.

[83] CFIUS FY2019 Report, *supra* note 62. According to the report, Chinese firms filed 115 notices between 2017 and 2018, and only 25 of 231 written notices filed in 2019. Japan was the main country of origin for companies filing in 2019, with 46 filings, followed by: Canada with 23, France, Germany, and the UK with 13 each, and South Korea and Singapore with 10 each.

[84] Moran, *supra* note 58 ("[If] the rationale [of applying investment screening measures] to prevent the erosion of industrial or technological leadership becomes accepted as legitimate, could the effort be limited to foreign acquisitions involving only a few countries?").

[85] *See* Chad P. Brown, *Export Controls: America's Other National Security Threat*, 30 DUKE J. COMP. & INT'L L. 283, 286 (2020) [hereafter "Brown"].

effective and discernable controls.[86] Further, its emphasis on multilateralism as well as built-in incentives for global cooperation could see many of its features adopted by other capital-importing, technology-exporting states.[87] Still, there are many politically sensitive and problematic elements of the export control regime. Most prominent is the Entity List, by which the US Commerce Department maintains a list of foreign companies to which certain export licenses will be presumptively denied.[88] China has copied this tool in recent updates to its export control regime with the addition of an "unreliable entities" list targeting specific firms by name.[89]

The key for making sense of CFIUS' expanded jurisdiction for tech investors is also held within the Department of Commerce, by the Bureau of Industry and Security ("BIS").[90] This key is the ability to define "critical technology", the umbrella term for both foundational and emerging tech within the larger TNP regime. BIS has been reluctant to take on its expanded role on its own, but has been aided by robust input from both the policy establishment and the regulated community.[91] The ECRA provides detailed standards for considering what to define as "emerging" and "foundational" technology, and it establishes a public-private advisory board to assist

[86] *See* Feng Wang & Menghao Dai, *New Export Control Law: 5 Issues Remain to be Clarified*, King & Wood Mallesons, CHINA LAW INSIGHT BLOG, Nov. 5, 2020, https://www.chinalawinsight.com/2020/11/articles/export/new-export-control-law-5-issues-remains-to-be-clarified/#page=1 [hereinafter "Wang & Dai"].

[87] *Id.*

[88] Commerce has already blocked exports of critical components for major Chinese firms such as Huawei and SMIC and their affiliates using the entities list. *See*, BIS, Supplement No.4 to part 744 of the EAR ("Entity List"), https://www.bis.doc.gov/index.php/policy-guidance/lists-of-parties-of-concern/entity-list.

[89] Wang & Dai, *supra* note 86.

[90] The US Treasury Department promulgated a rule, effective October 15, 2020, that changes the source definition for "critical technologies" to harmonize it with export controls promulgated under BIS. *See*, 31 CFR Part 800, RIN 1505–AC68, *supra* note 59. *See* Export Control Reform Act, 50 U.S.C. §4817 (2018). Under this process, interagency consultation must take into account: (1) foreign availability of the tech; (2) potential impact on domestic research; and (3) the potential effectiveness of the controls imposed on limiting the proliferation of covered technologies. *Id.*

[91] Notice of Recruitment of Members, A Notice by the Industry and Security Bureau on 04/01/2019, 84 Fed. Reg. 12195 (recruiting policy professionals to join BIS' Technical Advisory Committee). BIS' first notice of proposed rulemaking relating to emerging tech under the ECRA received a staggering 250 public comments from the regulated community in a 3-month period. Review of Controls for Certain Emerging Technologies, A Proposed Rule by the Industry and Security Bureau on 11/19/2018, 83 Fed. Reg. 58201, 15 CFR Part 744, RIN 0694–AH61.

BIS in its mission.[92] BIS has come up with fourteen broad categories within which it will seek continuing input as to the existence of "emerging technologies" with dual use applications.[93]

The Commerce Department has shown that it intends to introduce new export controls under the ECRA on a rolling basis, rather than by issuing a single, comprehensive rule.[94] The ability to develop controls in this manner addresses the challenge inherent in regulating the ever-evolving cutting edge of technological innovation. But the importance of this procedure to determining CFIUS jurisdiction creates a host of concerns. Several of the Senators sponsoring FIRRMA have already expressed concern regarding the slow pace of the Commerce Department in developing a workable list of emerging and foundational technologies, and the impact of this dynamic on CFIUS' legal capacity.[95] On the other hand, a constant flux in the definition of "critical tech" creates the possibility of *ex post facto* regulatory intervention by CFIUS. How can a technology transaction ever truly be finalized when regulators might consider the technology at the center of the transaction "critical" to domestic security interests well after the fact?

In response to this apparent gap, the "Final Rule" promulgated by the US Treasury Department relating to "critical technology" CFIUS filing requirements clarifies that a covered transaction will be considered to involve "critical technology" as that

[92] *See* 50 U.S.C. § 1758(b)(4)(f).

[93] 83 Fed. Reg. 58201, *supra* note 91. These include broadly: biotechnology; AI & machine learning technology; position, navigation, and timing technology; microprocessor advancements; advanced computing technology; quantum information and sensing technology; logistics technology; additive manufacturing (*i.e.*, 3D printing); robotics; brain-computer interfaces; hypersonics; advanced materials; and advanced surveillance technologies.

[94] Department of Commerce, Advance Notice of Proposed Rulemaking (ANPRM): Review of Controls for Certain Emerging Technologies, 15 CFR 744, RIN 0694-AH61 (Nov. 19, 2019).

[95] Ian F. Fergusson & Karen M. Sutter, *U.S. Export Control Reforms and China: Issues for Congress*, CRS IN FOCUS, Aug. 21, 2020; Kirkland & Ellis, *CFIUS Goes Back to the Future by Tying Mandatory Filings Pertaining to Critical Technologies to U.S. Export Controls Assessments*, Kirkland Alert, Oct. 21, 2020, https://www.kirkland.com/publications/kirkland-alert/2020/10/cfius-critical-technologies#ref6. The experts authoring the report further state that Congress is likely to take a more active role policing BIS regarding the implementation of controls on "emerging" and "foundational" technologies, such that BIS may soon abandon its current multilateral approach.

definition stands at the time the transaction is consummated.[96] That means that investors who consummate transactions involving a technology that has not yet been added to the roster of BIS export controls effectively have assurances that their transaction will not become "covered" *ex post facto*. Under CFIUS' traditional structure, this sort of measure would be enough to protect investments from post-establishment meddling.

But FIRRMA, has vastly expanded the meaning of a "covered transaction", beyond that utilized in CFIUS' traditional focus on mergers and acquisitions. Any subsequent "transaction" involving a change in control or other material rights in an US TID company technically invites further review by CFIUS, even where general foreign control over the company is established prior to the underlying technology becoming "emerging or foundational" according to BIS. So, an investor purchasing a material interest in a technically non-TID company may find still themselves facing CFIUS review later on. In theory, should BIS decide to add that firm's technology to the list of emerging or foundational technologies, when the corporation makes another covered transaction CFIUS gets another bite at the apple. Under this regime, any foreign investor purchasing shares or an interest in a US TID business incident to a long-term investment strategy does so at significant political risk.

This dynamic, which likely will manifest in other investment screening regimes in the form of similarly vague jurisdictional rules, is worth monitoring as the basis for potential future disputes under IIAs that protect an investor's "legitimate expectations." A failure to accord due process of administrative law, inconsistencies between separate governmental agencies in implementing the law governing an investment, or a general lack of transparency in carrying out measures that cause harm to a protected investment, might each form the basis of a violation of the Fair and Equitable Treatment ("FET") standards found in many IIAs.[97]

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[96] *See* 31 CFR Part 800, RIN 1505–AC68, *supra* note 59.

[97] *See generally* Tecnicas Medioambientales Tecmed S.A. v. the United Mexican States, ICSID Case No. ARB(AF)/00/2, Award ¶ 154 (May 29, 2003); PSEG Global, Inc. v. Republic of Turkey, ICSID Case No. ARB/02/5, Award ¶¶ 173-74 (Jan. 19, 2007) (discussing the principle of transparency in international investment law); MTD Equity v. Republic of Chile, ICSID Case No. ARB/01/7, Award ¶ 163 (May 25, 2004)

Because of the broad mandate of BIS in formulating both International Traffic in Arms Regulations ("ITAR") and Export Administration Regulations ("EAR"), there will likely be general confusion about exactly what implications future BIS rules carry *vis-à-vis* commercial US TID business.[98] As with CFIUS, part of the uncertainty may be by design. In any event, export controls limiting the flow of products to critical markets can have indirect impacts that are just as destructive of protected foreign investment as the direct bans issued by CFIUS.[99] Given the diffuse nature of production and sales markets for many critical technologies and the need to issue regulation quickly to respond to a rapidly evolving technological landscape, haphazard export controls may well form the basis of several future investment treaty claims.

The hyper-concentrated nature of some markets for emerging technology also presents risks for discriminatory or arbitrary action *vis-à-vis* foreign firms. The case of Advanced Semiconductor Materials International ("ASML") with Extreme Ultraviolet-Lithography ("EUV") is a pronounced example.[100] In October of 2020, BIS

(highlighting the inconsistency between two arms of government in implementing the legal framework to regulate the foreign investment); Champion Trading Co. v. Arab Republic of Egypt, ICSID Case No. ARB/02/9, Award ¶ 164 (Oct. 27, 2006); Joseph C Lemire v. Ukraine, ICSID Case No ARB/06/18, Award ¶ 49 (Mar. 28, 2011) ("Previous notification of limiting laws and regulations is not simply a formality: it is a fundamental requirement in order to guarantee that investors enjoy legal certainty, and that States cannot invoke the exception ex post facto, surprising the investor's good faith").

[98] For example, in January of 2020, BIS published its first notice of an interim final rule that appeared to add "software specifically designed to automate the analysis of geospatial imagery" to the export control regime as an "emerging technology". *See*, Dep't of Commerce, Bureau of Industry & Security (BIS), *Notice of Interim Final Rule for the Addition of Software Specially Designed to Automate the Analysis of Geospatial Imagery to the Export Control Classification Number 0Y521 Series* (2020). Although this announcement generated a great deal of speculation about BIS enacting broad unilateral dual-use tech controls, as the former Assistant Secretary of Commerce for Export Administration Kevin Wolf noted, the use of the 0Y521 Series designation actually rendered it a *temporary* unilateral control, subject to public comment and clarification but not subject to the notice and comment requirements of the ECRA. Kevin Wolf et al., *A Look at New Limits on Geospatial Imagery Software Exports*, LAW360, Jan. 6, 2020. Despite the subject matter overlap, this designation addressed what BIS saw as a momentary gap in the export control regime, not the definition of "emerging technology" as it links to CFIUS jurisdiction or otherwise relates to the holistic TNP regime.

[99] Brown, *supra* note 85, at 293-94 (discussing the relationship between access to foreign markets and legitimate commercial expectations in the US semiconductor industry).

[100] Alexander Alper et al., *Trump Administration pressed Dutch hard to cancel China chip-equipment sale: sources*, REUTERS, Jan. 6, 2020.

published its first true "emerging technology" control list.[101] The list included six items that were established as critical dual-use technology by multilateral consultations under the Wassenaar Arrangement during its 2019 plenary.[102] In effect, this was the Bureau's first definitive list of "emerging technologies" under its ECRA mandate.

Notably, this October 2020 list includes software utilized in EUV-Lithography Semiconductor Manufacture Equipment (SME). There is one company, which dominates the market in these machines: the Dutch firm ASML.[103] After failing to block ASML directly from exporting its EUV machines in 2018, the US managed to persuade the Dutch government to suspend its license to export the US$120 million products to one of its largest customers in China.[104] But the suspension is not permanent, and China has applied equal pressure to allow release of the already purchase-ordered machines to its main chip foundry company SMIC.[105]

The inclusion in its export control regime of the software needed to program these gargantuan machines is a clever jurisdictional hook for the US TNP regime. Chip design software is the single area in the supply chain in which the US maintains a distinctive majority of global market share, and ASML utilizes a US-incorporated subsidiary in part for this purpose.[106] Whether or not the concern behind these

[101] Dep't of Commerce, Bureau of Industry & Security (BIS), *Implementation of Certain New Controls on Emerging Technologies Agreed at Wassenaar Arrangement 2019 Plenary*, Final Rule, 15 CFR 740, 772, 774 RIN 0694-AI03 (Oct. 5, 2020).

[102] *See* Statement Issued by the Plenary Chair on 2019 Outcomes of the Wassenaar Arrangement on Export Controls for Conventional Arms and Dual-Use Goods and Technologies, Vienna (Dec. 5, 2019), https://www.wassenaar.org/app/uploads/2019/12/WA-DOC-19-PUB-001-Statement-issued-by-the-Plenary-Chair-on-2019-Outcomes.pdf. For more on Wassenaar, *see infra* Section II.B.1.

[103] *See* ASML, *supra* note 18.

[104] Yang Ge & He Shujing, *Chip Equipment Giant ASML Says Some Sales to China Don't Require US License*, CAIXIN, Oct. 15, 2020 (citing ASML's CEO as saying sales of Deep UV Lithography machines were not covered by existing licensing controls).

[105] Reuters Staff, *Chinese ambassador warns Dutch government against restricting* ASML *supplies*, REUTERS, Jan. 15, 2020.

[106] Asa Fitch & Luis Santiago, *Asia Captures Chip Production from US*, WSJ, Nov. 4, 2020. The authors demonstrate from market data provided by Gartner, the SIA, VLSI Research, SEMI, and company financials that the US maintains 85% of global market share in the chip design software supply-chain segment. This is compared to US control of only 12% of the global market share in overall chip manufacturing.

measures is grounded in a legitimate threat to national security, the potential for abuse and for harm to foreign firms is apparent.

B. *Multilateralization of the TNP Strategy*

1. By Cooperation within Established Multilateral Frameworks

When it comes to non-proliferation regimes, purely unilateral policies aimed at supply-side restrictions are doomed to fail. The ECRA includes instruction that export controls relating to emerging and foundation technology be multilateralized swiftly and comprehensively.[107] As one of the "Congressional Findings" in the preamble to the bill that became FIRRMA notes, POTUS is implored to spread the CFIUS investment screening technique among allied nations.[108] International partnerships, with allied states working in lockstep, are necessary to prevent sourcing of controlled products from reaching the targets of any non-proliferation regime.[109]

The TNP strategy leaves no stone unturned when it comes to expanding US influence over trade and investment with China.[110] And beyond technological non-proliferation, the US has made strides to create a united trade front against China.[111] But the cracks in the "club" model of global governance are beginning to show.[112] It may not be practicable to ostracize a state with the economic clout of China into

[107] Export Control Reform Act of 2018, Pub. L. No. 115-232, § 4811(6), 132 Stat. 2210 (2018) ("Export controls applied unilaterally to items widely available from foreign sources generally are less effective in preventing end-users from acquiring those items. Application of unilateral export controls should be limited for purposes of protecting specific United States national security and foreign policy interests."). In particular, the ECRA recommends that if the President fails in multilateralizing any particular export control within three years, the US should drop it. *See* 50 U.S.C. §1758(c).

[108] *See* Title XVII– Review of Foreign Investment and Export Controls, Subtitle A – Committee on Foreign Investment in the United States, Sec. 1702(7), HR 5515-538.

[109] Brown, *supra* note 85.

[110] For a particularly salient example, the United States Mexico Canada Free Trade Agreement ("USMCA"), which entered into force on 1 July 2020 contains a provision, buried in Chapter 32, that allows two of the parties to terminate the agreement with six-months' notice as to the third, should that party enter into a free trade agreement with a "non-market" country. *See* United States-Mexico-Canada Agreement, July 1, 2020 ["USMCA"], art. 32.10.

[111] *See* Bob Davis, *White House Weighs New Action Against Beijing*, WSJ, Nov. 23, 2020 (discussing Trump administration plan to create an informal alliance of Western nations to jointly retaliate and absorb economic impacts when China uses its trading clout to pressure other States politically).

[112] Nicolas Lamp, *The Club Approach to Multilateral Trade Lawmaking*, 49 VAND. J. TRANSNAT'L L. 107 (2016) (describing a 'club' approach to global economic rulemaking, which compartmentalizes multilateralization efforts but has normative influence on those inside and outside of the "club").

submission by threatening technological or full economic decoupling. The global mechanisms currently in place to deal with issues such as non-proliferation are not well equipped for such a task.

For example, though relatively obscure, international export control coordination systems aimed at dual-use TNP have existed since the beginning of the US-Soviet Cold War.[113] During this period, an informal agreement called the Coordinating Committee for Multilateral Export Controls (COCOM) was established between the US and members of the North Atlantic Treaty Organization (NATO), largely in secret, to coordinate national economic embargo policy among these allied states.[114] COCOM consisted of three list categories: (1) Munitions; (2) Atomic Energy; and (3) Dual-Use Technologies.[115] Items regulated by the first two were subject to an outright ban, while dual-use technology products were subject to export control reviews and licensure procedures.[116] COCOM was replaced in 1995 by the Wassenaar Arrangement, which included a newly independent Russian Federation as a member.[117] There are now 42 member countries in Wassenaar, with the notable continued exclusion of China.[118]

The Wassenaar Arrangement shifted the focus of COCOM away from a secretive bi-polar embargo strategy towards transparency, and non-proliferation of potentially dangerous products to rogue states and non-state actors.[119] It contains two publicly available lists: (1) Munitions and (2) Dual-Use Goods and Technologies.[120] The dual-use goods and technologies list contains nine broad, and somewhat outdated

[113] Wassenaar Arrangement on Export Controls for Conventional Arms and Dual-Use Goods and Technologies, Vol. I, Founding Documents, Dec. 19, 1995, WA-DOC (17) PUB 001.

[114] Brown, *supra* note 85, at 296-97.

[115] *Id.*

[116] *Id.*

[117] Wassenaar Arrangement on Export Controls for Conventional Arms and Dual-Use Goods and Technologies, Vol. I, Founding Documents, Dec. 19, 1995, WA-DOC (17) PUB 001.

[118] *See* www.wassenaar.org.

[119] *See* Brown, *supra* note 85.

[120] *See* List of Dual-Use Goods and Technologies and Munitions List, Wassenaar Arrangement on Export Controls for Conventional Arms and Dual-Use Goods and Technologies, Wa-List (19) (Dec. 5, 2019).

categories.[121] There are also four general criteria which participant states should use in evaluating whether a given technology should be subject to export controls.[122]

The US has demonstrated through BIS rulemaking that it intends to pursue the export control portion of its TNP strategy directly through this framework. But there are inherent problems with this approach. First and foremost, this sort of total economic decoupling was not the task for which the Wassenaar Arrangement was developed.[123] Wassenaar was developed as a consequence of the post-Cold War breakup of the Soviet Union and the issues inherent to that geopolitical process.[124] In that sense, it is modeled to move away from establishing a comprehensive, bi-polar embargo regime towards one focused on non-proliferation to non-State and rogue State actors. Second, with regard to high-tech, the pace of innovation means a given emerging technology is likely to become widely commercially available in a short period of time relative to the time it takes to reach consensus on and to implement multilateral controls.[125]

Finally, because of the growing importance of the Chinese market, it will be much harder to use an informal system to achieve the ends of the TNP strategy since allied trading partners may not have the commercial incentives to subscribe to TNP, absent a clear and immediate national security rationale to do so.[126] If recent events are any

[121] *Id.* These are: special materials and related equipment, materials processing, electronics, computers, telecommunications and information security, sensors and lasers, navigation and avionics, marine, and aerospace and propulsion.

[122] These are: (1) is the technology already available from non-participant countries; (2) do states have any evidence indicating a given export control will be ineffective; (3) do product definitions contain a "clear and objective specification"; and (4) is the product controlled by some other regime, *e.g.*, the Munitions List or Nuclear Suppliers Group. Criteria for the Selection of Dual-Use Items, Wassenaar Arrangement on Export Controls for Conventional Arms and Dual-Use Goods and Technologies (adopted in 1994, amended by the Plenary in 2004 and 2005).

[123] *See* Heath, *supra* note 25, at 1024 (noting that, in contrast to cold war period, major strategic rivals today are also economic competitors within the same multilateral trading system).

[124] *Id.* Wassenaar was developed during a period in which the international community was focused on bringing former communist countries into the global economic system. The opposite is true of the out-casting measures envisioned by the TNP strategy.

[125] Cindy Whang, *Undermining the Consensus-Building and List-Based Standard in Export Controls: What the United States Export Controls Act Means to the Global Export Control Regime*, 22 J. INT'L ECON. L. 579 (2019).

[126] *See* Brown, *supra* note 85, at 301.

indication, the non-proliferation approach may already be faltering in the EU, which, led by Germany, recently concluded a milestone investment liberalization agreement with China.[127] Cooperation through established multilateral fora, at least under the Trump Administration, has been a secondary tactic for spreading TNP. As a primary tactic, the US has leaned on the extraterritorial impacts of its domestic law and has used bilateral political bartering to impact the operations of Chinese firms on a global level.

2. By Extraterritorial Force of Domestic Law and Policy

The US effort to stymie China's lead in global 5G infrastructure development provides an excellent case study for this dynamic.[128] In early 2018, members of Congress began pressuring US companies to renege on deals to sell Huawei's smartphones to US customers.[129] Within a year, criminal charges were brought against the company and its officers by the DOJ for violations of Iran Sanctions, racketeering conspiracy, and conspiracy to steal trade secrets.[130] Next, Congress passed a bill, the *Secure and Trusted Communications Networks Act* of 2019, which prohibits the use of federal telecoms subsidy programs to acquire telecoms equipment from providers "that pose a national security risk from entering US networks".[131] Simultaneously, the government engaged private 5G network developers that had been using Huawei equipment to disassemble said equipment

[127] *See* European Commission, *Key elements of the EU-China Comprehensive Agreement on Investment*, Press Release, Dec. 30, 2020, https://ec.europa.eu/commission/presscorner/detail/en/ip_20_2542.

[128] For a general narrative of this campaign, *see* Garrett M. Graff, *Inside the Feds' Battle Against Huawei*, WIRED, Jan. 16, 2020, https://www.wired.com/story/us-feds-battle-against-huawei/.

[129] Diane Batz, *Exclusive: US lawmakers urge AT&T to cut commercial ties with Huawei – sources*, REUTERS, Jan. 16, 2018.

[130] *See* Indictment, *United States v. Huawei Device Co., Ltd..*, No. 2:19-cr-00010-RSM, 2019 WL 653277 (W.D. Wash. Jan. 16, 2019); Superseding Indictment, *United States v. Huawei Technologies Co., Ltd.*, Cr. No. 18-457 (S-2) (AMD) (E.D.N.Y. Jan. 24, 2019); Office of Public Affairs, *Chinese Telecommunications Conglomerate Huawei and Subsidiaries Charged in Racketeering Conspiracy and Conspiracy to Steal Trade Secrets*, DOJ Press Release (Feb. 13, 2020), https://www.justice.gov/opa/pr/chinese-telecommunications-conglomerate-huawei-and-subsidiaries-charged-racketeering. These measures came after the arrest of Huawei's CFO in Canada at the request of the United States at the end of 2018. Robert. D. Williams & Preston Lim, *Huawei Arrest Raises Thorny Questions of Law Enforcement and Foreign Policy*, LAWFARE BLOG (Dec. 7, 2018, 11:06 AM).

[131] Public Law No: 116-124 (03/12/2020), https://www.congress.gov/bill/116th-congress/house-b.

and turn to other companies to build out this infrastructure.[132] Huawei has challenged these measures, so far unsuccessfully, as a Bill of Attainder, which in US law is an unconstitutional legislative action targeting and punishing specific (in this case, corporate) persons.[133]

Most strikingly, the Trump administration proposed a rule to tighten gaps in the export control regime established when Huawei was placed on BIS' Entity List in May of 2019.[134] The 2020 rule requires export licenses for US chip design specifications and software used by foreign chip suppliers in any chips shipped to Huawei, licenses which presumably will not be granted.[135] In response to the rule, Taiwan Semiconductor Manufacturing Company ("TSMC") reportedly stopped taking orders

[132] Executive Order on Securing the Information and Communications Technology and Services Supply Chain, Exec. Order No. 13,873, Fed. Reg. 22, 689 (May 15, 2019)(using IEEPA to establish regime to block the sales and purchases of communications tech and services from foreign adversaries on transaction-by-transaction basis); *see*, Jeanne Whalen & Felicia Sonmez, *Huawei business ban leaves rural wireless companies with few alternatives*, WASHINGTON POST, Aug. 19, 2019; *see also* David Shepardson, *US rural telecom networks need $1.8bn to remove Huawei, ZTE equipment – FCC*, REUTERS, Sept. 15, 2020; Margaret Harding McGill, *COVID relief bill provides $7 billion for broadband access*, AXIOS, Dec. 21, 2020 (noting that a US $900 billion COVID relief bill passed by Congress in December 2020 included US$1.9 billion for "rip and replace" efforts to remove Huawei and ZTE equipment from US networks).

[133] *Huawei Technologies USA, Inc. & Huawei Technologies Co., Ltd. v.* USA, 4:19-CV-00159-ALM (E.D. Tex. Feb. 18, 2020). After extensive fact discussion on allegations of Huawei's illicit activity and connections to the Chinese Communist Party, the court engages in a fascinating discussion on the Bill of Attainder question. *Id.* at pp. 15-50. While it found that by including its name, Section 889 of the NDAA was clearly specific to Huawei, the court held that Huawei failed: (1) to find an apposite historical analogy for its '*punishment*' in the common law; (2) failed to demonstrate the Section 889 *functioned* as a bill of attainder as defined by common law; and (3) failed to demonstrate the measure was *intended* to punish Huawei as subject individuals, rather than to achieve the valid security objectives of the government. The court also addressed and dismissed Huawei's arguments that a deprivation of its property rights had not complied with Fifth Amendment Due Process requirements (*i.e.*, the typical avenue for an expropriation claim under US law). The court dictated offhand that Huawei's arguments on interference with future contract and other economic damages were speculative and held that in any case Huawei failed to demonstrate Section 889 was not rationally related to a legitimate legislative purpose. For an excellent discussion of the history of the Constitutional prohibition of Bills of Attainder in the context of the Huawei suit, *see*, Evan Zoldan, *The Hidden Issue in Huawei's Suit Against the United States*, JUST SECURITY, Mar. 28, 2019.

[134] Dep't of Commerce, Bureau of Industry and Security (BIS), *Addition of Certain Entities to the Entity List and Revision of Entities on the Entity List*, Final Rule, 15 CFR 744 RIN 0694-AH86, Aug. 21, 2019; US Dept. Comm. Office of Public Affairs, *Commerce Addresses Huawei's Efforts to Undermine Entity List, Restricts Products Designed and Produced with US Technologies*, PRESS RELEASE, May 15, 2020.

[135] Bob Davis & Katy Stech Ferek, *U.S. Moving Forward with Rule to Limit Chips to Huawei*, WSJ, Mar. 26, 2020. The emphasis on software and design specifications highlights US emphasis on regulating the parts of the global supply chain over which it maintains a firm grasp (85% global market share). *See* Fitch & Santiago, *supra* note 106. Other states have already begun to leverage their dominant positions in various parts of the electronics manufacture supply chain to similar effect. *See*, discussion on South Korea-Japan chemicals trade conflict, *infra* note 207.

from Huawei, one of its largest customers.[136]

The US has engaged in diplomatic efforts, through consultation and intelligence sharing with the UK,[137] Germany,[138] and other NATO members, to encourage them to take up similar measures to block Huawei from their 5G networks which are currently being built by operators using Huawei technology.[139] While several states have demonstrated responsiveness to these efforts, few have decided to go all the way with removing Huawei from their telecoms sectors.[140] For some of these states, International Investment Agreements ("IIAs") with China, and threats proffered by Huawei to bring treaty claims, may be staying their hand.[141] Indeed, many of the aforementioned measures taken against Huawei by the US resemble the scripts of classic international investment law disputes.[142] All that is missing is a treaty establishing consent between the States to arbitration.[143]

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[136] Cheng Ting-Fang & Lauly Li, *TSMC halts new Huawei orders after US tightens restrictions*, NIKKEI ASIA, May 18, 2020.

[137] Helen Warrell, *US presses Boris Johnson with new dossier on Huawei security risks*, FT, Jan. 13, 2020.

[138] Joanna Kakissis, *Despite US Pressure, Germany Refuses to Exclude Huawei's 5G Technology*, NPR, Mar. 20, 2019.

[139] US Dept. of State Office of the Spokesperson, *The Transatlantic Alliance Goes Clean*, Fact Sheet (Oct. 17, 2020) https://2017-2021.state.gov/the-transatlantic-alliance-goes-clean/index.html; Reuters Staff, *Bulgaria signs 5G security declaration with US*, REUTERS (Oct. 23, 2020). The US has also threatened to end all intelligence sharing with countries that use Huawei systems. Reuters Staff, *US won't partner with countries that use Huawei systems: Pompeo*, REUTERS (Feb. 21, 2019).

[140] David E Sanger & David McCabe, *Huawei is winning the argument in Europe, as the U.S. Fumbles to develop alternatives*, N.Y. TIMES, Feb. 17, 2020; Patrick Wintour, *Europe Divided on Huawei as US pressure to drop company grows*, THE GUARDIAN, July 13, 2020.

[141] Glinavos walks through a hypothetical claim by Huawei under the 2003 Germany-China BIT based on the possibility of Germany taking measures towards Huawei similar to those taken by the US with the passage of the Secure and Trusted Communications Networks Act of 2019. Ioannis Glinavos, *Which Way Huawei? ISDS Options for Chinese Investors*, *in* HANDBOOK OF INTERNATIONAL INVESTMENT LAW AND POLICY 2451 (J. Chaisse et al. eds., Aug. 2021); *see also* Peterson LE, Hepburn J, *Analysis: as Huawei invokes investment treaty protections in relation to 5G network security controversy, what scope is there for claims under Chinese Treaties with Czech Republic, Canada, Australia and New Zealand?*, IAREPORTER, Feb. 11, 2019.

[142] *See* Catherine A. Rogers, *The World is not Enough*, KLUWER ARBITRATION BLOG, Nov. 6, 2016 (analogizing the factual background of several high-profile international arbitrations to the plot of James Bond scripts, and commenting on the efficacy of arbitration in resolving politically-charged international disputes).

[143] Although it seems a distant memory in today's international economic climate, agreement on a US-China BIT has been attempted by each state at various points in the past fifteen years. *See* Wayne M.

The US has also sought to counter China's tech ambitions with certain "carrots". For example, FIRRMA institutes a "white list" of countries and grants their investors exemption from many transactions otherwise covered by expanded CFIUS jurisdiction.[144] The "white list" operates as a sort of investment security review report card, rewarding states that cooperate and coordinate with US TNP efforts.[145] Conversely, if a friendly state refuses to comply with nonproliferation control regimes like Wassenaar, this refusal technically can form the basis of a presidential determination under FIRRMA to block transactions by investors of that state involving US TID businesses under 50 U.S.C. §4565(f)(9)(A-C).

BIS similarly promulgated a final rule on October 29, 2020 that aims to restrict items potentially destined for China, Russia, and Venezuela that "will make a material contribution to the "development," "production," maintenance, repair, or operation of weapons systems of the PRC, Venezuela, or the Russian Federation".[146] The rule directs BIS to consider, among other factors, the "scope and effectiveness of the export control system in the [immediate] importing country", and the impacts of the export on the US defense industrial base.[147] Thus, for states with major firms looking to frictionlessly utilize US-based technologies, the incentive to demonstrate compliance with the US TNP strategy is baked into the legal process, a la "carrot"

Morrison, A U.S.-*China Bilateral Investment Treaty (BIT): Issues and Implications*, CRS IN FOCUS, Jan.12, 2018).

[144] *See* US Dep't of Treasury, CFIUS Excepted Foreign States (Part 800), *available at* https://home.treasury.gov/policy-issues/international/the-committee-on-foreign-investment-in-the-united-states-cfius/cfius-excepted-foreign-states; *see also*, Kokusai Shoju Homu, *The CFIUS "White List" Class of 2020: Potential Takeaways for Japan*, Morrison Foerster Insights (Sept. 2020), https://www.mofo.com/resources/insights/200910-cfius-white-list.html.

[145] After pre-set exceptions under FIRRMA expire on February 13, 2022, "CFIUS will make ongoing determinations as to whether the [white-list] country has established and is effectively utilizing a robust process to analyze foreign investments for national security risks and to facilitate coordination with the US on matters relating to national security." 31 C.F.R. Part 800, RIN 1505–AC68, *supra* note 59.

[146] Department of Commerce, Bureau of Industry and Security, 15 C.F.R. Part 742 [Docket No. 201022–0277] RIN 0694–AI05 Amendments to National Security License Review Policy Under the Export Administration Regulations.

[147] *Id.* It should also be noted that the rule includes a presumption for granting license applications which detail a sufficiently commercial use, *i.e.*, a reliably civil end user and/or civil end uses for the product. In the context of the TNP strategy however, given its stance on MCF, it is difficult to say in practice what end user of critical technology would be considered "civil" by the BIS for the purposes of export and re-export. *See*, Section III.C.2 infra.

cake.

In the realm of international credit facilitation, the US Export-Import Bank ("Ex-Im") has been partially retrofitted into a veritable "carrot" factory. The US government directed the bank to extend credit facilities of no less than 20% of its US$135 billion in total assets to counter foreign consumption financing initiatives by China as part of the December 2019 Ex-Im Reauthorization Bill.[148] These funds are already being deployed to persuade foreign telecoms operators to move from Huawei to other developers such as Samsung and Ericsson in building out their 5G networks.[149] The goal is to counter China's push to finance its own lead in standard setting for 5G. A similar effort to coordinate responses to Chinese efforts in AI standard setting was recently announced at the G7.[150]

Although the US is able to articulate coherent concerns linked to Chinese progress in these fields, in passing upon the legitimacy of such measures, the observer is inclined to question: (1) to what degree they are motivated by an anxiety about hard security issues (*i.e.*, backdoor access for the Chinese government to future 5G networks); (2) to what degree they are motivated by an economic concern regarding China setting global standards for 5G;[151] (3) to what degree both are true; and (4) to what degree such questioning has any impact on the validity of the policy – or its ostensible justification as a matter taken out of an "essential security

[148] 12 U.S.C. § 635, *see esp.* subsection (I)(3)(A); *see also* EXIM, *Overview: Program on China and Transformational Exports*, Fact Sheet, June 11, 2020, *available at* https://www.exim.gov/who-we-serve/external-engagement/china-and-transformational-exports-program/fact-sheet.

[149] *See* Anthony Boadle & Andrea Shalal, *US offers Brazil telecoms financing to buy 5G equipment from Huawei rivals*, REUTERS, Oct. 20, 2020.

[150] Matt O'Brian, *US joins G7 artificial intelligence group to counter China*, AP, May 28, 2020.

[151] This line of questioning should not be taken to trivialize the extant concern at the heart of this question. Take the perspective of Erdal Arikan, one of the academics whose work developing the concept of polar codes laid the foundation for 5G technology, "[i]n the internet era, the US produced a few trillion-dollar companies. Because of 5G, China will have 10 or more trillion-dollar companies. Huawei and China now have the lead". Steven Levy, *Huawei, 5G, and the man who conquered noise*, WIRED (Nov. 16, 2020), https://www.wired.com/story/huawei-5g-polar-codes-data-breakthrough/. Since Arikan first published his conceptual research on polar codes in 2009, Huawei has poured hundreds of millions of dollars into researching and patenting design implementations of the concept for its 5G technology. It holds two-thirds of the existing patents in polar codes and is hoping that this method of data "noise reduction" becomes the global standard over alternative options proposed by Qualcomm and others for implementing 5G successfully. *Id.*

interest".[152]

Whatever means it uses to achieve a global consensus, at the state-to-state level, the US needs to find an ephectic audience for its TNP platform. In its overtures to allied states, the US security establishment finds itself competing with a cacophony of commercial and economic counterincentives.[153] If the US fails to effectively multilateralize product and capital controls on dual-use technology, the entire program will likely collapse from internal industry pressures.[154] So, the impact of TNP on private multinational firms has considerable importance to the success of the policy itself. This impact can be traced and quantified by the specific externalities incurred by these firms as a direct result of TNP.[155] As stated above, in the exceptional cases where an externality is imposed avariciously upon a foreign investor so as to frustrate their rights in their property, an investment treaty claim may be had. The primary purpose of most IIAs is to protect foreign investment and promote direct inflows of foreign capital.[156] Therefore, the impacts of TNP on FDI should also be examined on a macro level.

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[152] *See* Eli Greenbaum, *5G, Standard-Setting, and National Security*, HARV. NAT. SEC. J. (July 3, 2018) (arguing that national security concerns associated with dominance of the international standard-setting process and with foreign ownership of 5G patents are not legitimate). Additionally, experts, including a former Chairman of the FCC, have noted that recent US efforts targeting Huawei may be less than germane to their stated objective to secure 5G networks, because they are underinclusive. Tom Wheeler & Robert D. Williams, *Keeping Huawei Hardware Out of the US is Not Enough to Secure* 5G, LAWFARE BLOG (Feb. 20, 2019, 4:18 PM). *See infra* Sections III.B.3 and III.C for further discussion on the meaning of "essential security" and the US policy rationale supporting TNP.

[153] *See* Stephen Ezell, *An Allied Approach to Semiconductor Leadership*, Information Technology & Innovation Foundation (Sept. 17, 2020); Brown, *supra* note 85, at 300-301 (describing the skepticism with which states typically view the policy rationales given for trade controls that have the effect of promoting domestic industry at the expense of foreign markets [in this case by lowering the cost of upstream semiconductor products by erecting barriers to foreign demand]).

[154] *See* Kevin Wolf, *Export Controls Will Become More Effective When They Include Plurilateral Controls*, CENTER FOR A NEW AMERICAN SECURITY, Aug. 13, 2020.

[155] For an example of negative externalities, *see* Kathrin Hille, *Huawei says new US sanctions put its survival at stake*, FT, May 18, 2020. For an example of positive externalities impacting firm decision making, *see* Kif Leswing, *Qualcomm angles to get a piece of the $8bn market for 5G infrastructure*, CNBC BUSINESS, Oct. 20, 2020.

[156] *See* UNCTAD, *The Role of International Investment Agreements in Attracting Foreign Direct Investment to Developing Countries*, UNCTAD Series on International Investment Policies for Development (2009); Relja Radovic, *Inherently Unneutral Investment Treaty Arbitration: The Formation of Decisive Arguments in Jurisdictional Determinations*, 2018 J. DISP. RESOL. 143, 150 (2018) (describing the protection of foreign investment as a "teleological ideal" of investment arbitration).

C. *Tech Industry Impacts*

The most immediate impacts of the US TNP strategy *vis-à-vis* China have materialized in the form of a sharp decline in Chinese FDI into the US. In their 2020 annual report on US-China investment trends, the Rhodium Group observed that annual Chinese FDI into the US had dropped from a 2016 peak of US$46 billion to only US$5 billion in each of 2018 and 2019—a low watermark not seen since the financial crisis in 2009.[157] A brief glance at the authors' sector-by-sector breakdown further suggests a root cause.[158] Sectors with low political and regulatory risk (consumer products and services, and automotive) have been the most resilient, while the drop in target sectors of the TNP strategy (information and communications technology, and electronics) is staggering by contrast.[159] This sharp trend, while jarring, is unsurprising given the dynamic nature of the TNP strategy.[160]

As to venture investment, impacts of TNP have been slower to materialize. Chinese venture investors participated in 261 unique funding rounds for US startups, investing an estimated US$2.6 billion in 2019. This represents a drop from $4.7 billion in 2018, but is on a par with 2015-2017.[161] All while overall venture fundraising in the

[157] Thilo Hanemann et al., *Two-Way Street: 2020 Update US-China Investment Trends*, RHODIUM GROUP May 2020 [hereafter "Hanemann"]. The Rhodium Group's analysis of overall China-US capital flows have come to be favored as their methodology takes a bottom-up data approach which identifies, values and aggregates individual FDI transactions. This is to confront the complications inherent in assessment based on official FDI statistics, which tend to measure financial flows based on Balance of Payments Principles which can be distorted by complex global financing structures, tax optimization strategies, intra-company transfers and other factors. Accord Karl P. Sauvant, *Beware of FDI statistics!*, COLUMBIA FDI PERSPECTIVES No. 215 (Dec. 18, 2017).

[158] *See Hanemann* at 22, Figure 6.

[159] *Id.* at 21, Table 2 (showing a 98% drop in inbound Chinese FDI from 2016/17 to 2019 in each the Electronics and Information and Communications Technology sectors, as opposed to an 11% drop in FDI into the Consumer Products and Services sector, a 21% drop in FDI into the Automotive Sector, and a 211% increase in FDI into the Industrial Machinery and Equipment sector over that same period).

[160] *See* Hoon Lee, Glen Biglaiser, Joseph L. Staats, *The effects of political risk on different entry modes of foreign direct investment*, 40(5) INT'L INTERACTIONS 683 (2014) (finding that, in general, firms limit resource commitments in markets with high political risks especially with regard to capital intensive strategies such as M&A).

[161] Haneman, *supra* note 157, at 24. Rhodium Group takes a granular approach in tallying Chinese venture capital in their report, "We do not count the full value of each investment round with Chinese participants, but estimate the pro-rata share of total fundraising round values attributable to the Chinese investor(s)". By contrast, CFIUS reviews the totality of a transaction involving Chinese investors. If a larger funding round is dependent on capital inputs or business synergies from non-controlling but

US remained close to peak 2018 levels in 2019.[162] As with larger merger and acquisition transactions, it appears as though a gradual freeze on Chinese investments in the venture and seed capital space will be at least nominally corrected for by capital flows from investors of different nationalities.[163] Still, macro-level FDI trends cannot account for the increased frictional costs individual companies incur shelving deals,[164] paying for legal and PR services, or losing out on strategic collaborations with Chinese firms.[165]

Anecdotally, Allen Wang, an M&A partner with Freshfields in China, asserts that the question of whether CFIUS will be involved in a given deal, even tangentially so, is one of the primary concerns of his transactional clients.[166] He believes that Japanese and Korean firms have benefited greatly from the absence of Chinese bidders in US tech transactions over the past two years, and he considers the TNP strategy to have been the most successful offensive in the trade war at injuring the Chinese manufacturing base and supply-chain market share, especially with regard to the semiconductor industry.[167] Long term, however Wang sees these initiatives as having strengthened Chinese resolve to build up domestic capabilities in order to reduce Chinese dependence on Western technology.[168] Indeed, the Chinese

non-passive Chinese LPs, a much larger chilling effect may take place than is recorded by this study because the whole fund may be blocked.

[162] *Id.* at 30, Figure 12 (providing a breakdown of Chinese venture capital shifts *vis-à-vis* the general US venture market).

[163] *See* CFIUS Annual Report FY2019, *supra* note 62; *see also* Nevena Simidjiyska, *CFIUS Expanded-How Will the Broadened Scope Affect Private Equity*?, 22 J. PRIV. EQUITY 31 (2018).

[164] *See* Michael Martina & Stephen Nellis, *Qualcomm ends $44 billion NXP bid after failing to win China approval*, REUTERS, July 25, 2018 (noting that Qualcomm was forced to pay a $2bn termination fee to NXP as a result of failing to achieve, what many saw as politically withheld, regulatory approval for a merger).

[165] Jan Knoerich, *Why some advanced economy firms prefer to be taken over by Chinese acquirers*, COLUMBIA FDI PERSPECTIVE No. 187 (Nov. 21, 2016); Jan Knoerich, *Gaining from the global ambitions of emerging economy enterprises: an analysis of the decision to sell a German firm to a Chinese acquirer*, 16 J. OF INT'L MGMT. 177 (2010).

[166] *View from the Valley #4: what will a Biden presidency mean for the global tech industry*?, FRESHFIELDS, BRUCKHAUS, & DERRINGER LLP PODCAST (Nov. 9, 2020), https://www.freshfields.com/en-gb/our-thinking/our-podcasts/technology-quotient-podcast/view-from-the-valley-4-what-biden-presidency-means-for-the-global-tech-industry/ (Wang's comments begin at 20:27).

[167] *Id.*

[168] *Id.*

government has officially expressed this intent, in the form of a plan to invest US$1.4 trillion internally to develop domestic innovation capabilities.[169] If TNP continues to gain legitimacy and momentum, these impacts may represent the tip of an FDI-chilling iceberg.

III. THE SECURITY TABOO IN INTERNATIONAL LAW

Any attempt to systematically regulate the economic and political conflict implicated by technological competition and the TNP strategy must overcome the "security taboo" that looms over the praxis of law. In domestic legal systems, lawyers promoting the rule of law have long struggled to tame the chimeric nature of the security state.[170] Even the less erudite have, on convenient occasion, observed the tendency of policy to bend to the gravity of national security anxieties.[171]

In international law, this relationship between law and national security is both more complex and more pronounced. It is more complex because, at first blush, the core project of international law to transcend the unlimited power of the nation-state is in conflict with the conceptual aim of national security to maintain, promote, and

[169] Bloomberg, *China's got a New Plan to Overtake the US in Tech*, BLOOMBERG NEWS (May 20, 2020), https://www.bloomberg.com/news/articles/2020-05-20/china-has-a-new-1-4-trillion-plan-to-overtake-the-u-s-in-tech.

[170] *See* Oona Hathaway, *National Security Lawyering in the Post-War Era: Can Law Constrain Power?*, 68 UCLA L. REV. 2 (2021); s*ee also infra* Section II.A.1, discussing CFIUS justiciability. Dimitropoulos identifies a spectrum of justiciability among domestic systems, noting that the EU screening guidelines proposal makes domestic court and CJEU review a mandatory feature of investment screening measures, while in the US, CFIUS falls on the opposite end of the spectrum. Dimitropoulos, *National Security: The Role of Investment Screening Mechanisms*, *in* HANDBOOK OF INTERNATIONAL INVESTMENT LAW AND POLICY 27 (J. Chaisse et al. eds., 2021) [hereinafter"Dimitropoulos"].

[171] For example, after a February 2020 meeting with executives from GE about export restrictions on aircraft engine sales to China, then-President Donald Trump tweeted the following:

> The United States cannot, & will not, become such a difficult place to deal with in terms of foreign countries buying our product, *including for the always used National Security excuse*, that our companies will be forced to leave in order to remain competitive. We want to sell product and goods to China and other countries. […] As an example, I want China to buy our jet engines, the best in the World. I have seen some of the regulations being circulated, including those being contemplated by Congress, and they are ridiculous. I want to make it EASY to do business with the United States, not difficult. Everyone in my Administration is being so instructed, with no excuses. THE UNITED STATES IS OPEN FOR BUSINESS! (emphasis added)

Donald Trump (@realDonaldTrump), TWITTER (Feb. 18, 2020, 10:29 AM), https://twitter.com/realDonaldTrump/status/1229790099866603521 (account suspended as of Jan. 11, 2021).

protect national identities and the institutional structures of a given nation state.[172] It is more pronounced because international law is still largely defined in negative terms, against the principles of state sovereignty and *Domaine Réservé*.[173] And there is no more fundamentally domestic concern than the security, the conceptual integrity of the "state" itself. As Benton Heath and others have noted, the increased contact between international economic law and national security will need to be addressed by some sort of political consensus if international law is to function at all in the realm of international trade and investment.[174]

This project is ongoing. Yet, as this section discusses, international investment law has already developed mechanisms to defer to genuine security imperatives of the state and to adjudicate instances which are adjacent to, but do not truly implicate, these concerns. ISDS can and should continue to pay respect to the security domain of the state, without obviating the ability of arbitrators to address the particular species of concerns raised by TNP.

A. *Traditional Carve-Outs for Security-Related State Action*

There is no rule of international law that allows states to read open-ended security exceptions into treaties where none exist.[175] But treaties frequently include carve-outs to preserve vital elements of state sovereignty, such as essential security interests.[176] Sometimes, these take the form of general provisions in the text of the treaty itself which narrow the scope of the treaty's applicability or provide loopholes to certain of the treaty's obligations. There are also elements of customary

[172] At least this conflict is apparent for theories of international politics that subscribe to zero-sum reasoning. For more on the role of relative power in international relations, *see* David A. Baldwin, *Power Analysis and World Politics: New Trends versus Old Tendencies*, 31 WORLD POL. 161 (1979).

[173] *See* Katja Ziegler, *Domaine Réservé*, MAX PLANCK ENCYCLOPEDIA OF PUBLIC INTERNATIONAL LAW (MPEPIL) (Apr. 2013), https://opil.ouplaw.com/view/10.1093/law:epil/9780199231690/law-9780199231690-e1398.

[174] *See* Heath, *supra* note 25.

[175] Susan Rose-Ackerman & Benjamin Billa, *Treaties and National Security*, 40 N.Y.U. J. INT'L L & POL. 437, 439, 441-55 (2008) [hereinafter "Rose-Ackerman & Billa"].

[176] The essential security interest has been the subject of a great deal of scholarship and debate in international investment law. For an important early study by the OECD into the topic, *see* Katia Yannica-Small, *Essential Security Interests under International Investment Law*, INTERNATIONAL INVESTMENT PERSPECTIVES: FREEDOM OF INVESTMENT IN A CHANGING WORLD 93-134 (2007).

international law ("CIL") which limit the consequences of a state's breach of its treaty obligations in extenuating circumstances.[177]

In the case of investment treaty arbitration, the rules to be applied by a tribunal are contained within the underlying IIA which grants the tribunal jurisdiction to hear a given dispute. Most all of these treaties contain some form of incorporation by reference of customary or general rules of international law.[178] Although the permutations of future TNP-adjacent disputes are virtually limitless, a common feature of these disputes is that they will inevitably involve some form of security-based exception to either jurisdiction or the merits of the dispute. The following exceptions are the most likely to arise in a TNP-adjacent dispute: (1) non-conforming and non-precluded measures; (2) security exceptions clauses; and (3) the CIL of Necessity. Together, these exceptions form a gauntlet which foreign investors will have to navigate in order to vitiate any potential claims that a host state has denied them the benefits of a given IIA, in violation of said state's obligations in international law.

1. CIL Necessity as an Affirmative Defense to State Responsibility

The customary international law concept of Necessity is an important counterweight to state liability for wrongful acts.[179] Codified in the Articles on Responsibility of States for Internationally Wrongful Acts ("ARSIWA") at Article 25, Necessity generally allows states to preclude "the wrongfulness of an act not in conformity with an international obligation of that State" if the act "is the only way for the State to safeguard an essential interest against a grave and imminent peril".[180]

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[177] *See* Andrea K Bjorklund, *Emergency Exceptions to International Obligations in the Realm of Foreign Investment: The State of Necessity and Force Majeure as Circumstances Precluding Wrongfulness*, *in* THE OXFORD HANDBOOK OF INTERNATIONAL INVESTMENT LAW (Peter Muchlinkski et al. eds., 2008).

[178] *See*, *e.g.*, US Model BIT (2012), art. 30 (provision titled "Governing Law," providing that "… the tribunal shall decide the issues in dispute in accordance with this Treaty and applicable rules of international law").

[179] For an exegesis on the subject of Necessity, *see* Ryan Manton, Necessity in International Law (2016) (DPhil Thesis, Magdalen College University of Oxford) (on file with University of Oxford Magdalen College Library).

[180] UN General Assembly, *Responsibility of States for internationally wrongful acts: Resolution adopted by the General Assembly*, 28 January 2002, A/RES/56/83, https://www.refworld.org/docid/3da44ad10.html [hereinafter "ARSIWA"], art. 25(1)(a).

The parallels between Necessity and essential security exception clauses are apparent. Yet, while the International Court of Justice ("ICJ") has noted that, "customary international law continues to exist and to apply, separately from international treaty law, even where the two categories of law have an identical content",[181] arguing Necessity is likely the wrong tack for states to take in most security-adjacent investment disputes where underlying IIAs contain security exception clauses.[182]

As one commentator, Ji Ma, points out, there are good reasons for states not to rely on CIL necessity in these cases.[183] First, security exception clauses are much stronger.[184] When properly invoked, in most cases they are taken as a total break on jurisdiction rather than an affirmative defense to a treaty violation.[185] Second, the standard for showing Necessity, the "only way" test, is more stringent than even the strictest substantive scrutiny that can be applied to state action in light of security clause exceptions[186]. Third, there is a demonstrable risk of confusion of the standards contained in essential security exceptions treaty clauses with Necessity[187]. In the *Sempra* and *Enron v. Argentina* arbitrations, a failure to distinguish between the two standards was part of the grounds for the annulment of the initial International Centre for Settlement of Investment Disputes ("ICSID") awards.[188] Finally, Necessity

[181] Military and Paramilitary Activities (Nicar. v. U.S.), 1986 I.C.J. 14 (June 27) ¶ 179.

[182] *See* Bjorklund, *supra* note 177; *accord* comments of Prof. Orrego Vicuna *infra* note 371.

[183] Ji Ma, *International Investment and National Security Review*, 52 VAND. J. TRANSNAT'L L. 899 (2019).

[184] *Id.*

[185] *See, e.g.*, CC/Devas(Mauritius) Ltd. v. India, PCA Case No. 2013-09, Award on Jurisdiction and Merits ¶ 293 (July 25, 2016).

[186] Ma, *supra* note 186, at 927.

[187] *Id.* at 921-22.

[188] Sempra Energy Int. v. Argentine Republic, ICSID Case No. ARB/02/16, Decision on the Argentine Republic's Application for Annulment of the Award ¶¶ 214-217 (June 29, 2010) (finding and explaining that the Tribunal in the merits phase "engaged in an excess of powers by its total failure to apply art. XI ["Security Exceptions"] of the BIT"); Enron Creditors Recovery Corp. v. Argentina, ICSID Case No. ARB/01/3, Decision on the Application for Annulment of the Argentine Republic ¶¶ 349-51, 405-06 (July 30, 2010) ("The Tribunal [below] found that [the essential security exception of art. XI US-Argentina BIT] was not applicable for the same reasons that it found that Argentina could not rely on the principle of necessity under customary international law. [...] the Committee considers that the substantive operation and content of Article XI and the customary international law principles of necessity, and the

still requires compensation for material loss,[189] whereas the successful invocation of a security exception clause, that excludes application of all substantive treaty protections to a given measure, arguably may not.[190]

2. Non-Conforming and Non-Precluded Measures

As previously noted, many contemporary IIAs include both investment liberalization commitments and investment protection commitments, which cover state conduct pre- and post-establishment, respectively. With regard to the former category, states typically synchronize these commitments with their domestic policy priorities by limiting the general scope of treaty commitments. Ishikawa describes two different general approaches that IIAs take for this purpose: (1) making investment liberalization commitments only to the extent specified in a Schedule of Commitments, or what she calls the "positive list approach"; and (2) excluding from the scope of investment liberalization those non-conforming and non-precluded measures and/or business sectors as are identified in the Annexes of the treaty, what she calls the "negative list approach".[191]

While the General Agreement on Trade in Services ("GATS") takes a positive list approach,[192] Japanese IIAs for the most part, and US IIAs for the whole part, take a negative list approach.[193] Simply put, there is little to no basis in most international

interrelationship of the two, are issues that fall for decision by the tribunal. [...] The Committee has concluded that both the Tribunal's decision that Argentina is precluded from relying on Article XI, and the Tribunal's decision that Argentina is precluded from relying on the principle of necessity under customary international law, are tainted by annullable error).

[189] ARSIWA, *supra* note 180, art. 27(b).

[190] For discussion on the "compensation approach" to security exceptions clause analysis, *see infra* Section III.B.2.

[191] Ishikawa, *supra* note 14, at 85.

[192] *See*, *e.g.*, General Agreement on Trade in Services (1994), https://www.wto.org/english/docs_e/legal_e/26-gats_01_e.htm#ArticleI.

[193] U.S. 2012 Model BIT, art. 14. Japan-Israel BIT (2017), art. 8; Ishikawa, *supra.* note 14, at 85. Ishikawa also discusses the use of ratchet clauses to prevent the *post-hoc* revision of non-conforming measures listed in the Annexes of more progressive treaties, taking the Comprehensive and Progressive Agreement for Trans-Pacific Partnership ("CPTPP") as an example. *Id.* at 86, note 80, citing CPTPP, art. 9.12, which provides:

Article 9.4 (National Treatment), Article 9.5 (Most-Favoured-Nation Treatment), Article 9.10 (Performance Requirements) and Article 9.11 (Senior Management and Boards of Directors) shall not

investment law agreements to prevent a state from openly and transparently limiting the pre-establishment admission of foreign investment for its own security prerogatives, nor should there be. States are free to contract for themselves bespoke investment liberalization commitments, which allow them to tailor their investment screening measures to their security priorities.

However, as noted above, the functional reach of CFIUS, as amended by FIRRMA, transcends the establishment phase of investment to cover many important post-establishment transactions. The rapid spread of the TNP strategy, especially to legal systems without sufficient guardrails between the law and security forces, is creating a volatile investment climate for technology firms. In the marginal cases where state action contravenes the limitations to which states themselves consent, the state should be held accountable. If investment screening and export control regimes continue to evolve based on the US approach, then it will be on post-establishment measures that most TPA-adjacent claims will hinge.[194]

3. Security Exception Clauses

The fundamental treaty-based mechanism for the elevation of the essential security interest in international law is the security exception clause.[195] Security exception clauses have been utilized in economic agreements since the advent of bilateral Friendship, Commerce, and Navigation ("FCN") treaties, and they are included in many foundational multilateral economic agreements as well, such as the

apply to: (a) any existing non-conforming measure that is maintained by a Party … (c) an amendment to any non-conforming measure referred to in subparagraph (a), *to the extent that the amendment does not decrease the conformity of the measure, as it existed immediately before the amendment" with these obligations*. (emphasis added).

Ishikawa astutely observes that under such an obligation, a State's ability to deepen or broaden security screening measures without regard to its nondiscrimination and anti-performance requirement commitments is limited (in the case of CPTPP art. 9.12, by the operation of subparagraph (c)). But such ability is not limited if measures can be justified by broad, free-standing security exception clauses that negate the investment liberalization obligations of the whole treaty. *Id.* at 86.

[194] It should also be noted that, absent express stabilization commitments between a foreign investor and home state, tribunals are unlikely to consider the admission of an investment after preliminary security review, standing alone, to constitute a commitment by a host state to refrain from future tightening of their security scrutiny of that foreign investment or investor. *See, e.g.*, Total S.A. v. Argentina, ICSID Case ARB/04/1, Decision on Liability ¶ 312 (Dec. 27, 2010); *see also* El Paso Energy Intl'l Co. v. Argentina, ICSID Case ARB/03/15, Award ¶ 374 (Oct. 31, 2011).

[195] *See* Rose-Ackerman & Billa, *supra* note 175.

General Agreement on Tariffs and Trade ("GATT"). Among the thousands of international economic treaties in force today, there are security exceptions of every stripe and color. The threshold distinction, between self-judging and non-self-judging clauses, has been deliberated upon extensively in the context of largely non-self-judging FCN treaty security exceptions.[196] It is basically trite law that the invocation of a non-self-judging security clause is substantively reviewable.[197]

Self-judging clauses are more difficult to grapple with. In an important paper noting the rise of self-judging essential security interest clauses ("ESIs"), Karl Sauvant classified existing self-judging clauses by two dimensions:[198] (1) scope—(a) *broad* clauses that refer to essential security in the abstract, versus (b) *narrow* clauses that limit security to a predetermined taxonomy of issues; and (2) strength—(a) *conditional* clauses that expressly state measures are not to be applied in arbitrary manner or so as to avoid treaty obligations, versus (b) *strong* clauses that simply state they are self-judging and, (c) *very strong* clauses that expressly preclude judicial deliberation of their invocation.[199]

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[196] In *Nicaragua v. US*, the ICJ held that a non-self-judging security exception did not affect its jurisdiction but that its invocation could be considered as a defense on the merits. It found that the non-self-judging nature of an FCN treaty, as compared with the self-judging character of art. XXI GATT, to be dispositive with regard to the scope of judicial review available to security measures taken by the US. Military and Paramilitary Activities (Nicar. v. U.S.), 1986 I.C.J. 14 (June 27) ¶ 222. This approach was again followed by the ICJ in the *Oil Platforms* case with regard to article XX of the 1955 Iran-US Treaty of Amity, Economic Relations, and Consular Rights. *See* Oil Platforms (Iran v. U.S.), 1996 I.C.J. 803 (Dec. 12) ¶ 20.

[197] *See* William Burke-White & Andreas von Staden, *Private Litigation in a Public Law Sphere: The Standard of Review in Investor-State Arbitrations*, 35 YALE J. INT. L. 283, 295-96 (2010) [hereinafter "Burke-White & von Staden"]. Using the non-self-judging art. XI of the US-Argentina BIT and Argentine economic crisis arbitrations as an example, the authors suggest that tribunals engage in a balancing of rights between the host state and investor pivoting on the germaneness of contested state measures to achieving a given security objective. The authors further divide ISDS into a public law (investor v. broad policy imperative) and private law (investor v. targeted state action) dichotomy, arguing that in the former case, a greater margin of appreciation for the rights of host states to regulate must be given in order to preserve the legitimacy of investment arbitration writ large.

[198] Karl Sauvant & Mevelyn Ong, *The Rise of Self-Judging Essential Security Interest Clauses in International Investment Agreements*, COLUMBIA FDI PERSP. No. 188 (Dec. 5, 2016) [hereinafter"Sauvant & Ong"].

[199] *See* U.S.-Peru TPA, art. 22.2, n.2 ("For greater certainty, if a Party invokes Article 22.2 [essential security exception] in an arbitral proceeding initiated under Chapter Ten (Investment) or Chapter Twenty-One (Dispute Settlement), the tribunal or panel hearing the matter shall find that the exception applies").

The GATT's Article XXI is an important case study in self-judging security exceptions clauses.[200] Though this clause has rarely been invoked or deliberated upon, largely out of political taboo,[201] a recent WTO panel established to resolve a trade dispute between Russia and Ukraine had occasion to decide on the question of its own competence to consider the invocation of the clause.[202] The Panel began by dismissing the relevance of the *Nicaragua* and *Oil Platforms* ICJ cases which each involved a non-self-judging FCN treaty security clause.[203] The panel held that the GATT Article. XXI was not completely "self-judging" in the manner asserted by Russia, because it contained qualifying language that narrowed the application of the clause to a certain taxonomy of issues.[204] Applying good faith analysis, the panel found that Russia's 2014 actions were taken in a "situation of international emergency" *vis-à-vis* Ukraine, and that the substantive appropriateness of Russia's actions in dealing with these circumstances was within Russia's sole discretion, according to the self-judging language of the chapeau of Article XXI of the treaty.[205] In so holding, the panel rejected both an argument filed by the United States that GATT Article XXI precluded its jurisdiction entirely,[206] and an argument filed by the EU that Russia's invocation of the exception should be reviewable in substance, beyond the shallow inquiry into the presence or non-presence of an objective "emergency in international relations".[207]

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[200] For an excellent study of the development and use of this clause, *see* Mona Pinchis-Paulsen, *Trade Multilateralism and U.S. National Security: The Making of the GATT Security Exceptions*, 41 MICH. J. INT.'L L. 109 (2020) [hereinafter "Pinchis-Paulsen"].

[201] *See id.*

[202] Panel Report, *Russia–Measures Concerning Traffic in Transit*, WTO Doc. WT/DS/512 (adopted Apr. 5, 2019) [hereinafter "*Russia-Transit Panel*"].

[203] *Id.* at n.52.

[204] *Id.* ¶¶ 7.101-102 (noting GATT art. XXI(b)(iii) allows for invocation of the security exceptions in situations presenting "an emergency in international relations").

[205] *Id.* ¶¶ 7.126, 7.146-47.

[206] Responses of the United States of America to Questions From the Panel and Russia to Third Parties, Russia–Measures Concerning Traffic in Transit, WT/DS512 (Feb, 20, 2018), https://ustr.gov/sites/default/files/enforcement/DS/US.3d.Pty.As.Pnl.and.Rus.Qs.fin.%28public%29.pdf.

[207] European Union Third Party Written Submission, Russia–Measures Concerning Traffic in Transit, WT/DS512, (Nov. 8, 2017), https://trade.ec.europa.eu/doclib/docs/2018/february/tradoc_

The Ukraine-Russia conflict certainly provides fertile ground for a security argument to blossom. Yet this dispute has also sown seeds for future Article XXI invocations far astray of this mark. South Korea has recently lodged a challenge at the WTO to measures taken by Japan that increase scrutiny on the licensure of chemical exports which are critical to semiconductor manufacture to Korea.[208] South Korea maintains that these measures are politically motivated. The international semiconductor community has also expressed a principled concern related to the novelty and potential supply chain impacts of these measures.[209] As the export controls at issue are premised on national security considerations, it appears that GATT Article XXI will be revisited.[210] This time, the dispute has pinpoint relevance to the global US TNP strategy.

Some important investment treaties use a similar qualified, self-judging approach to that of the GATT, such as the 2012 Korea-China-Japan Trilateral Investment Treaty.[211] This treaty also includes a codified reiteration of the "good faith" obligation

156602.pdf, at ¶28 ("[the self-judging language in art. XXI(a) is] in reality of very limited relevance, if any, for the interpretation today of Article XXI of GATT 1994").

[208] Request for the Establishment of a Panel by the Republic of Korea, Japan—Measures Related to the Exportation of Products and Technology to Korea, WT/DS590, (June 19, 2020), https://docs.wto.org/dol2fe/Pages/SS/directdoc.aspx?filename=q:/WT/DS/590-4.pdf&Open=True. In July of 2019, Japan removed South Korea from a "white list" of countries receiving preferential treatment under its export control laws, citing an erosion of trust between the parties due to decreased working-level trade and security cooperation over the past three years. South Korea only imports about US$33.6 million worth of these three chemicals each month, but they are vital to manufacture of the US$8.4 billion of semiconductors exported by South Korea each month, demonstrating South Korea's outsized exposure in this trade dispute, and the sensitivity of the semiconductor supply chain to international disputes. Stephen Ezell, *Understanding the South Korea-Japan Trade Dispute and its Impacts on US Foreign Policy*, INFO. TECH. & INNOVATION FOUND., Jan. 16, 2020.

[209] *See* Letter from Computing Technology Industry Association et al. to the Japanese Minister of Economy, Trade and Industry and the Korean Minister for Trade, Ministry of Trade, Industry and Energy (July 23, 2019), https://www.semiconductors.org/wp-content/uploads/2019/07/Final-Multi-AssociationLetter-Japan-South-Korea-Export-Controls-1.pdf.

[210] *See* Pinchis-Paulsen, *supra* note 200, at 112.

[211] Korea-Japan-China Trilateral Investment Treaty, art. 18(1) ("Security Exceptions: 1. Notwithstanding any other provisions in this Agreement other than the provisions of Article 12, each Contracting Party may take any measure: (a) which it considers necessary for the protection of its essential security interests; (i) taken in time of war, or armed conflict, or other emergency in that Contracting Party or in international relations; or (ii) relating to the implementation of national policies or international agreements respecting the non-proliferation of weapons; (b) in pursuance of its obligations under the United Nations Charter for the maintenance of international peace and security").

which references and disciplines the application of the security exception clause.[212] The 2009 China-Peru FTA is unique in that it contains two security clauses. The clause for the general treaty models the GATT Article XXI and is self-judging and qualified.[213] But there is also a clause that applies only to the investment chapter of the treaty. It has ostensibly self-judging and non-qualified language but includes a clarifying note that the tribunal shall decide whether the security exception applies in any given case.[214] This may indicate a divergence in the level of deference the parties sought to afford trade related and investment related security measures respectively.

The qualification approach has been abandoned in a new generation of exceptionally strong, broad, and unqualified self-judging security exceptions clauses.[215] States that have negative experiences with ISDS may quickly revise their IIAs to reflect their desire to preclude adjudication of security adjacent disputes in the future.[216] Indeed, the proliferation and evolution of self-judging security

[212] *Id.* art. 18(2) ("In cases where a Contracting Party takes any measure pursuant to paragraph 1, that does not conform with the obligations of the provisions of this Agreement other than the provisions of Article 12, that Contracting Party shall not use such measure as a means of avoiding its obligations."). The "good faith" approach is discussed further in Section III.B.1, *infra*.

[213] China-Peru FTA, art. 194.

[214] *Id.* at art. 141, n.19.

[215] *Compare* USMCA, *supra* note 110, at art. 32.2, *with* North American Free Trade Agreement, Jan. 1, 1994 ["NAFTA"], art. 2102. *See also* CPTPP, art. 29.2(b) ("Nothing in this Agreement shall be construed to […] (b) preclude a Party from applying measures that it considers necessary for the fulfilment of its obligations with respect to the maintenance or restoration of international peace or security, or the protection of its own essential security interests."); Regional Comprehensive Economic Partnership ("RCEP"), art. 10.15 (utilizing almost identical construction as CPTPP art.29.2).

[216] For example, India revised its model BIT in 2016 to include a broader security exceptions clause after its experience with the Devas Telecoms dispute. *See* India 2016 Model BIT, https://www.mygov.in/sites/default/files/master_image/Model%20Text%20for%20the%20Indian%20Bilateral%20Investment%20Treaty.pdf, art. 17(1) ("Nothing in this Treaty shall be construed: (i) to require a Party to furnish any information, the disclosure of which it considers contrary to its essential security interests; (ii) to prevent a Party from taking any action which it considers necessary for the protection of its essential security interests including but not limited to: (a) action relating to fissionable and fusionable materials or the materials from which they are derived; (b) action taken in time of war or other emergency in domestic or international relations; (c) action relating to the traffic in arms, ammunition and implements of war and to such traffic in other goods and materials as is carried on directly or indirectly for the purpose of supplying a military establishment; (d) action taken so as to protect critical public infrastructureincluding communication, power and water infrastructures from deliberate attempts intended to disable or degrade such infrastructure; or (iii) to prevent a Party from

exception clauses in IIAs presents the greatest obstacle to international adjudication of security-adjacent disputes going forward. As of yet, these clauses are not present in the majority of IIAs,[217] but the increasing popularity of self-judging clauses will make it difficult going forward for tribunals to analogize to past precedent in ISDS that applies good faith scrutiny to state measures taken in furtherance of national security objectives.[218]

B. *International Adjudication of Security-Adjacent Measures*

Although there is limited precedent to describe a "one-size-fits-all" approach to security exception analysis, there is enough to describe a pattern by which tribunals typically analyze the meaning of a given treaty's security exception language in light of the security rationale presented by the state. As adjudicators inevitably come into further contact with these exceptions in international disputes, these techniques will have to evolve according to the specific circumstances in which they are deployed.

1. The Good Faith Approach

In the case of a treaty with a non-self-judging security exception, a state's invocation of the clause can almost certainly be considered holistically, by applying the "good faith" approach.[219] The good faith approach is drawn from the CIL principle of *pacta sunt servanda*, which is codified in Article 26 of the VCLT.[220] Theorized most

taking any action in pursuance of its obligations under the United Nations Charter for the maintenance of international peace and security.").

[217] *See* Sauvant & Ong, *supra* note 198. As of early 2016, the authors found 222 self-judging ESI clauses in 1,861 treaties.

[218] *Id.* at Figure 2 (finding that 60% of the IIAs concluded in 2015 contained self-judging security clauses). Past investor-state tribunals, examining US-Argentina BIT art. XI and the Mauritius-India BIT art. 11(3) respectively, each operated under BIT containing a security exception clause with non-self-judging language. *See* Section III.C.3, *infra*.

[219] In the trade context, this approach was also utilized by the Russia-Transit Panel to apply scrutiny to Russia's reliance on the GATT's self-judging, but qualified, security exception. However, the Panel only did so to the extent of determining whether the qualifying condition of the clause had been met. It considered only the objective presence of a "state of emergency in international relations" between Russia and Ukraine, and not Russia's good faith in determining that the measures blocking Ukrainian goods in transit were necessary for its essential security interests. *Russia-Transit Panel*, *supra* note 202. Thus, the "good faith" approach is not necessarily limited in application to clauses which are non-self-judging.

[220] Vienna Convention on the Law of Treaties, May 23, 1969, 1155 U.N.T.S. 331 [hereinafter "VCLT"], art. 26, ("'*Pacta sunt servanda.*' Every treaty in force is binding upon the parties to it and must be performed

intensely by scholars and practitioners in the wake of the Argentine economic crisis arbitrations,[221] the good faith approach consists of a two-pronged analysis of state measures. First, comes an analysis of the procedural comprehensiveness of state measures, *i.e.*, whether the state has engaged in "honest and fair dealing" with the foreign investor.[222] Second, comes the substantive analysis of whether there is a "rational basis" for the invocation of measures relative to the security policy invoked under the security exception clause at issue.[223] In practice, there is a spectrum of viewpoints on to how to apply good faith analysis to security exceptions clauses, with positions falling between no review and thorough substantive review encompassing both steps of the good faith test.[224]

Despite there being no single consensus articulation of the good faith test, most tribunals considering its application to treaty exceptions across factual contexts agree that at minimum it requires the state to articulate some basis for its invocation of said exception. This is true with regard to self-judging and non-self-judging clauses, though in the former case a tribunal may be hesitant to engage in anything more than a superficial analysis of process while forgoing substance review entirely.[225] This hesitance might be somewhat alleviated by stressing a teleological

by them in good faith"). *See also* Nuclear Tests (Austl. v. Fr.), Judgment, 1974 I.C.J. 253, 268, ¶ 46 (Dec. 20, 1974) ("One of the basic principles governing the creation and performance of legal obligations, whatever their source, is the principle of good faith. Trust and confidence are inherent in international co-operation, in particular in an age when this CO-operation in many fields is becoming increasingly essential. Just as the very rule of pacta sunt servanda in the law of treaties is based on good faith, so also is the binding character of an international obligation assumed by unilateral declaration. Thus interested States may take cognizance of unilateral declarations and place confidence in them, and are entitled to require that the obligation thus created be respected.").

[221] Burke-White & von Staden, *supra* note 197.

[222] *Id.*

[223] *Id.*

[224] *Compare* relative interpretations of the self-judging clause in the US submission, EU submission, and the Panel decision in *Russia-Transit Panel*, *supra* note 202. The degree to which a tribunal engages in review appears to depend most heavily on the construction of the clause itself, the occurrence and location of "it considers" language within the clause, and the factual context of the dispute.

[225] Certain Questions of Mutual Assistance in Criminal Matters (Djibouti v France), 2008 I.C.J. 177 (June 4) ¶¶ 145-48 (examining a French court's statement of reasons for refusing to transfer a case file containing defense secrets and constraining its analysis to the question of whether the reasons stated "fell within those allowed for" in treaty exception). *See also id.* ¶¶ 7-11 (declaration of Keith, J.).

method of interpretation under VCLT Article 31(1).[226] Indeed, any invocation of a treaty exception clause requires an act of treaty interpretation on the part of the state. And the teleological approach has been widely used in investment arbitration to reinforce arguments for broad interpretations of, *inter alia*, the meaning of "investment" or of FET in IIAs where definitions clauses of the treaty are ambiguous and the treaty contains a reference to protecting foreign investment in its preamble.[227] If utility can provide grounds to broaden the meaning of "investment", it may provide grounds to narrow the meaning or impact of "it considers" as well, if the circumstances demand it.[228]

As demonstrated by the ICJ majority opinion in the *Norwegian Loans* case, the Argentine economic crisis arbitration, the *Devas* and *Deutsche Telekom* arbitrations, and the *Russia Transit* WTO panel decision, the good faith approach has become the predominant mode of analysis of the invocation of exception clauses in international law. That said, good faith analysis has its limitations and its detractors. With emergency scenarios, it is often difficult for tribunals to understand the perspective of states acting under the pressure of exigent security concerns.[229] What is more, the political implications of intent-based or good faith inquiries can be "quite exacting" on the relationship of the parties and on the legitimacy of the international

[226] VLCT, *supra* note 220, at art. 31(1) ("A treaty shall be interpreted in good faith in accordance with the ordinary meaning to be given to the terms of the treaty in their context *and in the light of its object and purpose*") (emphasis added).

[227] *See generally*, Sanja Djajic, *Searching for Purpose: Critical Assessment of Teleological Interpretation of Treaties in Investment Arbitration*, 2016 INT'L REV. L. 1 (2016). For an analysis of this trend with regard to FET, *see* Rachel A. Hird, *Thomas W. Wälde and Fair and Equitable Treatment*, 27 J. ENERGY & NAT. RESOURCES L. 377, 387 (2009).

[228] *See* Section III.B.3 *infra* for more on the imperative that tribunals find some way to consider the treaty meaning of "security" even in cases where defining an "essential security interest" is expressly left to the exclusive discretion of the state.

[229] *See e.g.*, Asian Agricultural Products Ltd. v. Republic of Sri Lanka, ICSID Case No. ARB/97/3, Dissenting Opinion of Samuel K.B. Asante (June 15, 1990), *in* 6 ICSID REV. 574, 593-595 (1991) ("The Tribunal's enunciation and application of due diligence fails to take into account the national emergency and extraordinary conditions under which the Government mounted a strategic and highly sensitive security operation to regain its sovereign control of the area of insurgency. The Government was confronted with essentially aforre mjeure situation. Once it is conceded that the Government had a compelling sovereign duty to undertake a military operation to regain control, the timing and modalities of the security operation must surely fall within its exclusive discretion. In this regard the Tribunal should be slow to second-guess the tactics and strategies of military commanders on the ground.").

adjudicatory process itself;[230] even to the point of rendering good faith analysis completely impracticable in some estimations.[231]

2. The Compensation for Lawful Expropriation Approach

A politically neutral alternative to "good faith" analysis being desirable, some have proposed a compensation-based, lawful expropriation model for dealing with the potential abuse of security justifications–as a more sterile solution.[232] Under this "compensation approach", an investor implores a tribunal to find not that a host state has breached a treaty obligation or committed an international delict, but that it has fairly invoked an exception yet must nonetheless pay compensation for the damage done to the investor by its actions. Perhaps reticent of the traditional geopolitical tension surrounding trade in natural resources,[233] the Energy Charter Treaty codifies this "compensation approach" by including a broad and self-judging security exception, while explicitly clarifying that states cannot expropriate investments without compensation, even for security reasons.[234] This approach appears to have the most utility in avoiding the "exacting" political nature of the good faith question. Indeed, it mirrors the use of non-violation claims at the WTO to remedy harm flowing

[230] Certain Norwegian Loans (France v. Norway), 1957 I.C.J. 52-54 (July 6) (Separate Opinion of Judge Sir Hersch Lauterpacht). It is important to note that Judge Lauterpacht did not dismiss the use of good faith analysis outright, he merely stated it was inappropriate given the broad nature of the French reservation at issue. The limiting factors Judge Lauterpacht would place on the operation of good faith analysis are tied inextricably to the concept of legitimate expectations:

The question of the obligation to act in good faith arises only in relation to legitimate expectations of the other party. But there is only a nominal degree of legitimate expectation in relation to an obligation, in regard to a potentially most comprehensive category of disputes, as to which the party undertaking it expressly declares in advance that it is free to determine both the existence and the degree of its obligation. *Id.* at 48.

[231] *See Certain Norwegian Loans*, *supra* note 230, at 89 (Dissenting Opinion of Judge Read) (stating that, "Practically speaking, it is, I think, impossible for an international tribunal to examine a dispute between two sovereign States on the basis of either good or bad faith or of abuse of law").

[232] *See* Ma, *supra* note 183; Alan O. Sykes, *Economic "Necessity" in International Law*, 109 AM. J. INT'L L. 296, 320-22 (2015); *but see* Anne van Aaken, *On the Necessity of Necessity Measures: A Response to Alan O. Sykes*, 109 AJIL UNBOUND 181 (2015) (advocating for an approach that better considers the unique industry, investor expectations, and economic conditions of the host state instead of imposing externality costs for expropriation in a uniform manner).

[233] *See, e.g.*, AGNIA GRIGAS, THE NEW GEOPOLITICS OF NATURAL GAS (2017); *but see*, *America's domination of oil and gas will not cow China*, THE ECONOMIST, Sept. 17, 2020 (describing a marked shift in resource geopolitics with regard to energy and renewables).

[234] Energy Charter Treaty, Dec. 17, 1994, arts. 13, 24(3), 2080 U.N.T.S. 95.

from measures taken in the name of essential security—which has been proposed by trade law experts as a means to dejudicialize conflicts that sit at the intersection of trade and national security.[235]

The "compensation approach" finds further support in case law regarding the CIL defense of Necessity.[236] Further, compensation for legal expropriation is a well-developed topic within the doctrinal field of international investment law.[237] And even under the strict language of many security clauses to the effect of "nothing in this agreement shall preclude a party from applying measures …",[238] it could be argued, albeit somewhat strenuously, that the compensation approach does not *preclude* the application of measures that expropriate but merely *conditions* expropriation on the subsequent payment of prompt, adequate, and effective compensation.

Despite the apparent benefits of the "compensation approach", its prospects for adoption are somewhat dubious. The tribunal in *Devas* rejected the compensation-based approach. It reasoned that where India took legitimate security measures the Mauritius-India BIT created a hard limit on substantive treaty obligations, including the right to compensation for expropriation.[239] At the same time, recognizing the importance of prompt, adequate, and effective compensation for expropriation to the international investment law regime, the tribunal was careful to segregate what is

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[235] Lamp, *supra* note 40.

[236] *See* Gabcikovo-Nagymaro Project (Hungary/Slovakia), 1997 I.C.J. ¶¶ 152-53 (Sept. 25) (discussing the requirement that compensation be dispensed to an aggrieved party even where Necessity is successfully invoked as an affirmative defense to state responsibility).

[237] OECD, "*Indirect Expropriation*" *and the* "*Right to Regulate*" *in International Investment Law*, OECD WORKING PAPERS ON INTERNATIONAL INVESTMENT (2004/04); *see* Sempra Energy Int. v. Argentine Republic, ICSID Case No. Arb/02/16, Award ¶ 396 (Sept. 28, 2007) (citing the Expert Statement of Professor W. Michael Reisman, Hearing Transcript, Vol. 6, February 11, 2006, p. 1007:

of course governments in these circumstances must take measures to restore public order, but from the investment law standpoint – and this is for the future of all investments – international investment law says you may do it, but you must pay compensation. If exceptions are made for like these or other circumstances, the entire purpose of modern investment law, which is to accelerate the movement of private funds into developing countries for development purposes, will be frustrated.).

[238] *See*, *e.g.*, USMCA, *supra* note 110, at *chapeau* of art. 32.2 ("Nothing in this Agreement shall be construed to …").

[239] *Devas* Award, *supra* note 185, ¶ 293.

saw as India's legitimate security claims from the illegitimate *vis-à-vis* the security carve out.[240] Advocates of the "compensation approach" argue that the exercise of scrutinizing a state's national security judgements is more dangerous than ruling a measure is *per se* valid while forcing the state to internalize the costs of that measure.[241]

However, a *pro forma* national security argument by its nature is more concerned with result than legal substance. In the context of truly frivolous national security claims, there is no meaningful difference between a bad faith finding and a non-violation leading to compensation in the perspective of the malfeasant state. The "compensation approach" shows more utility with novel or retrograde, but otherwise legitimate "economic security as national security" arguments. Still, it runs into problems with the somewhat amorphous and stochastically applied police power doctrine, which absolves states of responsibility for loss of property or other economic disadvantages resulting from its nondiscriminatory application of its police power.[242] The "compensation approach" also defies the plain meaning of broad "whole of treaty" security exceptions and defies the apparent policy logic behind including these strong security clauses in the treaty in the first place.[243] This context is relevant for tribunals to consider under Article 31(1) and (2) VCLT.

Additionally, the "compensation approach" is based on a finding of lawful expropriation. This means that to rely on this approach, an investor must establish that an expropriation took place. This could limit its utility for those investors whose

[240] *Id.* ¶¶ 355, 371; Deutsche Telekom AG v Republic of India, Permanent Court of Arbitration, Interim Award (Dec. 13, 2017).

[241] Ma, *supra* note 183.

[242] *See* Restatement (Third) of Foreign Relations of the United States § 712(2) (Am. Law Inst. 1987); *contra*, Peter Charles Choharis, *U.S. Courts and the International Law of Expropriation: Toward a New Model for Breach of Contract*, 80 S. CAL. L. REV. 1, 23-26 (2006) (critiquing US courts for reliance on the "outdated and muddled" Restatement (Third) as a means to uphold sovereign immunity defenses to payment of just compensation in contravention of more established principles of international law).

[243] Heath, *supra* note 25, at 1092 ("It is also unlikely that, as a policy matter, states intended security exceptions to force them to internalize the costs of their security measures. Rather, state parties to trade or investment treaties likely thought that when they imposed sanctions on a designated person or nation or when they forced a foreign company to divest its ownership of a technology firm on security grounds, their trading partners and foreign investors would legitimately expect to bear the costs of such measures.").

claims are grounded in a denial of FET or FPS, for example. Further, the investor's claims will be limited to the fair market value of the investment prior to expropriation, rather than a full accounting for "actual loss".[244] This makes it virtually useless for some investors.[245] In any event, the key benefit of international arbitration is that its practitioners can apply their unique perspectives and experience, with the law and with the political element of commercial disputes, in order to choose the most effective approach given the facts and treaty relationship implicated in each individual case.[246]

3. The Essential Issue: Defining "Security"

No matter the treaty clause or method of analysis applied, a tribunal faced with a security justification for state action must consider the meaning of "security" within the governing law of the dispute at hand. Defining "security" for the purposes of security-adjacent international disputes represents a Gordian knot for both the complexity of the task, and for its political implications.[247] Yet unlike the popular account of Alexander's conquest of Anatolia, in this case the bolder approach to the challenge is not the simpler one.[248] It is not enough for a tribunal seized of jurisdiction in an investment dispute to accept the invocation of a security exception

[244] World Bank, *Report to the Development Committee and Guidelines on the Treatment of Foreign Direct Investment*, Guideline IV at 41-44 (1992); *Factory at Chorzów*, (Germany v. Poland), Judgment No. 13, 1928 P.C.I.J. ¶ 47 (Sept. 13) (reparation must, as far as possible, wipe out all the consequences of the *illegal* act and re-establish the situation which would, in all probability, have existed if that act had not been committed"); *LG&E v. Argentine Republic*, ICSID Case No. ARB/02/1, Award ¶ 45 (July 25, 2007) ("Actual loss" incurred, can be measured by loss of dividends, [*i.e.* expectation damages]).

[245] For example, say a foreign investor is an activist limited partner in a tech-focused private equity fund and they are forced to sell their position in the fund at a discount on a secondaries market after the fund fails to agree to security mitigation measures with the government of their portfolio companies' domicile. That position may otherwise qualify as an investment protected by the treaty relationship between the foreign investor's home state and the domiciliary state of the portfolio company. Even if the investor can prove the host state engaged in bad faith mitigation negotiations, or the purpose for its security findings was inapposite to the treaty security exception, with the compensation approach the investor would be unable to recover damages incurred, *i.e.*, the difference in sale price and pre-measure market value, from its forced divestiture from the company or the fund.

[246] *See generally* Yves Dezalay & Bryant G. Garth, DEALING IN VIRTUE (UCP 1996); *see also* Section IV.A *infra*.

[247] Inveighing on the notion of contesting a state's characterization of its own security imperatives, Judge Lauterpacht once remarked that it is "doubtful whether any tribunal acting judicially can override the assertion of a State that a dispute affects its security." HERSCH LAUTERPACHT, THE FUNCTION OF LAW IN THE INTERNATIONAL COMMUNITY 188 (1933).

[248] *See* Gordian knot, ENCYCLOPEDIA BRITANNICA, https://www.britannica.com/topic/Gordian-knot.

clause by a respondent state uncritically and unequivocally. To do so would be to invite an interpretation of a component of the treaty that would, by its subjectivity, degrade the very legal quality of the instrument itself.[249] This would run counter to the teleological principle of interpretation that the language of a treaty be given effet utile (*ut res magis valeat quam pereat*),[250] which (though not explicitly mentioned in the VCLT) is a principle commonly put to the task of treaty interpretation.[251] Tribunals must engage to some degree with the meaning of "security" when considering TNP-adjacent measures, even if only implicitly and indirectly.[252]

The distinction between an "essential security" interest as used in most treaties, and a "national security" interest as used in domestic law has yet to be defined authoritatively.[253] Yet there is some agreement that "essential" suggests a focus on the existential components of statehood or nationhood.[254] In the context of the law

[249] *Accord Certain Norwegian Loans*, *supra* note 230, at 52 ("If thus practically every matter can be plausibly, though not necessarily accurately, described as a matter essentially within the domestic jurisdiction of the State concerned and if that State is the sole judge of the question, it is clear that, as the result, the element of legal obligation is reduced to a vanishing point.").

[250] This mashup of French public law and Latin canon law means to give terms, "useful effect (so that the matter may flourish rather than perish)". AARON FELLMETH & MAURICE HORWITZ, GUIDE TO LATIN IN INTERNATIONAL LAW (2009).

[251] *See, e.g.*, Sir Gerald Fitzmaurice, *The Law and Procedure of the International Court of Justice: Treaty Interpretation and Other Points*, 33 BYIL 203 (1957).

[252] *See* Heath, *supra* note 25, at 1068 ("A tribunal may also find a violation where a state's articulated rationale in support of a given measure clearly falls outside of the scope of the exception or subverts the entire treaty regime, such as when a state claims that economic autarky constitutes an essential security interest under a treaty meant to further trade liberalization.").

[253] There are some instances in international law instruments in which the "essential" is qualified or otherwise demarcated. For example, Article 346 of the Treaty on the Functioning of the European Union allows for exceptions from the application of EU law where necessary for the, "protection of the essential interest of security which are *connected with the production of or trade in arms, munitions and war material*." Consolidated Versions of the Treaty on European Union and the Treaty on the Functioning of the European Union art. 346, June 7, 2016, OJ (C 202) 1 [hereinafter "TFEU"] (emphasis added). There may be further evidence buried in the negotiating history of various treaties. For example, the negotiating history of the US-Philippines FCN demonstrates that the term "national emergencies", as used in that security exception, was understood as emergencies that "might not have regard to international situations; that a threat of uprising or an earthquake might be a national emergency," and that this concept "had a physical connotation, such as volcanic eruption or war." Telegram from the U.S. Embassy in Manila to the U.S. Dep't of State, July 20, 1948, (U.S. Dep't of State File No. 711.962/7-2048).

[254] *See* Julien Chaisse, *Demystifying Public Security Exception and Limitations on Capital Movement: Hard Law, Soft Law and Sovereign Investments in the EU Internal Market*, 37 U. PA. J. INT'L L. 583 (2015); *see also* William J. Moon, *Essential Security Interests in International Investment Agreements*, 15 J. INT'L ECON. L.

of Necessity, which depends upon the protection of an "essential state interest", the ILC Committee of experts on State Responsibility declared that an "essential interest" is one which involves, "political or economic survival, the continued functioning of [a state's] essential services, the maintenance of internal peace, the survival of a sector of [a state's] population, the preservation of the environment of [a state's] territory or a part thereof, etc."[255] The prevailing view seems to be that "essential" serves a narrowing function.[256] In this way, claiming a national security interest as "essential" can lay bare just what factors a given state considers fundamental to its nationhood, and to its vitality as a Nation-State.[257]

As for "national security", Arnold Wolfers, a pioneer of Realism in the field of International Relations, described the concept of "national security" as having both

481, 500 (2012) (asserting that essential security interests are fundamentally tied to traditional security imperatives).

[255] *Documents of the Thirty-Second Session*, [1980] 2 Y.B. INT'L L. COMM'N 14, U.N. Doc. A/CN.4/SER.A/1980/Add.1 (Part 1).

[256] *See Russia-Transit Panel*, *supra* note 202, ¶¶ 7.130-31 ("'Essential security interests', which is evidently a narrower concept than 'security interests', may generally be understood to refer to those interests relating to the quintessential functions of the state, namely, the protection of its territory and its population from external threats, and the maintenance of law and public order internally"). Alternatively, it could be argued that the word "essential" denotes an ephemerality of interest—in other words, something which can be a *security* matter in some cases, but need not be concretely, eternally, and exclusively so in all cases. This was the meaning ascribed by Judge Lauterpacht in the *Certain Norwegian Loans* case to the phrase "*essentially* within the domestic jurisdiction", which appeared in the French reservation to ICJ jurisdiction in that case. *Certain Norwegian Loans*, *supra* note 230, at 51:

> For, in the first instance. it will be noted that the French reservation in issue refers not to matters which are *according to international law exclusively* within the domestic jurisdiction of the State, but to matters which are *essentially* within the domestic jurisdiction. There are matters which have often been considered as being essentially within the domestic jurisdiction of States but which, having become regulated by treaty or custom, have ceased to be so – an aspect of the question for which the Advisory Opinion of the Permanent Court of International Justice in the case of *Tunis and Morocco Nationality Decrees* provides an instructive and authoritative illustration. Tariffs, immigration, treatment of aliens and citizens in national territory, internal legislation generally – all those matters have been claimed to be essentially within the domestic jurisdiction of States. It is not necessary for me to express an opinion on the subject. (emphasis in original).

[257] For its part, China has expressed a security ontology that conceptualizes national security as having military, political, economic, technological, and even cultural dimensions. *See* National Security Law of the People's Republic of China (2015), Ministry of Nat. Def. of China (Mar. 3, 2017), https://www.chinalawtranslate.com/en/2015nsl/ (unofficial translation); *see also* Xi Jinping, THE GOVERNANCE OF CHINA, Foreign Languages Press, at 222 (2014).

objective and subjective elements.[258] This distinction may have practical utility when considering the implications of a self-judging versus a non-self-judging security exception clause. In the former case, tribunals might look only to indicia of subjective fear of a value threat in the governmental machinations of the invoking state,[259] while in the latter they can consider objectively whether the conditions of a threat to values are met by broader factual circumstances.[260] Most importantly, this interpretation lends further credibility to the argument that the erstwhile magical "it considers" language might have meaning beyond simply signifying a self-judging, hard stop to judicial review.

According to Judge Baker, formerly Chief Judge of the US Court of Appeals for the Armed Forces, US national security law serves the purpose of establishing normative values, prescribing due process, and granting the state the substantive authority to act in its own best interest while defining the boundaries of that action (along with the boundaries of that interest).[261] Using this frame of reference, it is apparent that the US TNP strategy operates for both outward and inward security purposes—each an objective with normative and legitimizing functions. In this way, we can also see the TNP strategy, outside of the context of the interstate US-China rivalry, as a mechanism by the state to reclaim sovereignty from the private sector with regard to technological capability and strategic "edge".[262]

Again, the velocity of national security law in this inward direction stands to be contested, because it has not only the tendency but also the objective of

[258] Arnold Wolfers, *National Security as Ambiguous Symbol*, 67 POL. SCI. Q. 481, 485 (1952) ("Security, in an objective sense, measures the absence of threats to acquired values, in a subjective sense, the absence of fear that such values will be attacked.").

[259] *I.e.*, an emphasis on procedural analysis, as advocated by Heath, *supra* note 25.

[260] *I.e.*, a substantive analysis. In each case the values that form the content of "national security" are apparent from representations made by the State in, *e.g.*, national security laws and strategy publications.

[261] Honorable James E. Baker, *Artificial Intelligence and National Security Law: A Dangerous Nonchalance*, STARR F. REP. 1 (2018).

[262] Brian Seamus Haney, *Applied Artificial Intelligence in Modern Warfare and National Security Policy*, 11 HASTINGS SCI. & TECH. L.J. 61, 94-95 (2020) ("[M]ilitaries and intelligence services depend on the private sector for essential goods and services [...] one argument is the United States' national security law is in the hands of private companies, rather than the Government").

redistributing the free market benefits of innovation.[263] It does so specifically by limiting foreign persons' participation in the US market, and generally by rhetorically emphasizing the state's dominion over private action before a sound legal basis for that action is determined. The challenge posed by TNP for states and tribunals alike will be in cleanly separating the legitimate hard-security concerns: about foreign adversary access to critical infrastructure, data, and technological military edge, from an internal, private market contest between public and private actors.

C. *The National/Essential Security Interest in TNP*

1. The Policy Foundation of TNP

At the core of the US TNP strategy, is the resurrection of a belief that economic security is coextensive with national security.[264] The contours of this thinking are reminiscent of an era in global politics, from 1945 to 1991, that was dominated by the US-Soviet adversarial paradigm.[265] The attendant economic policy prescription is neo-autarkic.[266] Executive officials within the Trump Administration were clear in their representations to domestic private industry,[267] and to the international

[263] *See* Wakely & Indorf, *supra* note 60, at 28-31; *see also* Robert D. Williams, *In the Balance: The Future of America's National Security and Innovation Ecosystem*, LAWFARE BLOG (Nov. 30, 2018, 3:01 PM).

[264] White House, *National Security Strategy of the United States for 2017*, at 17 (Dec. 2017) ("Pillar II: Economic Security is National Security"), https://trumpwhitehouse.archives.gov/wp-content/uploads/2017/12/NSS-Final-12-18-2017-0905.pdf; Peter Navarro, White House Nat'l Trade Council Dir., Keynote Address at the National Ass'n for Business Economics Conference (Mar. 6, 2017) (stating that the US trade deficit is a threat to national security), https://www.c-span.org/video/?424924-3/peter-navarro-outlines-trump-administrations-trade-policy-economic-policy-conference.

[265] *See* Harold Hongju Koh & John Choon Yoo, *Dollar Diplomacy/Dollar Defense: The Fabric of Economics and National Security Law*, 26 INT'L L. 715 (1992).

[266] *See* Jeffrey Gedmin & Robert B. Zoellick, "*We Tried Autarky in the 1930s. It Didn't Work Very Well*", 15(6) THE AMERICAN INTEREST (April 14, 2020) (interview with Robert B. Zoellick, former President of the World Bank (2007-2012), US Deputy Secretary of State (2005-2006), and US Trade Representative (2001-2005), providing historical and experiential insight into contemporary crisis and nature of the desire to "decouple" the US from China).

[267] Mike Pompeo, Speech on Silicon Valley and National Security at the Commonwealth Club of San Francisco, CA (Jan. 13, 2020),

President Trump has taken action to confront China's theft and predatory economic practices. He's demanding respect and reciprocity. [...] He knows that economic security is, in fact, at the core of my mission set: to provide national security, to protect each and every one of you. And we've put export controls on parts that go into the CCP's nationwide surveillance machine. We've applied much greater scrutiny to technology exports that could have military use. [...] Our government agencies are

security community,[268] that they believed US national and collective global security depend upon changing Chinese behavior by hardening Chinese access points to global technology markets. There is a rhetorical emphasis in this strategy on utilizing economic pressure to force China to abandon some of its more obtuse economic-planning policies.[269]

In many ways, this concern is a new symptom of a lingering anxiety. A bipartisan commission was established by Congress to consider the security dimensions of China's participation in the global economic system, shortly before China's accession to the WTO.[270] The US-China Economic and Security Review Commission ("USCESR") Commission has been active over its 20-year mandate, but recently it is assuming a more active role in the national debate on China. China's perspective on its own technological development has been the subject of increased scrutiny by the US policy community as well.[271] To many, China's initiatives in this realm represent a new and dangerous permutation of China's larger economic reliance on State

cooperating in new ways to stop the Chinese military from using our own innovation against us. And we're putting our allies and partners on notice about the massive security and privacy risks connected to letting Huawei construct their 5G networks inside of their countries. And too, protecting America's innovating – innovative capacity is at the center of what we're trying to do in these talks.

[268] Prepared Remarks by Secretary of Defense Mark T. Esper at the Munich Security Conference (Feb. 15, 2020),

The [National Defense Strategy] states that we are now in an era of Great Power Competition, with our principal challengers being China, then Russia, and that we must move away from low intensity conflict and prepare once again for high-intensity warfare… I want to focus on the Pentagon's top concern: the People's Republic of China. […] I continue to stress to my friends in Europe – and just this past week again at the NATO Defense Ministerial in Brussels – that America's concerns about Beijing's commercial and military expansion should be their concerns as well… The reality of the 21st century is that many economic decisions are also national security decisions … our collective future may hang in the balance if we fail to make the hard choices now for the long run.

[269] *Id.*

… we want China to behave like a normal country that adheres to the international rules and order that generations before us have fought hard to protect and preserve. And that means the Chinese government needs to change its policies and behaviors. If the PRC will not change its ways, then defending this system must be our collective priority. We can only do this by making greater investments in our common defense; by making the hard economic and commercial choices needed to prioritize our shared security; and by working together to maintain a ready and capable alliance network […].

[270] Charter of the USCESR Commission, *available at* https://www.uscc.gov/charter.

[271] The recent work of the Center for Security and Emerging Technology (CSET) is prolific and exemplary. *See, e.g.*, Ryan Fedasiuk, *Chinese Perspectives on AI and Future Military Capabilities*, CSET POLICY BRIEF (Aug. 2020).

Capitalism.[272]

2. Traditional/Hard Security: Military-Civil Fusion and Military Edge

The keystone of the argument that Chinese access to technology implicates traditional security concerns, is the concept of Military-Civil Fusion (MCF).[273] Concern over this general phenomenon, a martial offshoot of Chinese State Capitalism, is what ties together technology transfer and national security. The term "State Capitalism" captures a range of economic activity in which the government, through SOEs, engages in commercial activity in the private sector.[274] While China's economy has evolved from byzantine central planning towards a more decentralized market economy in the past 40 years, it has yet to metamorphosize completely into a free market system. Despite China's accession to the WTO in 2001, a symbolic entry into the community of free market states, China's consistent deployment of State Capitalism creates enormous friction with its firms' participation in global markets.[275]

MCF builds on a process of integration between China's civilian economy and defense industrial base that is facilitated by the central authority of China's Communist Party.[276] This integration began during China's economic liberalization in the 1980s and 1990s and progressed in two stages: (1) a retooling of state heavy industry and military enterprise to produce consumer goods; and (2) a "spinning on" of advances in commercial tech into military applications.[277] Whereas military-civil

[272] Esper, *supra* note 268 ("China's growth over the years has been remarkable, but in many ways it is fueled by theft, coercion, and exploitation of free market economies, private companies, and colleges and universities."); *but see* Ji Li, *I Came, I Saw, I Adapted: An Empirical Study of Chinese Business Expansion in the United States and Its Legal and Policy Implications*, 36 NW. J. INT'L L. & BUS. 143, 194 (2016) (characterizing State Capitalism with Chinese characteristics as a "phantom menace").

[273] *See* US Dept. of State, *Military-Civil Fusion and the People's Republic of China*, Fact Sheet (2020), https://www.state.gov/remarks-and-releases-bureau-of-international-security-and-nonproliferation/mcf-and-the-prc/; *see also* Katherin Hille & Richard Waters, *Washington Unnerved by China's 'military-civil fusion'*, FT, Nov. 8, 2018.

[274] *See* MING DU, CHINA'S STATE CAPITALISM AND WORLD TRADE LAW (2014).

[275] *Id.*; *see also* JULIEN CHAISSE ET AL., EXPANSION OF TRADE AND FDI IN ASIA: STRATEGIC AND POLICY CHALLENGES 40 (2009).

[276] U.S.-China Economic and Security Review Commission, *Chapter 3, Section II: Emerging Technologies and Military-Civil Fusion: Artificial Intelligence, New Materials, and New Energy*, *in* 2019 REPORT TO CONGRESS (2019) (hereinafter "USCESRC Report").

[277] *Id.* at 237, nn.6-10.

integration took a top-down approach to guiding industrial and military improvements, military-civil *fusion* is society-wide in scope and involves a lighter-touch, bottom-up approach. As the national security community sees it, China is now directing its civilian research institutions, national-champion MNCs, investment-funds, and other nominally private, commercial actors to effect technology transfer from the West by both licit and illicit means.[278]

Implicit in the TNP strategy is an "endgame" assumption, *viz.* that effective implementation of MCF means that all commercial advances in Chinese technological and manufacturing capabilities are by extension military advances as well. This conclusion forms the major premise of the syllogism informing US TNP strategy.[279] In a nutshell, the logic is as follows: if China succeeds in acquiring and commercializing a given advanced technological concept, it will gain a technological military advantage by fiat.[280] China is in fact pursuing a broad strategy to extricate, adopt, manufacture and commercialize critical technologies.[281] Therefore, China will

[278] *Id.* at 237, nn.11-12; U.S.-China Economic and Security Review Commission, Hearing on Technology, Trade, and Military-Civil Fusion, written testimony of Elsa Kania, June 7, 2019, https://www.uscc.gov/hearings/technology-trade-and-military-civil-fusion-chinas-pursuit-artificial-intelligence-new [hereinafter "Kania"].

[279] *See* US Department of Commerce (Office of Public Affairs), *Commerce Adds China's SMIC to the Entity List, Restricting Access to Key Enabling US Technology*, Press Release, Dec. 18, 2020, https://www.commerce.gov/news/press-releases/2020/12/commerce-adds-chinas-smic-entity-list-restricting-access-key-enabling.

[280] *Id.* In 2017, General Secretary Xi created a special oversight body to facilitate interagency coordination, the Central Commission for Integrated Military and Civilian Development, which he chairs. Wei Qi, *Chinese President Takes on New Role to Spearhead Civilian-Military Tech Transfer*, SOUTH CHINA MORNING POST, Jan. 23, 2017. General Secretary Xi's leadership of the commission signals military-civil fusion's intended centrality in defense industrial planning, but also underscores the need for strong authority to overcome bureaucratic hurdles in implementation. Kania, *supra* note 278. Three central goals can be distilled from President Xi's public statements on the MCF initiative: (1) generate coordination between the defense and civilian sectors to improve the sophistication of China's military technology; (2) create cohesion in Chinese industry and academia to support military objectives; and (3) leverage industrial planning to drive technological innovation and economic growth. U.S.-China Economic and Security Review Commission, *Hearing on What Keeps Xi Up at Night*, testimony of Greg Levesque, Feb. 7, 2019, https://www.uscc.gov/hearings/what-keeps-xi-night-beijings-internal-and-external-challenges.

[281] While the Belt and Road Initiative can be seen as an external manifestation of this broader policy, China's "Made in China 2025" strategy is the most obvious internal manifestation. Published in 2015, it summarizes a ten-year plan to ramp up domestic sourcing of key technological inputs such as semiconductors and to utilize government funding and support to achieve domestic capacity in ten core industries: (1) advanced information technology; (2) robotics and automated machine tools; (3) aircraft

gain military advantage through their economic planning measures unless their progress on this front is impeded by economic force. The findings of the USCESR Commission reflect this presumptive formula.[282]

In response to the threat of MCF, the US has rapidly stepped up its effort to limit China's technological ascent. The Trump Administration utilized the IEEPA and NEA broadly to declare national emergencies and lay the groundwork for administrative action on rare earth mineral shortages,[283] an issue which the Obama administration had earlier sought to deal with through the WTO.[284] The US has denied visas to Chinese researchers through the State Department and has prosecuted dozens, whom it accuses of engaging in espionage on behalf of the Chinese military, through the DOJ.[285] It has even increased the potential liability carried by the academic institutions who would host Chinese researchers.[286] It has imposed product export sanctions using the commerce control list, targeting specific firms that it sees as agents of China's technological dominance strategy.[287] It has encouraged US institutional investors to divest their holdings of Chinese stocks, and banned

and aircraft components; (4) maritime vessels and marine engineering equipment; (5) advanced rail equipment; (6) new energy vehicles; (7) electrical generation and transmission equipment; (8) agricultural machinery and equipment; (9) new materials; and (10) pharmaceuticals and advanced medical devices. *See* Max J. Zenglein & Anna Holzmann, *Evolving Made in China 2025: China's Industrial Policy in the Quest for Global Tech Leadership*, MERCATOR INST. FOR CHINESE STUD. (July 2, 2019).

[282] *See* USCESRC Report, *supra* note 276.

[283] *See* Alistair MacDonald, *US Steps up Efforts to Counter China's Dominance of Minerals Key to Electric Cards, Phones*, WSJ, Oct. 5, 2020.

[284] *See Request for the Establishment of a Panel by the United States, China-Export Duties on Certain Raw Materials*, WTO Doc. WT/DS508/6 (Oct. 14, 2016).; Appellate Body Report, *China-Measures Related to the Exportation of Various Raw Materials*, WTO Doc. WT/DS394/AB/R (adopted Feb. 22, 2012).

[285] A notable recent example involved a Chinese-native Raytheon missile engineer who took and operated his company laptop while on vacation in China. He was sentenced to three years in federal prison for violating ITAR export control laws. US DOJ Press Release, *Former Raytheon Engineer Sentenced for Exporting Sensitive Military Related Technology to China*, Nov. 18, 2020. Criminal Docket https://www.courtlistener.com/docket/14782208/united-states-v-sun/.

[286] George P. Varghese et al., *The China Initiative Heads to School*, WilmerHale Publications, Mar. 24, 2020.

[287] *See* discussion on Huawei in Section II.B.2, *supra*.

investment by US persons in firms found to aid the Chinese military.[288] Most notable of all are the enhancements made to the regulatory infrastructure for foreign investment and product export, covered in Section II above. These modifications and their global doppelgangers draw a direct lineage to the US concern with Chinese MCF.

Concerns began to arise as Chinese investment into very early-stage US companies increased dramatically from 2013 to 2018.[289] Michael Brown, head of the Defense Innovation Unit of the US Department of Defense, documented this trend and forecast its implications in a groundbreaking 2018 paper, which directly inspired the legislation that became FIRRMA and the ECRA. In that paper, he wrote:

> Because the U.S. economy is open, foreign investors, including those from China, are able to invest in the newest and most relevant technologies gaining experience with those technologies at the same rate as the U.S. does. The U.S. government does not currently monitor or restrict venture investing nor the potential transfer of early-stage technology. … CFIUS reviews specific deals on a case-by-case basis (rather than systematic assessments of acquisitions or acquirers) and only deals that involve a controlling interest by foreign investors (usually mergers and acquisitions), [so] CFIUS is only partially effective in protecting national security since its jurisdiction is limited. The other principal tool to inhibit technology transfer is the U.S. export control regime. Export controls are effective at deterring exports of products to undesirable countries and can be used to prevent the loss of advanced technologies but controls were not designed to govern early-stage technologies or investment activity. Importantly, to be effective, export controls require collaboration with international allies, a long process where cooperation is not assured.
>
> U.S. military superiority since World War II has relied on both U.S. economic scale and technological superiority. … the technologies which will create the Third [generation of military superiority] Offset are to a large extent being developed by early-stage technology companies with significant commercial markets. If we allow China access to these same technologies concurrently, then not only may we lose our technological superiority but we may even be facilitating China's technological superiority. That China will grow to be an economy as large as ours may be inevitable; that we aid their mercantilist

[288] Dawn Lim, *State Department Urges Universities to Disclose China Stocks Held in Index Funds*, WSJ, Aug. 21, 2020; Gordon Lubold & Dawn Lim, *Trump Bars Americans From Investing in Firms That Help China's Military*, WSJ, Nov. 12, 2020; Frances Yoon, *Trump's China Blacklist Sparks Reviews at Index Compilers*, WSJ, Nov. 23, 2020.

[289] Office of the US Trade Representative, Findings of the Investigation into China's Acts, Policies, and Practices Related to Technology Transfer, Intellectual Property, and Innovation Under Section 301 of the Trade Act of 1974, 147-48 (Mar. 22 2018); Brown & Singh, *supra* note 7 ("Chinese investment activity in early stage technology deals is also growing rapidly and peaked in 2015 with Chinese investors participating in 271 deals, with total deal value of $11.5 billion. This represented almost 16% of the value of all technology deals in that year ($72 billion)").

> strategy through free trade and open investment in our technology sector is a choice. As a result, while strategic competition with China is a long-term threat rather than a short-term crisis, preserving our technological superiority and economic capacity are important issues for national focus today.[290]

Brown details China's central government planning initiatives relating to technology transfer and venture capital.[291] He documents a bevy of investment activity up and down the company value chain, from the Sinovation firm in the venture capital space,[292] to the spike in globally active Chinese private equity funds (627 active from 2013-2015),[293] to the use of special purpose vehicles to obscure beneficial ownership in specific acquisitions,[294] to investments by Chinese companies such as Baidu, Alibaba, Tencent, and JD.com directly into US companies.[295] Brown also alleges that these companies use anti-competitive commercial tactics to lower the purchase price of their target firms.[296] The bipartisan passage of FIRRMA signals that Brown's perspective has found unified support of the US legislature. The parroting of both the language and content of Brown's analysis signals adoption by the executive branch as well.[297] The US government's position on Chinese technology

[290] *See* Brown & Singh, *supra* note 7, at 2-3.

[291] *Id.* (citing APT1: *Exposing One of China's Cyber Espionage Units*, MANDIANT REPORT (2013) (demonstrating the use of targeted cyber-attacks to understand the scope of a technology, its IP value, and where it resides within a company followed by cyber theft or industrial espionage to steal that technology)).

[292] *Id.* at Appendix 3.

[293] *Id.* For perspective, these funds typically have 10-year investment horizons and usually participate in active management of portfolio companies to extract value from the initial invested capital. Brown identifies one of the most globally active Chinese PE investors as Yunfeng Capital, started by Alibaba and Ant Financial founder Jack Ma. Ma's ties to the government are contentious. He recently ran afoul of financial regulators for his public criticism, leading to a sudden cancelation of Ant's IPO. Jing Yang & Lingling Wei, *China's President Xi Jingping Personally Scuttled Jack Ma's Ant IPO*, WSJ, Nov. 12, 2020.

[294] *Id.* Brown uses the somewhat infamous example of Canyon Bridge Partners, a special purpose vehicle which combined Chinese capital with US management expertise in an attempt to acquire Lattice Semiconductor for US$1.3 billion. The attempt was blocked by CFIUS in 2017.

[295] *Id.*

[296] *Id.* (citing Elizabeth Dwoskin, *China Is Flooding Silicon Valley with Cash*, THE WASHINGTON POST, Aug. 6, 2016).

[297] Defense Production Act Policy Coordinator, Peter Navarro used Brown's titular language, that of "protecting the crown jewels" of US innovation, when describing US Trade Policy goals in an interview with NPR in 2018. *See Trump Administration Announces New Restrictions On China*, NPR, May 30, 2018, https://www.npr.org/2018/05/30/615414604/trump-administration-announces-new-restrictions-on-china.

acquisition is thus both clear and unified.

In the hard security sense, the traditional ambit of non-proliferation regimes, artificial intelligence or machine learning (deep learning, reinforcement learning and deep-reinforcement learning) technologies (collective, "AI") is prime among US concerns.[298] The strategic importance of AI for the future of military conflict has been compared to that of nuclear arsenals and aviation technology for the twentieth century.[299] But even more than nuclear or aviation technology, the technology that forms the broad classification of "artificial intelligence" is subject to vague categorization. Within the wider category of AI, it is deep learning, reinforcement learning, and deep reinforcement learning algorithms which garner the most national security focus.[300] These systems are particularly relevant to producing AI applications which are effective in asymmetrical conflict, which threatens US conventional military dominance.[301]

This AI-anxiety is most acute with regard to the development of autonomous weapons systems and with regard to security protocols protecting critical cyber infrastructure.[302] Advancements in these areas are already challenging established concepts in the law of armed conflict.[303] As regulators scramble to keep pace with developing technology, definitional challenges will metastasize in other areas of law as well. Thus, while the national security concern regarding AI is *prima facie* valid, it will be difficult to assess the specific application of the TNP policy to any given product or transaction without a great deal of technical proficiency and contextual

[298] *See* Gregory C. Allen, *Understanding China's AI Strategy: Clues to Chinese Strategic Thinking on Artificial Intelligence and National Security*, CTR. FOR A NEW AM. SEC. (Feb. 6, 2019). According to the USCESR Commission, "China's strategists see AI as a force multiplier across systems, a potential asymmetric advantage against high-value conventional weapons systems, and even a harbinger of a new mode of combat, where superior algorithms prove operationally decisive". USCESRC Report, *supra* note 276, at 220.

[299] *See* Baker, *supra* note 261; Brown & Singh, *supra* note 7, at 2-3.

[300] For an excellent primer on artificial intelligence, machine learning, informatics and national security written for legal professionals, *see* Haney, *supra* note 262.

[301] *See* Brown & Singh, *supra* note 7.

[302] Haney, *supra* note 262, at 77-85.

[303] *See* Rebecca Crootof, *Autonomous Weapons Systems and the Limits of Analogy*, 9 HARV. NAT'L SEC. J. 51 (2018).

knowledge. This challenge may present an opportunity for a new generation of advocates and adjudicators, with high degrees of technological literacy, to step into the breach opened by the US and China's emerging technological conflict.[304]

The full industrial coverage of the TNP strategy is also indeterminate, perhaps infinitely so. While operational AI applications are the endgame concern of the TNP strategy, for practical reasons the strategy casts a far broader net.[305] The mathematical concepts that inform deep learning, reinforcement learning, and deep reinforcement learning progress are not novel *per se*,[306] and advancements in these fields are largely open-sourced.[307] So, relative advancement in AI, supercomputing, and machine learning is largely dependent on its base inputs—advanced microchips and massive data aggregation on which machine learning algorithms can be trained.[308] The myriad inputs that construct real-world applications for AI become the main targets of the non-proliferation regime, which aims ultimately to slow the spread of China's relative AI superiority.[309] Equally important is relative supremacy in Internet of Things ("IoT") networking, *i.e.* the ability to communicate, command, and control robotic systems on the battlefield of the future.[310] In this regard,

[304] An underappreciated benefit of international arbitration is that it strengthens the demand for technical and subject-matter proficiency of legal practitioners through private market competition for instruction and appointment in specific high-stakes disputes. *See* Yves Dezalay & Bryant G. Garth, *Merchants of Law as Moral Entrepreneurs: Constructing International Justice out of the Competition for Transnational Business Disputes*, *in* DEALING IN VIRTUE 33 (1996).

[305] USCESRC Report, *supra* note 276, at 214 (*recognizing* that technological advancement in AI primarily relies on: (1) increased computing power (*i.e.*, semiconductor improvements); (2) the sophistication of algorithms (most of which are open source), and (3) mass data sets on which to train those algorithms).

[306] For example, Haney notes that the fundamental learning model used in reinforcement learning algorithms, the Markov Decision Process, was developed in 1913 and "remains state-of-the-art in AI today". Haney, *supra* note 262, at 68 (citing Gely P. Basharin, et al., *The Life and Work of* A.A. *Markov*, 386 LINEAR ALGEBRA AND ITS APPLICATIONS 4, 15 (2004); GEORGE GILDER, LIFE AFTER GOOGLE 75 (2018)).

[307] Haney, *supra* note 262 (pointing to Google TensorFlow as a prominent example of AI open sourcing).

[308] *Id.* at 75 ("Deep learning, reinforcement learning, and DRM provide a framework for analyzing state-of-the-art technical applications of AI tech. While the mathematical models underlying these systems are not new, their capabilities have shown rapid improvement symbiotically with the massive amount of information/data that humans have begun collecting at the dawn of the digital age.").

[309] Saif M. Khan & Alexander Mann, *AI Chips: What are they and Why they Matter*, CTR. FOR SEC. AND EMERGING TECH. (Apr. 2020).

[310] USCESRC Report, *supra* note 276, at 232, n.187 (citing John Chen et al., *China's Internet of Things*, SOSi Special Programs Division, 69–81 (prepared for the U.S.-China Economic and Security Review

familiarity with the 5G systems that will power these networks is critical.

This bottom-up non-proliferation approach works well for limiting the spread of biological and chemical agents, or fissionable nuclear materials—technologies that have limited commercial applications. Indeed, it is the limited impact of these non-proliferation regimes on the private sector have made them generally uncontroversial.[311] With the TNP strategy, however, the targeted inputs are more diffuse and are overwhelmingly developed by commercial firms for commercial purposes. And it is exceedingly difficult to separate, in most cases, the design of a given tech from its possible or probable usage.[312]

Another important feature of the concerns surrounding Chinese technology supremacy is that they are largely forward looking.[313] This makes it difficult to estimate the security relevance of TNP measures as against their more immediately apparent economic impacts. It will be important for arbitrators to develop deference strategies when dealing with governmental measures that lean on prospective hard national security concerns for their justification.[314] What may be even more important, however, is developing a system to distill economic protectionism from hard security concerns when measures are applied in an overbroad or under inclusive manner vis-à-vis a given state's economic competitors. To be sure, there are real and meaningful hard security concerns informing the US TNP strategy, but the larger

Commission) (Oct. 25, 2018)); *see also*, Paolo Coella, *5G and IoT: Ushering in a new era*, Ericsson, https://www.ericsson.com/en/about-us/company-facts/ericsson-worldwide/india/authored-articles/5g-and-iot-ushering-in-a-new-era.

[311] Take the Treaty on the Non-Proliferation of Nuclear Weapons ("NPT") and the international safeguard system that prevents the diversion of fissile materials into weapons as a prominent example. *See* UN Office for Disarmament Affairs, *Treaty on the Non-Proliferation of Nuclear Weapons*, Fact Sheet, available at https://www.un.org/disarmament/wmd/nuclear/npt/; *see also*, World Nuclear Ass'n, *Safeguards to Prevent Nuclear Proliferation*, Information Library Fact Sheet (Sept. 2018), available at https://www.world-nuclear.org/information-library/safety-and-security/non-proliferation/safeguards-to-prevent-nuclear-proliferation.aspx.

[312] *See* Brown & Singh, *supra* note 7, at 24 ("… controlling a broad technology will be highly controversial within the venture and technology community where the largest markets are for benign, commercial purposes.").

[313] USCESRC Report, *supra* note 276, at 232 (concluding, "[a]lthough China's current capabilities do not appear to indicate any *immediate* substantial threat, the intent of China's industrial policy and military strategy is clear") (emphasis added).

[314] *See* Ishikawa, *supra* note 14, at 94-96.

portion of its concern and impacts relate to economic competition with China and maintaining US tech exceptionalism.[315]

3. Industrial Planning & Economic Security

TNP, as developed under the Trump Administration, was fundamentally tied to a larger desire to engage in various modes of rigorous economic and industrial planning. Addressing the problem of America's shrinking industrial manufacturing base formed a core component of Trump's electoral mandate in 2016.[316] While Trump's method seems novel against the backdrop of mainstream post-war US economic policy, it is really more retrograde.[317] The US is concerned that its "innovation edge" is dulling,[318] and that if Chinese firms continue to appropriate technology from the West, they will be able to manufacture and commercialize these technologies at a rate and cost efficiency that will kill US competitors in the cradle.[319] It is worth considering then, how this fear manifests within the US TNP regime, and whether these economic security imperatives can be considered to be taken in the "essential security interest" of the state.

To be sure, the fear that America is falling behind in manufacturing is not without

[315] In 2019, President Trump issued The Executive Order on Maintaining American Leadership in Artificial Intelligence, Exec. Order No. 13,859, 84 Fed. Reg. 3967 (Feb. 14, 2019). Though largely symbolic, the order crystalized several administrative priorities regarding AI, among them the mandate that, "the United States must promote an international environment that supports American Al research and innovation and opens markets for American Al industries, while protecting our technological advantage in Al and protecting our critical Al technologies from acquisition by strategic competitors and adversarial nations".

[316] Peter Navarro, *America's Military-Industrial Base is at Risk*, N.Y. TIMES, Oct. 4, 2018.

[317] The Founders debated robustly on the subject of internal and external governmental controls in support of domestic manufacturing, with the very first Treasury Secretary delivering to the House of Representatives a detailed report in 1791 on "the subject of Manufactures; and particularly to the means of promoting such as will tend to render the United States, independent on foreign nations, for military and other essential supplies." Alexander Hamilton, *Report on the Subject of Manufacturers*, Communicated to Congress in Philadelphia (Dec. 5, 1791).

[318] *See* Ashish Arora *et. al.*, *Why the US Innovation Ecosystem is Slowing Down*, HARV. BUS. REV. (Nov. 26, 2019) (asserting that in an era where large corporations have largely spun off their innovative research functions, venture capital has become an important bridge between research intensive academia and development-minded private business firms).

[319] Erik Roth, Jeongmin Seong, Jonathan Woetzel, *Gauging the Strength of Chinese Innovation*, MCKINSEY Q. (Oct. 2015) (finding that China has an innovation lead in traditional manufacturing industries where low costs provide a competitive advantage, and that China leads in innovation by leveraging a concentrated supply base and expertise in automation and modular design, *e.g.* electronics, solar panels, & construction equipment).

merit, especially with regard to critical technology industries.[320] And AI (taken as a broad industrial category that includes the constituent technologies that power it) presents perhaps the clearest transformative economic opportunity since the invention of electricity.[321] Furthermore, there are clear military and hard security dimensions to this problem, as the Assistant Treasury Secretary for Investment Security describes in one vivid anecdote:

> Before my legal career, I was an officer in the U.S. Navy's submarine service, serving on the fast-attack submarine USS Salt Lake City—what's called a Los Angeles-class submarine. When you live and work in a steel tube operating hundreds of feet below the ocean's surface, you develop a keen sense of your surroundings, and how every single component of that remarkable machine is critical to your survival and your mission. Space is a commodity, and everything on the boat has a specific and important purpose. And much of it is cutting-edge technology, including advanced computers, sonar systems, weaponry, or the noise-quieting materials that turn U.S. submarines into black holes in the depths of the sea.
>
> …
>
> [T]his illustrates just one example of the reality of military preparedness and the importance of each piece of the puzzle, so to speak. The Los Angeles-class fast-attacks of my day—almost 30 years ago—have since been succeeded by the Virginia-class. The Virginias are built by Newport News Shipbuilding and General Dynamics Electric Boat; their nuclear reactors are built by General Electric; and, the torpedoes they carry are built by Honeywell, Hughes, and Westinghouse. With subcontractors, direct and indirect suppliers, engineering service providers, maintenance support, and the like, dozens and even up to hundreds of different companies play a vital role in the submarine sailors' execution of their important national security mission. Now consider all of the other classes of submarines, warships, aircraft, weapons platforms, and command and control systems, and one begins to realize the vastness of our defense industrial base and the importance of protecting it.[322]

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[320] *See* Arora, *supra* note 318; *see also* Asa Fitch, *Intel's Success Came with Making Its Own Chips. Until Now*, WSJ, Nov. 7, 2020 (chronicling Intel's journey as a leader in US microchip production to becoming the last major chip firm to divest its US brick and mortar factory assets to focus solely on chip design). Intel's struggle to compete on this basis is indicative of challenges experienced by US firms across high-tech industries – where the pace of innovation and labor costs often militate against companies holding manufacturing facilities in their asset portfolios.

[321] The Pope has even weighed in on AI in his November 2020 Prayer Intention, calling for advancements in the field to "be human" and to respect the dignity of humanity and of creation. *See Pope's November prayer intention: that progress in robotics and AI "be human"*, VATICAN NEWS, Nov. 5, 2020, https://www.vaticannews.va/en/pope/news/2020-11/pope-francis-november-prayer-intention-robotics-ai-human.html.

[322] Thomas Feddo, *As Prepared, Keynote Remarks at the American Conference Institute's Sixth National Conference on CFIUS*, US Dept. Treasury Press Release (July 20, 2020).

The problem is that the anxiety over the US industrial base and Chinese advancement extends well beyond the traditional national security boundaries of military production, an overstep that the security policy community describes as necessary given the difficulty in drawing clear lines between military and commercial technology.[323] Holistic industrial planning initiatives invite firms to direct resources towards soliciting protectionist favors from the government that defy the reasonable expectations of other free market participants.[324] Ill-defined executive powers, which lack coherent and consistent standards of application can exacerbate this problem.[325] When applied to ventures in emerging technology, where forward-looking profitability assumptions necessarily form the basis of highly speculative company valuations, even a small amount of added political risk can sink entire enterprises. And when the basis for government action is the foreignness of the investor involved, this action implicates a core concern of international investment

[323] *Id.* After describing the importance of weapons system components as unique, in his next breath, Feddo goes on to say:

In today's world the line between military and commercial technology isn't always clear. Increasingly, it's not just foreign investment in the defense industrial base that we must consider, but also whether there might be national security implications of foreign investment in ostensibly commercial enterprises. This could include companies with new technologies that may have future military applications, or which represent the cutting edge of America's tech leadership.

[324] *See* Brown, *supra* note 85; *see also*, *e.g.*, Ian King, *Chip Industry wants $50bn to Keep Manufacturing in US*, BLOOMBERG LAW, Sept. 16, 2020.

[325] A prime example is the use by Qualcomm of a request for CFIUS review as a defensive mechanism to block a hostile takeover attempt by rival firm Broadcom in 2018. Qualcomm successfully appealed to the interagency committee by arguing that the owners of Broadcom, a Singaporean private equity firm that had planned to repatriate the company to the US, would take measures (such as cuts to R&D spending) to finance and extract a return from their investment. This, they argued, would harm the company and, ultimately, the US microprocessor industry and US national security interests writ large. *See* Letter from Aimen N. Mir, Deputy Assistant Sec'y, U.S. Dep't of the Treasury, to Mark Plotkin, Covington & Burling LLP, & Theodore Kassinger, O'Melveny & Myers LLP 2-3 (Mar. 5, 2018). The President subsequently blocked the transaction, citing "credible evidence that Broadcom [...] might take action that threatens to impair the national security of the United States". Presidential Order Regarding the Proposed Takeover of Qualcomm Incorporated by Broadcom Limited (March 12, 2018); *but see* Paul Rosenzweig, *Qualcomm v. Broadcom:* A *National Security Issue*, LAWFARE BLOG (Feb. 28, 2018), https://www.lawfareblog.com/qualcomm-v-broadcom-national-security-issue (expressing broader national security concern regarding Qualcomm's role in US 5G development and its contracts with US government requiring top secret facility security clearance).

law as well.[326]

The idea that generalized economic policy can implicate "essential security" interests is also legally problematic.[327] A handful of investment treaty tribunals considering measures taken during the Argentine economic crisis held that purely economic emergencies could implicate the "essential security" interests of a state (at least under the US-Argentina bilateral treaty relationship).[328] In those cases, investors contested a number of internal monetary measures Argentina had taken to head off a looming dollar-reserve crisis. These included: rescinding a measure that had pegged the Argentine peso to the US dollar, requiring that debts and contracts be paid in pesos, and restricting currency transfers and bank withdrawals.[329] The exigency of this emergency situation degrades the position that measures following the US TNP strategy can rely on the Argentina cases for the general proposition that economic security is coextensive with national security. The indeterminate nature of the concerns informing the TNP strategy make it difficult to analogize to any "economic security" case that has come before it. Instead of focusing on the strategy holistically then, tribunals will have to use it for context when examining how specific

[326] *See* Joost Pauwelyn, *The Transformation of World Trade*, 104 MICH. L. REV. 1, 10-12 (2005) (articulating three primary rationales regarding the case for free trade and nondiscrimination, each of which are relevant to investment law as well: (1) to avoid the economic incentives of large countries to impose externalities; (2) to counter the disproportionate political influence of domestic groups that favor protectionism; and (3) to dismantle the discriminatory imperial preferences system in place before the institution of the GATT).

[327] *See* Roberts, *supra* note 8; *see also* Moran, *supra* note 58 (warning that CFIUS lacks a clear limiting principle to prevent it from excluding foreign investments from other nations).

[328] CMS Gas Transmission Co. v. The Republic of Argentina, ICSID Case ARB/01/8, Award ¶ 360 (May 12, 2005); LG&E Energy Corp. v. The Republic of Argentina, ICSID Case ARB/02/1, Decision on Liability ¶ 238 (Oct. 3, 2006) ("When a State's economic foundation is under siege, the severity of the problem can equal that of any military invasion"); Continental Casualty Co. v. Argentina Republic, ICSID Case ARB/03/9, Award ¶ 175 (Sept. 5, 2008).

[329] The Argentine Economic Crisis arbitrations have become a prevailing case study for the concept of Necessity, public order exceptions and security exceptions in international economic law. Most tribunals that examined the US-Argentina BIT's security exception concluded that in some cases an internal emergency would suffice to trigger the clause, but the Tribunal in *El Paso Energy Int'l Corp. v. Argentine Republic* decided to draw the line differently. ICSID Case No. ARB/03/15, Award ¶ 588 (Oct. 31, 2011) (finding that "essential security interests" must relate to an *external* threat). Under this approach, it would be difficult to differentiate between external and internal threat were the TNP policy invoked primarily to prevent the offshoring of foundational technology production. Less so if the goal is to prevent an adversary nation access to one or more specific and potentially lethal or force multiplying emerging technologies.

measures taken in furtherance of the strategy impact specific protected rights of foreign investors.[330]

Allowing international tribunals to draw the line around the permissible field of "essential security" actions, as was done in the *Devas* and *Duetsche Telekom* arbitrations,[331] can provide an immediate release valve for some of the financial pressures involved in implementing an holistic TNP strategy.[332] These arbitrations, arising from the same government measure, involved India renouncing a contract for satellite telecoms spectrum distribution on the grounds that the finite spectrum needed to be reserved for a host of public functions, including: defense, para-military forces, public utility services, and other societal needs.[333] While the tribunal excused India's revocation for those parts of the spectrum reserved for military and paramilitary needs, it held that the Mauritius-India BIT's essential security exception did not include public utility services, rural communications, tele-education, crop forecasting, emergency communication and disaster warnings, telemedicine, or other "societal needs".[334]

Still, the *Devas* case is not a perfect surrogate for likely future TNP strategy disputes, which may not lend themselves to as simple a quantification of security vs. non-security interests.[335] It will be more difficult for tribunals to use the *Devas*

[330] Heath suggests that judicial review of security clauses enforces primary and secondary limitations on security and emergency measures. Primary limitations address the categorical scope of security exceptions clauses, placing entire security policies within and without their ambit. Secondary limitations address particular measures: accepting the security rationale as valid but critiquing the validity of the process or the substantive logic by which the state measures are applied to the aggrieved party. *See* Heath, *supra* note 25 (citing OREN GROSS & FIONNUALA NI AOLAIN, LAW IN TIMES OF CRISIS: EMERGENCY POWERS IN THEORY AND PRACTICE 283 (2006)). According to Heath, most approaches, included that utilized by the Russia-Transit WTO Panel, include both primary and secondary limitations.

[331] *See Devas* Award, *supra* note 185, ¶¶ 211-374; Deutsche Telekom AG v. India, PCA Case No. 2014-10, Interim Award ¶¶ 183-291 (Dec. 13, 2017).

[332] *See* Lisa Bohmer, *In now-public Devas v. India BIT award, arbitrators disagree on interpretation of "essential security interest" clause and extent to which national security concerns underlay state's conduct*, IA REPORTER, June 12, 2018.

[333] *Id.*

[334] *Id.*

[335] The Majority in *Devas* ultimately held that the contract cancellation was motivated by a "mix of objectives", both security and ulterior considerations including a fear of political scandal and a desire to address the concerns of other network providers. They decided to split the protection of Claimants'

approach in the case of novel or retrograde security interest claims used to justify "all or nothing" policies–such as blocking chip company transactions to protect a strategic semiconductor manufacturing base, or banning domestic companies from transacting with Huawei to ensure operational superiority in developing and maintaining 5G broadband that hosts both civilian and military spectrum.[336]

Taking all this into consideration: the rise of investment screening and export control "firewalls", the fragility of international supply chains and capital markets for computational and electronics technologies firms, the security imperative of technological edge, and the widening economic fault lines and political cynicism between erstwhile trading partners–one might be tempted to think that this paper describes a problem without a solution. However, there is a means to deescalate, to reprogram, the burgeoning conflict between the US and China which threatens to disrupt global trade and investment in a host of high technology industries. By utilizing established IIAs responsibly, and by advocating for the continued practice of ISDS in this regard, arbitration practitioners can lead a "bottom up" effort to mitigate the adverse political and economic impacts of state-to-state technological competition.

IV. REPROGRAMING THE FIREWALL: THE CASE FOR ISDS

There are two sides to every conflict. For its part, China has developed

investment 60-40 according to this rubric and the facts of the case. *Devas* Award, *supra* note 185, ¶ 373 ("[T]he Tribunal, by majority, is of the view that a reasonable allocation of spectrum directed to the protection of the Respondent's essential security interests would not exceed 60% of the S-band spectrum allocated to the Claimants, the remaining 40% being allocated for other public interest purposes and being subject to the expropriation conditions under Article 6 of the Treaty"). The claimant's arbitrator objected and wrote a dissenting opinion finding that the *post-hoc* nature of the security rational, which on the evidence was developed well after the contract was ordered to be cancelled, precluded a good faith application of the Security Exception by the State. CC/Devas (Mauritius) Ltd. v. India, PCA Case No. 2013-09, Award on Jurisdiction and Merits, Dissenting Opinion of David R. Haigh QC (July 25, 2016).

[336] *See* Heath, *supra* note 25, at 1065. There are factual parallels to TNP insofar as the *Devas* case can be said to be a dispute about critical technological infrastructure, *viz*. telecoms spectrum. However, the nature of the dispute is more akin to the category of "telecoms as a resource" disputes, and less concerned with technological innovation and competition per se. This former category of disputes will likely grow in number along with 5G and the importance of the higher bands of radio frequency through which it operates. *See* Romilly Holland, *Is Spectrum the New Oil: Trends in Investor-State Disputes in the Telecommunications Sector*, 12 DISP. RESOL. INT'L 131 (2018).

exceptionally strict measures for FDI screening and export control,[337] sometimes in response to US regulations or to project political strength.[338] As some commentators have pointed out, this approach may create greater problems for Chinese investors in the form of political retribution.[339] China's involvement with international economic law is confronted by intersecting normative and pragmatic paradoxes. On the one hand, China's firms reap obvious benefits from China's lawful participation in a rules-based system of free, fair, and open global trade and investment. On the other hand, its political leaders have demonstrated cynicism, largely rooted in historical experience,[340] that international law has any content beyond its political symbolism.[341] Going forward, China may decide it would rather lien on political clout

[337] *See* Cathleen H. Hartge, *China's National Security Review: Motivations and the Implications for Investors*, 49 STAN. J. INT'L L. 239 (2013); Wang & Dai, *supra* note 86; Alex Irwin-Hunt & Seth O'Farrell, *China outlines new regulations to review foreign investment*, FDI INTEL. (Dec. 23, 2020) (emphasizing the intentional similarities between China's forthcoming national security FDI screening mechanism and CFIUS).

[338] For example, Qualcomm's US$44 billion acquisition of Dutch company NXP in 2018 was abandoned after Qualcomm failed to achieve regulatory approval for the merger in China. The botched deal ended up costing Qualcomm a US$2 billion termination fee with NXP and a $30bn share buy-back program for shareholders anticipating a bump in share value. Spectators alleged that the failure to issue approval was a retaliatory measure by China in response to increased scrutiny of Chinese investment in the US. Tom Mitchell et. al., *China's suffocation of Qualcomm-NXP merger signals new era*, FT, July 26, 2018. Senator Marco Rubio tweeted in response to the news that the US should "reimpose ZTE ban" referring to the earlier removal of Chinese telecoms giant ZTE from the commerce control list by President Trump against the advice of the Commerce Department. Martina & Nellis, *supra* note 164. The issue ended up costing the US a significant deal of political capital later in the year. After meeting with President Xi for two-hours at the G20 summit, Trump announced among other things that China would be willing to move forward with the Qualcomm-NXP deal, but at that point the timeline for the merger had elapsed, and Qualcomm had already begun its stock-buyback program. Jackie Wattles, *Trump says China is now open to Qualcomm-NXP deal. But it's too late*, CNN BUSINESS, Dec. 3, 2018.

[339] *See* Freshfields, Public interest or protectionism? Navigating the new normal (Oct. 8, 2018) at 45, https://www.freshfields.com/49bbc3/globalassets/imported/documents/228b5055-4cb2-4ee9-b56f-186a4c2bd7f7.pdf (noting a push for "reciprocity" of regulatory measures has played a key role in many of the developments in Western states towards stricter capital import controls).

[340] China's perspective on free trade and on foreign national treatment obligations is deeply marred by its historical experience with colonialism and the Leonine Treaties that codified an uneven relationship with western powers during the 19th and early 20th centuries. *See* Risvas, *supra* note 35, at 89-91, *esp.* n.61.

[341] Jesse Liss, *China's Investment Treaties with Latin America and Implications for South-South Cooperation: Evidence from Firm-Level Data*, 11 TRADE L. & DEV. 269, 297 (2019) (citing, Kate Hadley, *Do China's BITs Matter? Assessing the Effect of China's Investment Agreements on Foreign Direct Investment Flows, Investors' Rights, and the Rule of Law*, 45 GEO. J. INT'L L. 255, 273 (2014) (suggesting that China's BIT program with the global south is motivated by a desire to persuade other countries to not recognize Taiwan, to secure access to resources, and to facilitate durable political ties)).

vis-à-vis developing States than subject itself to mandatory ISDS. This approach seems to reflect more accurately what Chinese MNCs are familiar with domestically at least.[342]

But for practical reasons, China's record of non-participation in ISDS is being challenged by a spate of recent treaty cases brought by Chinese investors, including some SOEs.[343] It remains to be seen whether this trend will hold over time, and whether China can be pulled further into a system of reciprocal investment liberalization commitments. In this way, global TNP presents a major opportunity to reassert the utility of international law as between developed and developing states in a truly reciprocal fashion.[344] As a corollary, if the US abdicates its role as a leader in international institution building, and its allies do not follow its path, it runs the risk of ceding its leading role in current institutions to China.[345]

With this frame of reference, the exigency of "reprogramming" the political conflict between China and the West around emerging technology comes into sharper relief. ISDS has a key role to play in this task. For foreign investors, ISDS provides practical and case-specific standards to prevent the abuse of sovereign power. This protection is critical in light of the growing political incentives to

[342] Ji Li & Wei Zhang, *What Do Chinese Clients Want?*, 15 U. PA. ASIAN L. REV. 86 (2019) (finding, from survey of Chinese firms, that management actors in Chinese MNCs tend to value an understanding of and familiarity with political power dynamics over pure legal expertise or familiarity with legal process when deciding which legal counsel to hire, and suggesting that this is a function of their experience with China's domestic legal-political system).

[343] *See, e.g.*, Tza Yap Shum v. Peru, ICSID Case No. ARB/07/6; China Heilongjiang Int'l Economic & Technical Cooperative Corp. v. Mongolia, UNCITRAL, PCA Case No. 2010-20; Ping An Life Insurance Co. v. Belgium, ICSID Case No. ARB/12/29; Sanum Inv. Ltd. v. Laos, UNCITRAL, PCA Case No. 2013-13; Sanum Inv. Ltd. v. Laos, ICSID Case No. ADHOC/17/1; Beijing Urban Construction Grp. Co. Ltd. v. Yemen, ICSID Case No. ARB/14/30; Wuxi T. Hertz Technologies Co. Ltd. v. Greece, *ad hoc* UNCITRAL arbitration, 2019.

[344] *Accord* Risvas, *supra* note 35, at 110-11. Emphasizing the importance of historical context in understanding the principals and content of law, Risvas problematizes the relationship between the concepts of "sovereign equality" and "non-discrimination" based on the historical experiences of colonization and the cold war. Technological competition presents a relatively low-stakes arena for lawmakers, administrators, diplomats, and legal practitioners to challenge this historical narrative by developing and adhering to international economic rules that apply with equal force to developed and developing states.

[345] *See* Joel Slawotsky, *National Security Exception in an Era of Hegemonic Rivalry: Emerging Impacts on Trade and Investment*, *in* HANDBOOK OF INTERNATIONAL INVESTMENT LAW AND POLICY 545 (J. Chaisse et al. eds., Aug. 2021).

discriminate against foreign investors on the basis of their nationality. For states, ISDS provides a means to regulate the commercial activities taken by their counterparts (under the guise of SOEs) without incurring the negative economic impacts of complete decoupling. Despite the prevailing narrative to the contrary, ISDS tribunals are exceedingly deferential to states on matters impugning state sovereignty.

From the perspective of the regulated community, including and especially foreign investors, it is becoming increasingly difficult to define the levers or to trace their operation to any particular coordinate branch of government. For this reason, the scope of this authority should be limited by something approaching an international normative consensus.[346] The proliferation of CFIUS-like investment screening mechanisms among OECD countries amplifies this imperative. Any standard-setting effort will necessarily involve a large element of political deliberation and institution-building, but it will also require some measure of judicial oversight where politics fail.[347]

ISDS is well situated to function as an aid for foreign investors caught in the interstitial regulatory matrices of foreign investment screening regimes. In particular, the emphasis on protecting the property rights of foreign investors and non-reliance on doctrinal concepts like *res judicata* makes international investment law far more flexible than its domestic counterparts.[348] In this context, arbitrators may be better situated than diplomats or domestic courts to navigate the political minefield presented by TNP-adjacent disputes arising out of foreign investment in

[346] *See* Heath, *supra* note 25.

[347] *Id.* The OECD has previously examined the question of investment screening measures during past spikes in geopolitical tension around FDI, *e.g.*, the EU unbundling of Russian gas pipelines and the Dubai Ports World fiasco. *See Guidelines for Recipient Country Investment Policies Relating to National Security*, OECD (2009). In this case the OECD failed to impose hard limits to discipline the use of security exemptions.

[348] *See* W. Michael Reisman, '*Case Specific Mandates*' *versus* '*Systemic Implications*': *How Should Investment Tribunals Decide?: The Freshfields Arbitration Lecture*, 29(2) ARB. INT'L 131 (2013) (asserting that under investment treaties, international investment arbitrators are only authorized to act as 'law-appliers' and as such they should, and largely do, stick to their case-specific mandate rather than extrapolating to make decisions with 'systemic implications'); *accord* Gabrielle Kaufmann-Kohler, *Arbitral Precedent: Dream, Necessity or Excuse?: The 2006 Freshfields Lecture*, 23(3) ARB. INT.'L 357 (2007).

global technology companies.

Investment treaty arbitration has developed powerful norms that, through continued international treaty practice, have become sufficiently diffuse that they can displace otherwise stable precedents in other fields of law. One prominent example, with a great deal of relevance to FIRRMA-like investment screening mechanisms, is the issue of shareholder standing.[349] Additionally, some have argued that, if tribunals are willing to embrace geopolitical analysis, international investment law can provide an effective medium for the resolution of strategic investment disputes.[350] Others might note that from an historical perspective, arbitration has long provided a means to resolve disputes regarding investments with geopolitical implications (if not geopolitical intentions) while minimizing political and military costs.[351] There are clear benefits to all stakeholders in using ISDS to "reprogram" the political conflicts at the heart of global TNP policies.

A. *Protecting Non-Controlling, Non-Passive Equity-Holders*

The policy underlying FIRRMA makes explicit its intention that CFIUS target transactions involving non-controlling, but non-passive foreign investors.[352] This category is painted with exceptional breadth, as any foreign investor that holds any sort of investment instrument, be it: convertible bond, warrant, share-specific contractual right, etc., which has the *possibility* to achieve for the investor some sort of control, information-access, or technology facilitation rights.[353] One major advantage of treaty arbitration for these investors lies in the fact that, in the event of unjustified interference with their property rights, they will likely have a cause of

[349] In the 2007 *Diallo* case, the ICJ recognized that in "contemporary international law" the question of shareholder standing is "essentially governed" by investment treaties; so much so that the rules of investment treaties could be said to displace traditional rules on diplomatic espousal of shareholder claims. Ahmadou Sadio Diallo (Rep. Guinea v. Dem. Rep. Congo), 2007 I.C.J. 103, ¶ 88 (June 27, 2007). *See also* David D. Caron, *The Nature of the Iran-United States Claims Tribunal and the Evolving Structure of International Dispute Resolution*, 84 AM. J. INT'L. L. 104 (1990).

[350] Anatole Boute, *Economic Statecraft and Investment Arbitration*, 40 U. PA. J. INT'L L. 383, 388 (2019).

[351] NOEL MAURER, THE EMPIRE TRAP: THE RISE AND FALL OF US INTERVENTION TO PROTECT AMERICAN PROPERTY OVERSEAS, 1893–2013 (2013).

[352] Brown & Singh, *supra* note 7.

[353] *Id.*

action under international investment law that might be otherwise unavailable to them under the domestic law of corporations.[354]

Often in investment disputes, damage will manifest to a given investor in the form of a loss of share value or of dividends in a domestic enterprise of the host State. Insofar as these equity ownership rights are damaged by the flow from synchronous losses to the underlying enterprise, (*e.g.* an expropriation of the enterprise's assets or a ban on the enterprise exporting its products) the losses are "reflective" under the definition used in most domestic company laws.[355] Most of these laws take the position that the loss may only accrue to the company itself, so as to avoid jeopardy to the defendant of duplicitous claims and double recovery.[356] International investment law, however, generally recognizes the right of minority shareholders to bring claims for such losses.[357]

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[354] *Compare* Johnson v. Gore Wood & Co. [2000] UKHL 65, *with*: RosInvestCo UK Ltd. v. Russian Federation, SCC Case No. V079/2005, Final Award ¶¶ 606-07 (Sept. 12, 2010) (finding that the applicable treaty expressly clarified that shareholders, be they majority or minority shareholders, also have a claim for protection under if expropriatory measures are taken "only" against the company and not directly against the shareholders themselves); Camuzzi Int'l S.A. v. Argentine Republic I, ICSID Case No. ARB/03/2, Decision on Objections to Jurisdiction ¶¶ 63-64 (May 11, 2005) (a "minority shareholder has a right of action for a loss deriving from damage to the company in which it had invested, agreeing that the fact that a host state does not explicitly interfere with share ownership is not decisive; rather, the issue was whether a breach of the treaty led with sufficient directness to the loss or damage in respect of a given investment."); Total S.A. v. The Argentine Republic, ICSID Case No. ARB/04/01, Decision of the Tribunal on Objections to Jurisdiction ¶ 81 (Aug. 25, 2006) (finding that as the claimant [a minority shareholder] invoked treaty rights concerning its investment, the claim could not be construed as derivative or indirect, as if it were brought on behalf of or in contravention of the rights of its subsidiaries).

[355] *See* Johnson v. Gore Wood & Co., *supra* note 354 (famously expressing the English Law principle barring the award of reflective losses to a shareholder bringing a claim independent of the company in which they hold shares); Julien Chaisse & Lisa Zhuoyue Li, *Shareholder Protection Reloaded: Redesigning the Matrix of Shareholder Claims for Reflective Loss*, 52 STAN. J. INT'L L. 51, 55-58 (2016) [hereinafter "Chaisse & Li"] (examining the treatment of claims for reflective loss in German, French, US, UK, and Hong Kong company laws).

[356] Chaisse & Li, *supra* note 355.

[357] While the concept of reflective loss is not explicitly discussed or regulated by investment treaties, shareholder standing as "investor(s)" under IIAs presents a valid avenue for such losses to be recovered should they be merited. *Id.* at 69. *See also* Stanimir A. Alexandrov, *The "Baby Boom" of Treaty-Based Arbitrations and the Jurisdiction of ICSID Tribunals: Shareholders as Investors and Jurisdiction Ratione Temporis*, 4 L. & PRAC. INT'L CTS. & TRIBUNALS 19 (2005) ("[I]t is beyond doubt that shareholders have standing [...] to submit claims separate and independent from the claims of the corporation" and "this principle applies to all shareholders, no matter whether or not they own the majority of the shares or control the corporation.").

The reality in many cases is that legally offensive measures are not *directed* at the company, but at the specific foreign investors who hold equity in that company. Sometimes these are taken by majority shareholders themselves, hiding behind the guise of the corporate form.[358] The risk that government or parastatal entities operating a joint venture company, or private native investors might abuse a majority position to extract value from foreign minority investors is only heightened in times of political tension.

International investment law has exceptional advantages in addressing this sort of concern in an effective and equitable manner. This is owing to the bespoke nature of consent to arbitration in IIAs,[359] and owing to the ability in ISDS for arbitrators to ignore (where appropriate) the legal formalism inherent in domestic company law doctrine surrounding the legal fiction of corporate personality.[360] These are not *ex aequo et bono* findings. They rely on the broad and inclusive definitions of "investment" found in most IIAs.[361] This creates a far more stable investment environment, and ultimately increases the value of domestic firms' non-controlling

[358] *Accord Dodge v. Ford Motor Co.*, 204 Mich. 459 (Mich. 1919) (implicating the relatively unmitigated power of controlling shareholders over the business decisions of the firm). The facts of this particular dispute are commonly discussed in corporations law curricula to demonstrate the ability of majority shareholders to abuse this position to force concessions from minority shareholders, especially in privately held corporations for which shares are less easily liquidated.

[359] *See*, *e.g.*, NAFTA, arts. 1116, 1117; William Richard Clayton, Douglas Clayton, Daniel Clayton, and Bilcon of Delaware, Inc. v. The Government of Canada, PCA Case No. 2009-04, Award on Damages, ¶¶ 372-389 (Jan. 10, 2019) (finding that NAFTA arts. 1116 and 1117 create separate tracks for investors and for domestically incorporated companies to bring treaty claims, and that in principle this may limit minority shareholder ability to recover damages for reflective losses under the NAFTA).

[360] *See* Verza Korzun, *Shareholder Claims for Reflective Loss: How International Investment Law Changes Corporate Law and Governance*, 40(1) U. PA. J. INT'L L. 192 (2018) (noting that the presumption favoring minority shareholder standing in investment arbitration allows minority shareholders to make decisions that affect the company and to ostensibly benefit at the expense of the corporation, but that this is a normative good given the policy goals of international investment law). The author proposes a private ordering solution, *i.e.*, that individual corporations include provisions in their charters and bylaws waiving the right of shareholders to bring reflective loss claims in arbitration where this reflects the true agreement of equity holders in the company. *Id.* at 251.

[361] *See*, *e.g.*, Hochtief AG v. Argentine Republic, ICSID Case No. ARB/07/31, Decision on Jurisdiction ¶¶ 115-19 (Oct. 24, 2011); CME Czech Republic B.V. v. Czech Republic, UNCITRAL, Partial Award ¶ 392 (Sept. 13, 2001) (finding shares to be a covered investment under the treaty, and as such that expropriation of a local company must be considered by the tribunal insofar as it could affect the value of the claimant's shares).

equity.[362]

This is but one example of international investment law demonstrating remarkable adaptivity as a field of *lex specialis*.[363] By emphasizing the individualized protection of foreign property rights, the field has organically developed a work-around to the issue of shareholder standing confronted by the ICJ in a more general fashion in the *Barcelona Traction* case.[364] Meaningful engagement with international investment law norms can provide similar benefits to states, beyond the obvious attraction of inward FDI. Because of the emphasis of treaty law on state consent and the exceptional deference of arbitrators to issues implicating state sovereignty, ISDS can provide an excellent forum for states to regulate their economic interactions with rival powers,[365] set global economic rules for the deployment of State Capitalism,[366] and generally work to demarcate the line between commercial and sovereign action.[367]

B. *Regulating Commercial Geopolitics Through Treaty Practice*

Confronting this argument are valid critiques which emphasize the predilection of developed states, waxing in recent years, to reclaim elements of their sovereignty over foreign investment regulation from the field of international law.[368] National

[362] Korzun, *supra* note 360.

[363] For more on this adaptivity characteristic, *see* Joost Pauwelyn, *At the Edge of Chaos? Foreign Investment Law as a Complex Adaptive System, How It Emerged and How It Can Be Reformed*, 29(2) ICSID REV. 372 (2014).

[364] Barcelona Traction, Light and Power Co., Ltd., 1970 I.C.J. 4, ¶¶ 35-36, 40-41 (Feb. 5).

[365] Boute, *supra* note 350.

[366] Julien Chaisse, *Ascent: Stress, Shock, and Adaptation of the International Law on Foreign Investment*, 27 MINN. J. INT'L L. 339 (2018).

[367] Charles N. Brower & Shashank P. Kumar, *Investomercial Arbitration: Whence Cometh It? What Is It? Whither Goeth It?*, 30(1) ICSID REV. 35 (2015) (identifying within ISDS a distinct, hybrid field of law, having elements of private and public law, which addresses the relationship between foreign investors and host States based on a complementarity between contractual and treaty-based dispute settlement processes).

[368] *See, e.g.*, Dimitropoulos, *supra* note 170. Dimitropoulos asserts that the "delimitation of sovereignty by investment treaties and tribunals" is the *raison d'etre* for a systemic move away from international law and towards domestic law in regulating foreign direct investment. Though the author identifies a valid concern with the (ab)use of ISDS, he is putting the cart before the horse. In the US experience at least, international obligations relating to foreign investment are tertiary concerns of the policy community behind (1) economic impact; and (2) domestic law considerations such as due process. In

Security, Essential Security, Necessity, and the Right to Regulate are all concepts that implicate the very existential basis of statehood.[369] As such, any discussion of these topics in international law must begin with the presumption that measures taken in relation to a state's primary internal prerogatives are *prima facie* valid.[370]

Indeed, even when ruling against a state invoking a national security defense, tribunals are wont to signal a degree of deference to a state's determination of its own security interests.[371] A failure by arbitrators to afford states robust deference in these domains inevitably invites controversy. A track record of such, invites disqualification on the grounds of evident partiality.[372]

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other words, domestic regulation of foreign investment in populist regimes is better viewed as an indigenous phenomenon, because these regimes have no regard, rhetorically at least, for the value of international obligations or institutions. This does not mean that they are free from the real negative economic impacts of rejecting normative rules of international conduct, *viz.*, "outcasting". *See* Hathaway & Shapiro, *supra* note 33.

[369] The first three concepts are discussed in detail in Section II, *infra*. As to Right to Regulate, Boute notes that much of the literature on the Right to Regulate has focused on the right to regulate to prevent negative environmental externalities of investment but that this literature might be equally applicable to the right to Regulate against security externalities of existing investments in strategic assets. Boute, *supra* note 350, at 405.

[370] *See* Eastern Sugar B.V. v. Czech Rep., SCC Case No.088/2004, Partial Award ¶ 272 (Mar. 27, 2007) (emphasizing that the State must be afforded appreciation for "some measure of inefficiency, a degree of trial and error, [and] a modicum of human imperfection"); GAMI Inv., Inc. v. Mexico, UNCITRAL, GAMI Investments, Incorporated v Mexico, Final Award¶ 114 (Nov. 15, 2004) (finding that Mexico's perception of a legitimate goal in favor of public policy, though misguided, was not a treaty violation).

[371] Deutsche Telekom AG v Republic of India, PCA Case No 2014–10, Interim Award ¶ 235 (Dec. 13, 2017) ("In respect of the existence of essential security interests, the Tribunal accepts that a degree of deference is owed to a state's assessment. However, such deference cannot be unlimited"); *Devas* Award, *supra* note 185, ¶¶ 244-45 ("The Tribunal has also no difficulty in recognizing the 'wide measure of deference…'. National security issues relate to the existential core of a State. An investor who wishes to challenge a State decision in that respect faces a heavy burden of proof, such as bad faith, absence of authority or application to measures that do not relate to essential security interests.").

[372] Take the challenge to Prof. Orrego Vicuna by India in the *Devas* case—the only known successful challenge to an arbitrator for partiality due to issue preclusion. The basis for the challenge was that Prof. Vicuna could not approach the question of the semantic content of the phrase "essential security" within the Mauritius-India BIT with an open mind. This was based on the allegation that he had made his firm position apparent in three arbitrations under the Argentina-US BIT (which was found to have materially similar terms in its security exception), and most fatally in an academic article following the annulment of those awards in which he wrote the following:

While the interlinking of treaty and customary law requirements in respect of necessity has been held to be a manifest error of law in the context of a particular case [referring to the decision of the CMS annulment committee], one may respectfully wonder whether the error of law might not lie with the approach suggesting that a rather vague clause of a treaty might be able to simply do away with the obligations established under the same treaty.

Further, states are overwhelmingly free to tailor their treaty obligations as they see fit. There is no basis in customary international law for the proposition that states may not discriminate amongst one another in their international economic relations.[373] Even where they submit themselves to treaty obligations, their sovereign character remains legally paramount.[374] On the merits, as Brower and Kumar note, investment treaty arbitration relies intimately on domestic legal rules for substantive content.[375] And in enforcement, the continued participation of domestic courts gives states the opportunity to reassert "public policy" concerns regarding the achievement of any given arbitral award.[376]

These are not normative assumptions; they are positive realities. In light of these truths, and of the evidence apparent in arbitration's long track record as a mode of international adjudication, one is inclined to question the disbelief in the legitimacy

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In this light the discussion about whether the availability of the defense should first be examined under the treaty and, only if unsuccessful, examined next under customary international law, appears to be somewhat circular. If the treaty precludes the defense there is no second shot at it under customary law. If it provides for an exception and this is not defined, its examination under customary international law will be the first and only shot supplementing the treaty vacuum. It is the two shots that would appear to run counter to the strictness of the requirements of international law.

Appointed by the PCA, ICJ president Judge Tomka upheld the challenge on the grounds that Prof. Vicuna could not be impartial with regard to the inevitable issue of the Mauritius-India BIT's security exception. *Devas v. India*, PCA Case No. 2013-09, Decision on the Respondent's Challenge to Hon. Marc Lalonde as Presiding Arbitrator and Prof. Francisco Orrego Vicuna as Co-Arbitrator ¶¶ 60-65 (Sept. 30, 2013).

[373] OPPENHEIM'S INTERNATIONAL LAW, VOL 1, 373-377 (Robert Jennings & Arthur Watts QC eds., 9th ed. 1992).

[374] *See* Amco Asia Corp. and others v. Republic of Indonesia, ICSID Case No ARB/81/1, Award (Nov. 20, 1984) 24 ILM 1022, 1029.

[375] Brower & Kumar, *supra* note 367, at 55 (stating the ISDS, "has to account for the reality that the bundle of rights that constitute the investment is grounded in domestic law. The treaty cannot be wholly separated from the contract or from domestic law. The treaty and the contract are mutually reinforcing").

[376] It is at this stage that the true "positive" element of international law shine through, what Hathaway and Shapiro identify as "Adjudicated and Non-in-Kind" enforcement in the form of a partial abdication of sovereign immunity *vis-à-vis* an injured investor. Hathaway & Shapiro, *supra* note 33, at 327-28. Experience demonstrates that the law in this domain does bend to political gravity. Take the ICSID convention's otherwise clear provision that awards are subject to *ex parte* enforcement, ignored in *Mobil Cerro Negro Ltd. v. Bolivarian Republic of Venezuela*, in the face of stronger concerns relating to diplomatic practice and the potential for a reciprocal loss of sovereign immunity. 863 F.3d 96 (2d Cir. 2017).

of the process projected by its various detractors.[377] Once the notion that ISDS involves an obsolescing sovereignty bargain is removed, policymakers can turn to another fear, central to the TNP pathos, that states will use their commercial appendages to abuse the openness of the global economic for geopolitical gain.[378] State capitalism is a reality—one which international investment law is slowly but surely digesting.[379] As the system continues to adapt through evolving treaty practice,[380] it represents perhaps the best opportunity to strip the political venom from foreign government controlled firms.[381]

ISDS can help states establish clear standards and clear left and right boundaries for action related to questions of "geoeconomics" and "national security". It can promote cross-border investment flows, technology transfer, and vital access to liquidity for firms in growing industries and in emerging markets. But it can only do so effectively and efficiently, if the measures states use to carve-out sovereignty in important domains like national security are not abused to shield state action that is primarily commercial in nature.

Though it will be difficult no doubt, the process of ISDS can adapt to resolve disputes which nominally involve legitimate national security concerns. And when invoked legitimately, adherence to agreed-upon normative restraints on a state's regulatory powers should not be characterized as some insidious threat to security or sovereignty. Rather, ISDS acts as a case-specific safety valve.[382] It is a mode of transnational law in the sense arrived at by Judge Jessup,[383] which polishes the opaque, smooths out uncertainty, and promotes legitimate investment that would

[377] *See* Brower & Schill, *supra* note 30 (cataloguing and rebutting various critiques of procedural and substantive inequities alleged to be inherent to investment treaty arbitration by critics thereof).

[378] *See* Esper, *supra* note 268; Brown & Singh, *supra* note 7; Pompeo, *supra* note 267; *accord* Boute, *supra* note 350.

[379] Chaisse, *supra* note 366, at 344.

[380] Boute, *supra* note 350.

[381] *See* Meg Lippincott, *Depoliticizing Sovereign Wealth Funds Through International Arbitration*, 13 CHI. J. INT'L L. 649, 651 (2013).

[382] *See* Reisman, *supra* note 348; Kaufman-Kohler, *supra* note 348.

[383] Judge Jessup defined "transnational law" as "all law which regulates actions or events that transcend national frontiers." PHILIP C JESSUP, TRANSNATIONAL LAW 2 (1956)."

otherwise be chilled by what appears before the foreign investor in the guise of a totalizing and unforgiving regulatory firewall.

V. CONCLUSION

As of the time of writing, Chinese investors have brought a US$3.5 billion claim against Ukraine for measures related to blocking their repeated attempts to acquire a controlling stake in the Ukrainian aerospace company Motor Sich.[384] Motor Sich is one of the world's largest manufacturers of civilian and military turbine engines for aircraft but has struggled financially from 2014 owing to the loss of its chief export market in Russia.[385] Despite the financial situation of Motor Sich, the consummation of significant prior purchases of its stock by Chinese investors, and the fact that the rights to the technology utilized by Motor Sich is held by a separate Ukrainian SOE; the Antimonopoly Committee of Ukraine blocked each of Skyrizon's outright purchase attempts. For justification, Ukraine cited violations of antitrust laws and the need to prevent the transfer of sensitive military technology.[386]

Since 2017, Skyrizon's shares in Motor Sich have been frozen pending a still-ongoing national security review by Ukraine's security service. In March of 2020, a Kiev court rejected an appeal by Skyrizon's owners to unfreeze the shares.[387] And in December of 2020, Skyrizon's shareholders submitted a notice of arbitration to Ukraine.[388]

Many see the offers by Skyrizon as an attempt by China to exploit Motor Sich's financial distress in order to advance China's lagging military aviation capabilities.[389]

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[384] Cosmo Sanderson, *Ukraine faces multibillion claim over blocked aerospace deal*, GLOB. ARB. REV., Dec. 7, 2020.

[385] Olena Lennon, *Motor Sich and America's Pressure Campaign in Ukraine: Can it Keep the Chinese at Bay?*, FOCUS UKRAINE BLOG, WILSON CENTER: KENNAN INSTITUTE (Oct. 29, 2020), https://www.wilsoncenter.org/blog-post/motor-sich-and-americas-pressure-campaign-ukraine-can-it-keep-chinese-bay.

[386] *Id.*

[387] Natalia Zinets, *Ukraine court rejects Chinese appeal in aerospace deal opposed by Washington*, REUTERS, Apr. 17, 2020, https://www.reuters.com/article/us-ukraine-motorsich/ukraine-court-rejects-chinese-appeal-in-aerospace-deal-opposed-by-washington-idUSKBN21Z1AY.

[388] Sanderson, *supra* note 384.

[389] *Id.*

For this reason, the US has been active in lobbying Ukraine to prevent the acquisition, [390] including by suggesting updates to Ukraine's domestic foreign investment screening mechanism to block the transfer of strategic assets,[391] and proposing that US investors acquire the company instead.[392]

Whatever the motivation, the method here is part and parcel of the US' TNP playbook. This paper has documented the levers and ontology of that strategy. The technological and military competition between the US and China that fuels TNP is spilling over across borders and into commercial transactions and commercial enterprises in dual-use technologies. Clearly, ISDS is already working its way into the seams of this conflict. As tension continues to build, and calls for decoupling grow louder, ISDS will continue to serve as a pin; holding together the fabric of global economic relations until a more permanent political consensus can be stitched together.

Marcus Aurelius, while ruminating on his anxiety about the future, developed the maxim that one should, "meet [the future], if you have to, with the same weapons of reason which today arm you against the present".[393] The Trump Administration may have been a temporary anomaly in the otherwise unbroken chain of liberal economic trade policy in the post-WWII economic order.[394] Or, it may portend a general rebuke of the liberal world order and the beginning of a new era in world trade and investment. One thing is clear: in either theoretical scenario the hard reality of technological competition is here to stay. How the political and economic risk attending that competition will be managed is up to the legal and policy practitioners

[390] Brett Forrest, *US Aims to Block Chinese Acquisition of Ukrainian Aerospace Company*, WSJ, Aug. 23, 2019.

[391] Katya Gorchinskaya, *Ukraine Prepares to Snub China in Aerospace Deal with US Help*, FORBES, Feb. 17, 2020, https://www.forbes.com/sites/katyagorchinskaya/2020/02/17/ukraine-prepares-to-snub-china-in-aerospace-deal-with-us-help/?sh=1c0951c7328c.

[392] Brett Forrest, *Security Contractor Erik Prince Is in Talks to Acquire Ukraine's Motor Sich*, WSJ, Nov. 5, 2019.

[393] MARCUS AURELIUS, MEDITATIONS, Book VII, (8), (c. 161–180 AD).

[394] *See* Patrick Pearsall, *The Biden Administration Approach to Investment Arbitration? Retail Multilateralism*, KLUWER ARBITRATION BLOG, Nov. 9, 2020; Lester, *supra* note 16 (analyzing public comments in which Biden's nominee for US Trade Representative expressed the need, motivated by domestic political headwinds, to maintain an aggressive stance toward China).

of the future.

Effective tools already exist to manage the frictions between State and State, and between State and foreign investor. Indeed, arbitration between nation-states has existed on the international plane for as long as the concept of the sovereign state has.[395] Even faced with the specter of unknown weapons and conflicts of the future, there is no need to break the mold by which today's robust system of international trade and investment is bonded. Rather, states and investors should choose to arm themselves with the familiar and well-worn tools of the present and embrace the benefits of ISDS to resolve the inevitable TNP-adjacent disputes of the future.

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[395] *See* Henry T. King Jr. & Marc A. Le Forestier, *Papal Arbitration—How the Early Roman Catholic Church Influenced Modern Dispute Resolution*, 52(3) DISP. RES. J (1997) (describing the Church's historic role as arbitrator among Christian sovereigns beginning in the 13th century).

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