

Industrial Policy and the New Internationalism: After the Liberal International Order

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Financial and economic crises, pandemics, border closures, supply chain disruptions, wars, political uncertainty have fundamentally changed the way governments view economic development. Broad-based government interventions are now the order of the day. Many names have been given to the emerging new economics of intervention: “homeland economics,” the “new productivism paradigm,” “supply side progressivism,” “neomercantilism,” “new industrial policy,” or “Bidenomics”—in short, for the purposes of the article: “new industrialism.” Industrial policy is proliferating all over the world. The U.S. government is leading the trend of adopting such policies in an effort to boost domestic industrial production. Describing this strategy as “industrial” was as unexpected as the adoption of a government intervention policy.

In a further surprising move, U.S. officials speak about integrating domestic industrial policy with foreign trade policy as part of one “broader international economic policy.” Calls for an “alternative to the WTO” have also been repeatedly voiced. A “new internationalism” is emerging.

These developments are unfolding against the backdrop of an ongoing trade war between the U.S. and China—probably the most dramatic economic event of the last decades. The trade war between the two superpowers is morphing into a tech war. New industrial and trade policies primarily focus on maintaining, advancing, and developing new comparative advantages in the race for digital technology dominance. Economic statecraft, both as an ideology and as a tool in foreign affairs, is also becoming mainstream. New international economic agreements and new international marketcrafting reflect these changes.

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The contribution of this article sits at the intersection of two areas of legal scholarship: the rise of (domestic) industrial policy, and efforts to rethink international economic law—and the Liberal International Order (LIO). It first presents a novel conceptualization of contemporary international law. Instead of the more traditional classifications, it unveils a “free market” and an “infrastructure” layer of international economic law; both are now challenged by the advent of the digital economy and the digital world. In the new international economic order, industrial policy shapes domestic and international trade policy, as well as broader foreign policy. The article is one of the first contributions to provide a comprehensive legal analysis of the emerging new internationalism. While the focus is on the Indo-Pacific Economic Framework for Prosperity (IPEF), it discusses other new international fora of cooperation such as the E.U.-U.S. Trade and Technology Council (TTC) and the Digital Economy Partnership Agreement (DEPA). All these agreements place digital technologies at the forefront.

Finally, the article observes how new international economic agreements are giving rise to new forms of international economic ordering and marketcrafting. It observes first a transition from multilateralism to plurilateralism; a transition from broad-based thematic coverage to minilateralism; and, from economics to geoeconomics—and accordingly from liberalization to national security considerations. The article then presents economic and technological principles of the new emerging international economic order and makes recommendations for new principles of a new digital order. It closes by advocating a greater integration of novel principles, such as human-centricity, technological due process, publicness, and interoperability in new and emerging international economic agreements.

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Introduction

On September 26, 2022, Apple announced plans to begin shifting iPhone 14 production from China to India.¹ One would expect that clear corporate objectives and similar efficiency considerations would be the drivers of this decision. However, the rationale was neither economic nor financial. Rather, it was national. A little more than a year earlier, in June 2021, Brian Deese, then Director of the United States National Economic Council under President Biden, had made an unexpected statement at the Atlantic Council: “Strategic public investment to shelter and grow champion industries is a reality of the twenty-first century economy. We cannot ignore or wish this away.”² Deese has also suggested that “the most pertinent question for all of us is how do we re-underwrite the case for a modern American industrial strategy.”³

The way states view their economic and industrial development frameworks has significantly changed in recent years.⁴ The COVID-19 pandemic

1. Arjun Kharpal, *Apple begins making the iPhone 14 in India, marking a big shift in its manufacturing strategy*, CNBC (Sept. 26, 2022, 8:32 PM), <https://www.cnbc.com/amp/2022/09/26/apple-starts-manufacturing-the-iphone-14-in-india.html> [<https://perma.cc/Q4G4-838Y>].

2. *The Biden White House plan for a new U.S. industrial policy*, ATL. COUNCIL (June 23, 2021), <https://www.atlanticcouncil.org/commentary/transcript/the-biden-white-house-plan-for-a-new-us-industrial-policy/> [<https://perma.cc/M2BA-WVQP>].

3. Brian Deese, Speech in the Economic Club of New York, The Econ. Club of N.Y. (April 20, 2022), 8-9.

4. See generally David G. Tarr, *Government (Industrial) Policies for Competitiveness in a Global Economy* (World Bank, Policy Research Working Paper No. 4598, 2005); Dani Rodrik, *Industrial Policy for the Twenty-First Century* (Kennedy Sch. of Gov’t, Harv. Univ., Working Paper, 2004), available at <https://drodrik.scholar.harvard.edu/files/dani-rodrik/files/industrial-policy-twenty-first-century.pdf> [<https://perma.cc/QZC3-LYQB>]; Wim Naudé, *Industrial Policy: Old and New Issues* (World Inst. Dev. Econ. Rsch., Working Paper No. 2010/106, 2010), <https://www.econstor.eu/bitstream/10419/54072/1/63687043X.pdf> [<https://perma.cc/LPH9-R8SU>]; THE INDUSTRIAL POLICY REVOLUTION I: THE ROLE OF GOVERNMENT BEYOND IDEOLOGY (Joseph E. Stiglitz & Justin Yifu Lin eds., 2013); Dani Rodrik, *Green Industrial Policy*, 30 OXFORD REV. OF ECON. POL’Y 469 (2014); INT’L LAB. ORG., TRANSFORMING ECONOMIES:

has further accelerated the adoption and proliferation of industrial policies.⁵ Border closures, supply chain disruptions, economic and political unpredictability have led to a shift even in the previously stable markets of the U.S. and Europe. Many countries realized the need to produce commodities such as health material and other medical supplies domestically. Policymakers and commentators view this as a sign that markets are no longer operating efficiently, indicating a need for increased government intervention.⁶ Others have interpreted it instead as a shift toward protectionism.⁷ In the same vein, *The Economist* warns that this type of “homeland economics” will in fact “make the world poorer.”⁸

Many names have been given to the new economics that justifies greater government intervention:⁹ besides “homeland economics,”¹⁰ it has been referred to as “new industrial policy,”¹¹ the “new productivism paradigm,”¹² “supply side

MAKING INDUSTRIAL POLICY WORK FOR GROWTH, JOBS AND DEVELOPMENT (José M. Salazar-Xirinachs, Irmgard Nubler & Richard Kozul-Wright eds., 2014); Mark Wu & James Salzman, *The Next Generation of Trade and Environment Disputes: The Rise of Green Industrial Policy*, 108 Nw. U. L. REV. 401 (2014); Joseph E. Stiglitz, *Industrial Policy, Learning, and Development*, in *THE PRACTICE OF INDUSTRIAL POLICY: GOVERNMENT—BUSINESS COORDINATION IN AFRICA AND EAST ASIA* 23 (John Page & Finn Tarp eds., 2017); Myrto Kalouptsi, Nahim Bin Zahur & Panle Barwick, *Industrial policy: Lessons from China*, VOXEU CEPR (Sept. 11, 2019), <https://cepr.org/voxeu/columns/industrial-policy-lessons-china> [https://perma.cc/PPD5-BPUB]; Erik S. Reinert, *Industrial Policy: A Long-Term Perspective and Overview of Theoretical Arguments* (UCL Institute for Innovation and Public Purpose, Working Paper Series IIPP WP 2020-04), <https://www.ucl.ac.uk/bartlett/public-purpose/wp2020-04> [https://perma.cc/58GT-4QCP]; JOSTEIN HAUGE, *THE FUTURE OF THE FACTORY* (2023); Robert Armstrong & Ethan Wu, *Dani Rodrik: doing industrial policy right*, THE FINANCIAL TIMES (Feb. 9, 2024), <https://www.ft.com/content/34872d9a-3587-4b27-a01d-2905f8e23408> [https://perma.cc/MG9P-CZJT].

5. Timothy Meyer & Swati Dhingra, *Leveling the Playing Field: Industrial Policy and Export-Contingent Subsidies in India-Export Related Measures*, 20 WORLD TRADE REV. 606, 608 (2021) (with further references).

6. ATL. COUNCIL, *supra* note 2.

7. Marc-William Palen, *Protectionism 100 years ago helped ignite a world war. Could it happen again?*, WASH. POST (June 30, 2017, 6:00 AM), <https://www.washingtonpost.com/news/made-by-history/wp/2017/06/30/protectionism-100-years-ago-helped-ignite-a-world-war-could-it-happen-again/> [https://perma.cc/QG6B-DSQM].

8. “Homeland economics” will make the world poorer, THE ECONOMIST (Oct. 2, 2023), https://www.economist.com/special-report/2023/10/02/homeland-economics-will-make-the-world-poorer?utm_medium=cpc.adword.pd&utm_source=google&ppccampaignID=18151738051&ppcadID=&utm_campaign=a.22brand_pmax&utm_content=conversion.direct.response.anonymous&gad_source=1&gclid=CjwKCAjwMrqzBhAoEiwAXVpgo0HwCVw8T_148Ax3yBGb2vypDX-ciGtF96P7mOFmB6541a_hyycOBoCdyYQAvD_BwE&gclid=aw.ds [https://perma.cc/Q4ZL-2DEC].

9. See Réka Juhász, Nathan J. Lane & Dani Rodrik, *The New Economics of Industrial Policy* (Nat’l Bureau of Econ. Rsch. Working Paper No. 31538, 2023), <https://www.nber.org/papers/w31538> (discussing how new industrial policy and its tools work) [https://perma.cc/6TH9-3UCB].

10. THE ECONOMIST, *supra* note 8.

11. Laura Tyson & John Zysman, *The New Industrial Policy and Its Critics*, PROJECT SYNDICATE (Nov. 17, 2023), <https://www.project-syndicate.org/onpoint/the-case-for-new-industrial-policy-by-laura-tyson-and-john-zysman-2023-11?barrier=accesspaylog#:~:text=Far%20from%20harming%20markets%2C%20industrial,be%20delayed%20or%20lacking%20altogether> [https://perma.cc/6GCN-SFSZ].

12. Dani Rodrik, *The New Productivism Paradigm?*, PROJECT SYNDICATE (July 5, 2022), <https://www.project-syndicate.org/commentary/new-productivism-economic-policy-paradigm-by-dani-rodrik-2022-07?barrier=accesspaylog> [https://perma.cc/Q82D-8TVY].

progressivism,”¹³ “neomercantilism,”¹⁴ “marketcrafting,”¹⁵ or “Bidenomics.”¹⁶ I will refer to these policies as “new industrialism.”

The U.S. government has been increasingly adopting policies to facilitate greater state intervention in the economy. The Biden administration actively worked towards boosting domestic industrial production.¹⁷ The administration describing this strategy as “industrial” was as unexpected as the announcement of a government intervention policy.¹⁸ Industrial policy is proliferating all over the world—in the East and West, South and North.¹⁹ In fact, the U.S. is leading the way towards new industrial policymaking.²⁰ The European Union and its member states have also been actively pursuing robust industrial policies once again—beyond the orthodoxies of the “internal market.”²¹

In another surprising development, President Biden highlighted in his 2022 State of the Union address that “[i]nstead of relying on foreign supply chains, let’s make it in America.”²² This underscored, more starkly than at any

13. Ezra Klein, *The Economic Mistake the Left Is Finally Confronting*, N.Y. TIMES (Sept. 19, 2021), <https://www.nytimes.com/2021/09/19/opinion/supply-side-progressivism.html> [<https://perma.cc/ZSX7-L6BH>].

14. See ERIC HELLEINER, *THE NEOMERCANTILISTS: A GLOBAL INTELLECTUAL HISTORY* (2021) (presenting a historically informed account of contemporary critiques to foreign trade and new protectionist policies); see also Robert Manduca & Nic Johnson, *After Free Trade*, BOSTON REV. (May 25, 2022), <https://www.bostonreview.net/articles/after-free-trade/> [<https://perma.cc/2M5X-87C5>] (discussing Helleiner’s book).

15. STEVEN K. VOGEL, *MARKETCRAFT: HOW GOVERNMENTS MAKE MARKETS WORK* (2018); CHRIS HUGHES & PETER SPIEGLER, ROOSEVELT INSTITUTE, *MARKETCRAFTING: A 21ST-CENTURY INDUSTRIAL POLICY*, (2023), <https://rooseveltinstitute.org/publications/marketcrafting-a-21st-century-industrial-policy/> [<https://perma.cc/LED4-6CKN>]; Chris Hughes & Peter Spiegler, *The Promise of Marketcrafting*, 69 DEMOCRACY (2023), <https://democracyjournal.org/magazine/69/the-promise-of-marketcrafting/> [<https://perma.cc/AT6T-TU9X>].

16. Press Release, The White House, *Bidenomics Is Working: The President’s Plan Grows the Economy from the Middle Out and Bottom Up—Not the Top Down* (June 28, 2023), <https://www.whitehouse.gov/briefing-room/statements-releases/2023/06/28/bidenomics-is-working-the-presidents-plan-grows-the-economy-from-the-middle-out-and-bottom-up-not-the-top-down/> [<https://perma.cc/D9AL-3JNB>].

17. Press Release, The White House, *The Biden-Harris Plan to Revitalize American Manufacturing and Secure Critical Supply Chains in 2022* (Feb. 24, 2022), <https://www.whitehouse.gov/briefing-room/statements-releases/2022/02/24/the-biden-harris-plan-to-revitalize-american-manufacturing-and-secure-critical-supply-chains-in-2022/> [<https://perma.cc/86VX-BEMV>].

18. Reda Cherif & Fuad Hasanov, *The Return of the Policy That Shall Not Be Named: Principles of Industrial Policy* (IMF, IMF Working Paper WP/19/74, Mar. 2019), <https://www.imf.org/-/media/Files/Publications/WP/2019/WPIEA2019074.ashx> [<https://perma.cc/K65M-GY6S>].

19. See U.N. CONF. ON TRADE & DEV., *Chapter IV: Investment and New Industrial Policies*, in *WORLD INVESTMENT REPORT 2018* 126, (2018), https://unctad.org/system/files/official-document/wir2018ch4_en.pdf [<https://perma.cc/33MY-F3MC>] [*hereinafter* WIR 2018]; *Many Countries are seeing a revival of industrial policy: a previously discredited approach has found new believers*, THE ECONOMIST (Jan. 10, 2022), <https://www.economist.com/special-report/2022/01/10/many-countries-are-seeing-a-revival-of-industrial-policy> [<https://perma.cc/YLQ5-M298>]; Anshu Siripurapu & Noah Berman, *Is Industrial Policy Making a Comeback?*, COUNCIL ON FOREIGN RELS. (Sept. 18, 2023), <https://www.cfr.org/background/industrial-policy-making-comeback> [<https://perma.cc/QEX9-2DBR>].

20. See discussion *infra* part II, Section B, Subsection 1.

21. See discussion *infra* part II, Section B, Subsection 3.

22. President Joe Biden, *State of the Union Address* (The White House, March 1, 2022), <https://bidenwhitehouse.archives.gov/state-of-the-union-2022/> [<https://perma.cc/XV6K-UPW3>].

time in the past decades, the connection between domestic production and international trade.²³ Tariffs saw increased use during the COVID-19 pandemic, as global supply chains were strained and states were compelled to reevaluate their stance on imports and exports.²⁴ Generally, states have established trade barriers to limit the spread of the virus as well as to protect domestic industries and workers.²⁵ President Biden's programmatic announcement also signaled a shift in international trade and broader economic policy. Jake Sullivan, National Security Advisor under Biden, consolidated this approach in April 2023 as a "deeply integrate[d] domestic policy and foreign policy."²⁶ The goal of this "broader international economic policy" is to integrate domestic industrial and innovation policies at home and abroad.²⁷ The combination of foreign policy and domestic industrial policy is often called "economic statecraft."²⁸

Similar developments have been taking place at the international level as well. The leaders of the Group of 7 (G7) developed in June 2021 a blueprint for a future design of the international order.²⁹ In the aftermath of what became known as the "Cornwall Consensus," United States Trade Representative (USTR) Katherine Tai called in late March 2022 for a more expansive trade policy that goes beyond tariffs and sanctions and embraces "rebuilding our

23. See Harsha Vardhana Singh, *New Industrial Policy and Manufacturing: Options for International Trade Policy*, THE E15 INITIATIVE (2016), https://www3.weforum.org/docs/E15/WEF_New_Industrial_Policy_Manufacturing_report_2015_1401.pdf [<https://perma.cc/RML9-3PSQ>]; *Industrial Policy and International Competition: Trade and Investment Perspectives*, WORLD ECON. F. (Feb. 2022) (discussing the connections between domestic industrial and foreign trade policymaking).

24. Florian Bieber, *Global Nationalism in Times of the COVID-19 Pandemic*, 50 NATIONALITIES PAPERS 13 (2022).

25. Kevin Chen & Rui Mao, *Firelines as Fault Lines: Increased Trade Barriers During the COVID-19 Pandemic Further Shatter the Global Food System*, 12 FOOD SEC. 735, 736 (2020).

26. Jake Sullivan, Remarks by National Security Advisor Jake Sullivan on Renewing American Economic Leadership at the Brookings Institution (Apr. 27, 2023), <https://www.presidency.ucsb.edu/documents/remarks-national-security-advisor-jake-sullivan-renewing-american-economic-leadership-the> [<https://perma.cc/34HM-J2Y4>]; see also Georgios Dimitropoulos, *Law and Digital Globalization*, 44 U. PA. J. INT'L L. 41, 95-102 (2022) (presenting a new "integrated political economy" for digital globalization).

27. Sullivan, *supra* note 26.

28. Daniel Flatley & Mackenzie Hawkins, *Author Explains How U.S. Brand of Economic Statecraft Went Mainstream*, BLOOMBERG (Nov. 20, 2023, 7:00 AM), https://www.bloomberg.com/news/newsletters/2023-11-20/economic-statecraft-edition-author-discusses-shift-in-us-policy?utm_source=website&utm_medium=share&utm_campaign=copy [<https://perma.cc/RQH7-RTJ5>]; see generally ROBERT D. BLACKWILL & JENNIFER M. HARRIS, *WAR BY OTHER MEANS: GEOECONOMICS AND STATECRAFT* (2016) (explaining and criticizing the separation of these two spheres of policymaking in the mid to late 20th century).

29. G7, THE CORNWALL CONSENSUS: BUILDING FORWARD BETTER (2021), <https://www.mofa.go.jp/files/100200092.pdf> [<https://perma.cc/T8C3-FYFY>] [*hereinafter* Cornwall Consensus]; see also G7, CARBIS BAY G7 SUMMIT COMMUNIQUÉ (June 13, 2021), https://assets.publishing.service.gov.uk/media/60ec1a17d3bf7f568ffe86df/Carbis_Bay_G7_Summit_Communique_PDF_430KB_25_pages.pdf [<https://perma.cc/5EKD-CS2L>] [*hereinafter* Carbis Bay Communiqué]; G7, G7 PANEL ON ECONOMIC RESILIENCE: KEY POLICY RECOMMENDATIONS (2021) [*hereinafter* G7 Panel on Economic Resilience]. The G7 is a political forum consisting of the largest economies of the International Monetary Fund, as well as the wealthiest liberal democracies: Canada, France, Germany, Italy, Japan, the United Kingdom, and the United States. See also Sullivan, *supra* note 26, (referring to it as a "new Washington consensus"); Dimitropoulos, *supra* note 26 (discussing the new political economy of the Cornwall order).

industrial base.”³⁰ This was potentially hinting at an alternative to the WTO.³¹ Treasury Secretary Janet Yellen, speaking in April 2022, put forward the idea that the U.S. would have to focus on a “network of plurilateral trade agreements” with friendly countries “to achieve free but secure trade.”³² The plan was for Bidenomics and new industrialism to be accompanied by a “new internationalism.”³³ Dani Rodrik and colleagues have also proposed a similar approach, putting forward proposals for a “thin” or “realist” global order.³⁴

Around the same time, in April 2022, Ngozi Okonjo-Iweala, Director-General of the WTO, was explaining how the emergence of new political and economic powers, growing inequality within countries, the global financial crisis, the pandemic, as well as the war in Ukraine “have led many to conclude that global trade and multilateralism—two pillars of the WTO—are more threat than opportunity. They argue we should retreat into ourselves, make as much as we can ourselves, grow as much as we can ourselves.”³⁵ Okonjo-Iweala went on: “This would be tragic folly: consider the economic damage that would be done in the process of reversing most of the trade integration of the past few decades.”³⁶

Despite the cry of the WTO Director-General, the United States, along with its partners in Asia and the Pacific, announced in May 2022 the Indo-Pacific Economic Framework for Prosperity (IPEF).³⁷ Its fourteen members represent 40% of global GDP.³⁸ The IPEF is not a traditional agreement. It does not include binding commitments such as lowering of tariffs or market access.³⁹

30. Ambassador Katherine Tai, *Testimony Before the Senate Finance Committee Hearing on the President's 2022 Trade Policy Agenda*, 117th Cong. (Mar. 31, 2022), <https://ustr.gov/about-us/policy-offices/press-office/speeches-and-remarks/2022/march/testimony-ambassador-katherine-tai-senate-finance-committee-hearing-presidents-2022-trade-policy> [<https://perma.cc/WUZ9-K9WN>].

31. See *infra* section III.C.2.

32. Janet L. Yellen, *Remarks on Way Forward for the Global Economy*, U.S. Dep't of the Treasury (Apr. 13, 2022).

33. Charles A. Kupchan & Peter L. Trubowitz, *The Home Front: Why an Internationalist Foreign Policy Needs a Stronger Domestic Foundation*, 100 FOREIGN AFFS. 92, 95 (2021).

34. This concept envisions generally distinct and delineated orders centered around major powers like the U.S. and China. Dani Rodrik & Stephen Walt, *How to Construct A New Global Order*, (Harv. Kennedy Sch., Working Paper No. RWP21-013, 2021), <https://ssrn.com/abstract=3853936> [<https://perma.cc/JGY4-LLNJ>]; Dani Rodrik & Stephen M. Walt, *How to Build a Better Order: Limiting Great Power Rivalry in an Anarchic World*, 101 FOREIGN AFFAIRS 142 (2022), <https://www.foreignaffairs.com/world/build-better-order-great-power-rivalry-dani-rodrik-stephen-walt> [<https://perma.cc/JG3U-C8TP>]; see also Dani Rodrik, *Putting Global Governance in its Place*, 35 WORLD BANK RSCH. OBSERVER 1 (2020).

35. Ngozi Okonjo-Iweala, Director-General, WTO, *Remarks before the National Foreign Trade Council* (Apr. 27, 2022), https://www.wto.org/english/news_e/spno_e/spno25_e.htm [<https://perma.cc/KMN6-5RHM>].

36. *Id.*

37. *The United States Launches the Indo-Pacific Economic Framework for Prosperity and the Americas Partnership for Economic Prosperity*, 116 AM. J. INT'L L. 868, 868-69 (2022).

38. Press Release, The White House, FACT SHEET: In Asia, President Biden and a Dozen Indo-Pacific Partners Launch the Indo-Pacific Economic Framework for Prosperity (May 23, 2022), <https://www.whitehouse.gov/briefing-room/statements-releases/2022/05/23/fact-sheet-in-asia-president-biden-and-a-dozen-indo-pacific-partners-launch-the-indo-pacific-economic-framework-for-prosperity/> [<https://perma.cc/6YZY-7XTP>].

39. Demetri Sevastopulo & Kana Inagaki, *Joe Biden waters down Indo-Pacific Economic*

As its name suggests, it serves as a flexible yet structured legal arrangement for future negotiations. IPEF also encompasses an open invitation for other countries to join at any point. The IPEF is based on four pillars: a connected economy, a resilient economy, a clean economy, and a fair economy.⁴⁰ The first binding agreement under the IPEF framework focuses on supply chains.⁴¹

These developments are unfolding against the backdrop of an ongoing trade war between the U.S. and China—the most dramatic economic event of the last decades. Critically, the trade war between the two superpowers is evolving into a technology war.⁴² New industrial and trade policies are thus mostly about retaining, advancing, and developing new technological capabilities of states. A wave of new international economic agreements reflects this observation. As Yellen had announced, new plurilateral trade agreements would, and do, address growing economic challenges, and crucially also the digital economy.⁴³ Indeed, The Cornwall Consensus places the digital economy at the forefront of its initiatives.⁴⁴ The first pillar of the IPEF is specifically focused on agreements within the digital economy. The Digital Economy Partnership Agreement (DEPA), signed by Singapore, New Zealand, and Chile already in June 2020, operates with a similar modular design. Other Digital Economy Agreements (DEAs) have also adopted this approach, which allows for the combination of both binding and best effort obligations.⁴⁵ The EU-U.S. Trade and Technology Council (TTC), established in June 2021, operates as a forum for the coordination of trade and technology policies of the two transatlantic allies.

As these changes unfold, legal scholars are actively pursuing a new approach to international law⁴⁶—one that extends beyond the prevalence of U.S. and European interests.⁴⁷ The history of international law is now

Framework to win more support, FINANCIAL TIMES (May 20, 2022), <https://www.ft.com/content/91207c37-c9bd-4737-abf5-afc71200f8a1> [https://perma.cc/8GAT-NGTC].

40. Press Release, The White House, Statement on Indo-Pacific Economic Framework for Prosperity (May 23, 2022), <https://www.whitehouse.gov/briefing-room/statements-releases/2022/05/23/statement-on-indo-pacific-economic-framework-for-prosperity/> [https://perma.cc/S5LU-9AXH].

41. Press Release, U.S. Dept. of Com., U.S. Department of Commerce Publishes Text of Landmark Indo-Pacific Economic Framework for Prosperity (IPEF) Supply Chain Agreement (Sept. 7, 2023), <https://www.commerce.gov/news/press-releases/2023/09/us-department-commerce-publishes-text-landmark-indo-pacific-economic> [https://perma.cc/D4QH-ETVM].

42. See, e.g., CHRIS MILLER, CHIP WAR: THE FIGHT FOR THE WORLD'S MOST CRITICAL TECHNOLOGY (2022) (analyzing the tech war in semiconductors); David E. Sanger, *Biden Issues New Order to Block Chinese Investment in Technology in the U.S.*, N.Y. TIMES (Sept. 15, 2022), <https://www.nytimes.com/2022/09/15/us/politics/biden-china-tech-executive-order.html> [https://perma.cc/P9LJ-QZZA].

43. Yellen, *supra* note 32.

44. Dimitropoulos, *supra* note 26.

45. Marta Soprana, *The Digital Economy Partnership Agreement (DEPA): Assessing the Significance of the New Trade Agreement on the Block*, 13 TRADE, L. & DEV. 143 (2021); Neha Mishra & Ana Maria Palacio Valencia, *Digital Services and Digital Trade in the Asia Pacific: An Alternative Model for Digital Integration?*, 31 ASIA PAC. L. REV. 489 (2023).

46. See, e.g., Karen J. Alter, *Visions of International Law: An Interdisciplinary Retrospective*, 33 LEIDEN J. INT'L L. 837 (2020); Melissa J. Durkee, *The Pledging World Order*, 48 YALE J. INT'L L. 1 (2023); Adil Ahmad Haque, *The Inner Logic of International Law* 1, 1 (Rutgers L. Sch. Rsch. Paper, 2022), <http://dx.doi.org/10.2139/ssrn.4261174> [https://perma.cc/KPS4-4REU].

47. See generally Makane Moïse Mbengue & Olabisi D. Akinkugbe, *The Criticism of Eurocentrism and International Law: Countering and Pluralizing the Research, Teaching, and Practice of Eurocentric International Law*, in THE OXFORD HANDBOOK OF INTERNATIONAL LAW IN

well-documented. Originally derived from natural law and *ius gentium*, it evolved in the 19th century into a positivist discipline. Over time, it has grown more “pragmatic,” focused increasingly on efficiency. This evolution has produced both winners and losers; powerful countries have significantly influenced international law, often to the detriment of developing nations, which have endured substantial losses.⁴⁸

The contribution of this Article lies at the intersection of two areas of legal scholarship: the rise of (domestic) industrial policy, and efforts to rethink international economic law. It observes that in the new international economic order, industrial policy shapes domestic and international trade policy, as well as broader foreign policy. It is one of the first contributions to provide a legal analysis of these developments, as well as how new international economic agreements give rise to new forms of international economic ordering and international marketcraft. It presents structural, economic, and technical principles of the new emerging international law and international economic order and makes recommendations for the adoption of new principles for the emerging digital economic order.

The remainder of the article is structured as follows: Part I presents a new way of understanding international economic law. Beyond traditional presentations of international economic law, it highlights instead three distinct but interconnected layers: a free market layer; an infrastructural layer; and a new developing digital layer. International law as developed in the late 20th century primarily promotes free and open international markets, supporting the freedom of movement for goods, services, and capital. In doing so, international economic law has traditionally focused on outputs—rather than the inputs that go into the production process. However, this started changing towards the end of the 20th century. As early as the 1990s, regulating territory and land had emerged as an important theme in international economic governance.⁴⁹ As a result, international law acquired an infrastructural dimension.⁵⁰ Beyond infrastructure, domestic industrial and digital policy now shape international law.

Part II turns to the discussion of new industrial policymaking—or new industrialism. It explores the rise of industrial policy at the domestic level. It observes the two main features of new industrial policies: the effort to develop and enhance domestic digital industries, and the outward-looking nature of domestic industrial policies. It highlights aspects that pertain to the development of new industries as part of global value chains, fencing off and import control policies, as well as export controls in the digital economy. Part III examines the

EUROPE 225 (Anne van Aaken, Pierre d'Argent, Lauri Mälksoo & Johann Justus Vasel eds., 2023) (drawing on Third World Approaches to International Law in examining the how the research and teaching of international law in the Global South challenges Eurocentrism in international law).

48. See, e.g., ANTONY ANGHIE, *IMPERIALISM, SOVEREIGNTY AND THE MAKING OF INTERNATIONAL LAW* 2 (2005) [*hereinafter* Anghie, *Imperialism, Sovereignty*] (providing the authoritative account of this historical process of formation of international law).

49. Seth Schindler & J. Miguel Kanai, *Getting the Territory Right: Infrastructure-Led Development and the Re-Emergence of Spatial Planning Strategies*, 55 *REG'L STUDS.* 40 (2021).

50. See generally Benedict Kingsbury, *Introduction to the Symposium on Infrastructuring International Law*, 117 *AJIL UNBOUND* 1 (Jan. 2023).

rise of a new internationalism driven by the emergence of new industrial and digital policies. It first asks the question whether domestic industrial policy is still possible under the existing frameworks of international law. It then argues that a new “industrial layer” of international law is both emerging as well as desirable. This Part then goes on to explore new economic agreements inspired and shaped by new industrialism, centering the IPEF in the discussion. Part IV closes with the presentation of emerging structural principles of the new international economic order. It observes a transition from multilateralism to plurilateralism; a transition from broad-based thematic coverage to unilateralism; and, from economics to geoeconomics—and accordingly from liberalization to national security considerations. The article then presents economic and technological principles of the new emerging international economic order. It makes the case for the better and more integrated inclusion of technological principles into international economic agreements,⁵¹ and identifies human-centricity, technological due process, publicness, and interoperability as being at the heart of this transition.⁵²

I. The Transformations of International Law

International law has undergone significant changes in recent decades. This part of the article examines the changes that occurred in the latter half of the twentieth century and the early twenty-first century, introducing a new typology of international economic law. It identifies three layers in contemporary international economic law: a free-market layer, an infrastructural layer, and a new digital layer.

51. The rise of digital technology is giving rise to a new (law and) political economy framework; see Amy Kapczynski, *Law and the Political Economy of Technology*, LAW & POL. ECON. BLOG (May 30, 2018), <https://lpeproject.org/blog/law-and-the-political-economy-of-technology/> [https://perma.cc/8UC4-YAF3] (bringing a political economy lens to technology); JULIE E. COHEN, *BETWEEN TRUTH AND POWER: THE LEGAL CONSTRUCTIONS OF INFORMATIONAL CAPITALISM* (2019) (examining the ways that law and information technology are mutually reconstructed). The work of Frank Pasquale aims developing a new law and political economy framework for digital technologies with a focus on AI and algorithms; see generally, e.g., FRANK PASQUALE, *THE BLACK BOX SOCIETY: THE SECRET ALGORITHMS THAT CONTROL MONEY AND INFORMATION* (2015); FRANK PASQUALE, *NEW LAWS OF ROBOTICS: DEFENDING HUMAN EXPERTISE IN THE AGE OF AI* (2020). See also John W. Bagby, David Reitter & Philip Chwistek, *An Emerging Political Economy of the BlockChain: Enhancing Regulatory Opportunities*, 88 UMKC L. REV. 419 (2019); Barton E. Lee, Daniel J. Moroz & David C. Parkes, *The Political Economy of Blockchain Governance* (Feb. 8, 2020), <http://dx.doi.org/10.2139/ssrn.3537314> [https://perma.cc/738M-R3LX] (both discussing new political economy frameworks for blockchain technology).

52. See also Georgios Dimitropoulos, *The Law of Blockchain*, 95 WASH. L. REV. 1117, 1188-91 (2020) (discussing a law and political economy framework of blockchain that is based on the principles of publicness, trust, and interoperability).

A. Free Market Layer

International law is a product of the European “states system;” it is also the result of the horrendous encounters of Europeans with non-European peoples in the East, South and West.⁵³ The pre-modern “law of nations” (*ius gentium*) was drawn from natural law (*lex naturalis*);⁵⁴ *ius gentium* regulates the interactions between individuals and nations, as well as among nations.⁵⁵ Since the adoption of the Westphalia treaties of 1648, international law has been regulating the relations between sovereign states.⁵⁶ (Public) international law was by the 19th century a law for the coordination of state interests—the protection of the coordinated existence of sovereign states.⁵⁷

International law faced a paradigm shift in the 19th century.⁵⁸ In the “positivist turn” of international law, consent and custom provided the foundations of an international law posited by the “international society” of sovereign states. During the inter-war period, a more “pragmatist” and social science-based approach to international law emerged.⁵⁹ The end of World War II marked the establishment of a new world order that became known as the Liberal International Order (LIO).⁶⁰ The new world order, largely spearheaded by the US, was based on the principles of political and economic liberalism.⁶¹ The second half of the 20th century was also marked by the globalization of economies as almost all countries’ economies opened to international trade and investment. During this span, the liberal economic model became dominant.

One of the main features of this order was that domestic politics were sometimes perceived as secondary or even inhibitive to the development of the global economy. This type of “ordo-globalism” posits that domestic development policies can hinder the functioning of both domestic and global markets.⁶² Globalization has thus been largely conceived and exercised as a process of “de-nationalization;” a gradual merging of markets, politics and the law.⁶³

53. Antony Anghie, *The Heart of my Home: Colonialism, Environmental Damage, and the Nauru Case*, 34 HARV. INT’L L. J. 445, 447-8 (1993); Anghie, *Imperialism, Sovereignty*, *supra* note 48, at 2.

54. THOMAS HOBBS, *LEVIATHAN* 92 (Richard Tuck ed., Cambridge Univ. Press 1996) (1651).

55. Roscoe Pound, *The Need for a Sociological Jurisprudence*, 19 GREEN BAG 607, 609 (1907) (citing RICHARD WOODDESSON, *ELEMENTS OF JURISPRUDENCE* 158 (1792) (arguing that merchant law is a branch of the law of nations)).

56. Harold Hongju Koh, *Why Do Nations Obey International Law?*, 106 YALE L. J. 2599, 2607 (1997).

57. See *S.S. Lotus (Fr. v. Turk.)*, Judgment, 1927 P.C.I.J. ser. A, No. 10, at 18 (Sept. 7).

58. See Martti Koskenniemi, *Into Positivism: Georg Friedrich von Martens (1756–1821) and Modern International Law*, 15 CONSTELLATIONS 189 (2008).

59. Anghie, *Imperialism, Sovereignty*, *supra* note 48, at 124-29.

60. See Michael Barnett, *International Progress, International Order, and the Liberal International Order*, 14 CHINESE J. INT’L POL. 1, 13 (2021) (with further references).

61. See Kristen Hopewell, *Strategic Narratives in Global Trade Politics: American Hegemony, Free Trade, and the Hidden Hand of the State*, 14 CHINESE J. INT’L POL. 51 (2021).

62. QUINN SLOBODIAN, *GLOBALISTS: THE END OF EMPIRE AND THE BIRTH OF NEOLIBERALISM* 5-7, 266-69 (2020).

63. Jost Delbruck, *Globalization of Law, Politics and Markets - Implications for Domestic Law - A European Perspective*, 1 IND. J. GLOB. LEGAL STUDS. 9, 9 (1993); see also Alfred C. Aman, *Globalization as Denationalization: Pluralism, Democracy Deficits in the U.S. and the Need to Extend the Province of Administrative Law*, in *WELTINNENRECHT. LIBER AMICORUM JOST DELBRÜCK* 13, 18 (Klaus Dicke et al. eds., 2005).

“Neoliberalism” emphasizes the primacy of the market and the rights of market actors—especially contract and property rights—in the interplay between global and local dynamics.⁶⁴

Neoliberal globalization sharpened divides that had been latent for two or more centuries: those between the domestic and the international realm,⁶⁵ as well as those between politics and economics.⁶⁶ In the aftermath of World War II, international law started moving away from the regulation of horizontal coexistence of states.⁶⁷ In some international regimes, the main normative goal became the shaping of common values—such as the free movement of goods and services—for the international community.⁶⁸ This shift is frequently described as the transition to an “international law of global governance,” or a “law of globalization.”⁶⁹ The international law of global governance establishes a vertical relationship between international law and domestic law.

During the years of the LIO, international law established itself as a “universalist” project.⁷⁰ This conceptualization of international law gave rise to a perceived need to harmonize domestic laws and regulations.⁷¹ Experts in

64. See generally Anthea Roberts, Henrique Choer Moraes & Victor Ferguson, *Toward A Geoeconomic Order in International Trade and Investment*, 22 J. INT'L ECON. L. 655, 656 (2019). See also David Singh Grewal & Jedediah Purdy, *Introduction: Law and Neoliberalism*, 77 L. & CONTEMP. PROBS. 1, 23 (2014) (elaborating on the definition of neoliberalism). See also ANDREW LANG, *WORLD TRADE LAW AFTER NEOLIBERALISM: REIMAGINING THE GLOBAL ECONOMIC ORDER* 1 (2011) (discussing trade law in the era of neoliberalism, and possibilities for reform while taking human rights issues into account).

65. See MARK MAZOWER, *GOVERNING THE WORLD: THE HISTORY OF AN IDEA, 1815 TO THE PRESENT* xiv (2012) (explaining that modern institutions—domestic and international—have been developed in a relationship of opposition between “nationalism” and “internationalism.”).

66. This is often referred to as the opposition between “dominium” (the world of states and sovereignty) and “imperium” (the world of property and ownership); Quinn Slobodian, *Human Rights against Dominion*, HUMANITY (Oct. 4, 2019), <http://humanityjournal.org/blog/human-rights-against-dominium/> [https://perma.cc/BT73-PC6Z].

67. See WOLFGANG FRIEDMANN, *THE CHANGING STRUCTURE OF INTERNATIONAL LAW* 60 (1964).

68. ANDREAS L. PAULUS, *DIE INTERNATIONALE GEMEINSCHAFT IM VÖLKERRECHT: EINE UNTERSUCHUNG ZUR ENTWICKLUNG DES VÖLKERRECHTS IM ZEITALTER DER GLOBALISIERUNG* 100-03 (2001).

69. See Jost Delbrück, *Von der Staatenordnung über die internationale institutionelle Kooperation zur “supraterritorial or global governance,”* in *WELTINNENPOLITIK: HANDELN AUF WEGEN IN DER GEFAHR* 87 (Ulrich Bartosch & Jochen Wagner eds., 2008); EYAL BENVENISTI, *THE LAW OF GLOBAL GOVERNANCE* (2014). The category of “transnational law” is also indicative of these changes in international law; PHILLIP CARYL JESSUP, *TRANSNATIONAL LAW* 1–2 (1956), especially note 3. See also JAMES N. ROSENAU, *THE STUDY OF GLOBAL INTERDEPENDENCE: ESSAYS ON THE TRANSNATIONALISATION OF WORLD AFFAIRS* (1980).

70. See Anghie, *Imperialism, Sovereignty*, *supra* note 48, at 32; see also SUNDHYA PAHUJA, *DECOLONISING INTERNATIONAL LAW: DEVELOPMENT, ECONOMIC GROWTH AND THE POLITICS OF UNIVERSALITY* (2011). Universalism has not remained unchallenged in the history of the development of international law. See Armin von Bogdandy & Sergio Dellavalle, *Universalism and Particularism: A Dichotomy to Read Theories on International Order*, in *SYSTEM, ORDER, AND INTERNATIONAL LAW: THE EARLY HISTORY OF INTERNATIONAL LEGAL THOUGHT FROM MACHIAVELLI TO HEGEL* (Stefan Kadelbach, Thomas Kleinlein & David Roth-Isigkeit eds., 2017); Ralf Michaels, *Beyond Universalism and Particularism in International Law—Insights From Comparative Law and Private International Law*, 99 BOS. UNIV. L. REV. 18 (2019) (discussing “particularistic” theories of international law).

71. See, e.g., Amy Kapczynski, *Harmonization and its Discontents: A Case Study of TRIPS Implementation in India’s Pharmaceutical Sector*, 97 CALIF. L. REV. 1571, 1571-72 (2009) (writing on the example of the Agreement on Trade-Related Aspects of Intellectual Property

international agencies started developing universal standards in the particular areas of their specialized fields.⁷² The harmonization process intensified in the 1990s, involving the harmonization of an even greater set of laws and policies such as IP rights, health and sanitary regulations, subsidies, investment, and investor requirements.⁷³

International law's universalism is predominantly economic. The Washington Consensus established the priority of international economic considerations over domestic ones.⁷⁴ Economic globalization was advanced by multilateral institutions like the International Monetary Fund (IMF), the World Bank, and the World Trade Organization (WTO)—as well as regional organizations such as the EU. This shift resulted in the state also beginning to promote the market at the international level using (international) law.⁷⁵ The same trends were further intensified during the Nineties.⁷⁶ A whole new body of international law, international economic law, emerged as a separate discipline largely to accommodate freedom of movement of goods, services and capital across borders.⁷⁷ International law largely replaced domestic law as the dominant means for cross-border trade and investment protection during the same time.

Overall, during the second half of the 20th century, international law mostly accommodated economic globalization, and thus the free market. This is identified in this article as the “free market layer” of international law.

B. Infrastructural Layer

International economic law has traditionally focused on regulating two factors of production: labor and capital. Land, however, fell outside the

Rights—Annex 1C to the Agreement establishing the World Trade Organization); GEORGIOS DIMITROPOULOS, ZERTIFIZIERUNG UND AKKREDITIERUNG IM INTERNATIONALEN VERWALTUNGSVERBUND (2012) (writing on this mode of “harmonization through standardization” in international law); see also THE LEGITIMACY OF STANDARDISATION AS A REGULATORY TECHNIQUE: A CROSS-DISCIPLINARY AND MULTI-LEVEL ANALYSIS (Mariolina Eliantonio & Caroline Cauffman eds., 2020).

72. See JENNIFER L. BEARD, THE POLITICAL ECONOMY OF DESIRE: INTERNATIONAL LAW, DEVELOPMENT AND THE NATION STATE 157–81 (2007) (explaining how this process acquired a special and even greater role in universalizing international law towards the developing world).

73. Rodrik, *Putting Global Governance in its Place*, *supra* note 34, at 13.

74. John Williamson, *A Short History of the Washington Consensus*, in THE WASHINGTON CONSENSUS RECONSIDERED: TOWARD A NEW GLOBAL GOVERNANCE 14–17 (Narcis Serra & Joseph E. Stiglitz eds., 2008). The Bretton Woods institutions and international frameworks such as International Investment Agreements reinforced the Washington Consensus and compelled the states of the South and East to engage in cross-border trade and investment; see Chantal Thomas & Joel P. Trachtman, *Editors' Introduction*, in DEVELOPING COUNTRIES IN THE WTO LEGAL SYSTEM 1, 9–10 (Chantal Thomas & Joel P. Trachtman eds., 2009).

75. See Nancy Fraser, *Legitimation Crisis? On the Political Contradictions of Financialized Capitalism*, 2 CRITICAL HIST. STUDS. 157, 177 (2015).

76. See generally JOSEPH E. STIGLITZ, THE ROARING NINETIES: A NEW HISTORY OF THE WORLD'S MOST PROSPEROUS DECADE (2004) (on the “roaring nineties” as the period of the triumph of market economics); Martti Koskeniemi, *The Politics of International Law – 20 Years Later*, 20 EUR. J. INT'L L. 7, 14–18 (2009) (speaking about a “managerialism” in international law).

77. See generally Anghie, *Imperialism, Sovereignty*, *supra* note 48, at 196–272; David Schneiderman, *The Coloniality of Investment Law* (2019), <https://ssrn.com/abstract=3392034> [<https://perma.cc/VC4P-379H>]; SLOBODIAN, *Globalists*, *supra* note 62.

purview of international law's regulatory scope. The primary reason for this exclusion is land's inherent link to sovereignty—the cornerstone of modern international law. Additionally, in the foundational political economy theories of Adam Smith and David Ricardo, cross-border trade was conceptualized as transactions occurring between nations.⁷⁸

The focus of international economic law has been shifting in more recent decades; it now increasingly includes the regulation of land, expanding to incorporate an “infrastructural layer.”⁷⁹ The turn to infrastructure in international law is often associated with the rise of China. It would not be accurate, however, to portray the infrastructural turn in international law as an exclusively China-led approach. Already since the 1990s, international organizations like the World Bank had placed their focus on infrastructure and infrastructural projects.

Many countries in the North and South, and East and West have started focusing on infrastructure as a foundation for economic development and trade. It is now realized that economic development requires investment in infrastructure—transport, energy, water, as well as information and communication technology.⁸⁰ Numerous countries have begun crafting infrastructure development laws dedicated to facilitating the creation, regulation, and management of old and new infrastructure.⁸¹ An infrastructural turn has been taking place in developing and emerging economies in Africa,⁸² Asia and the broader Asia Pacific Region,⁸³ Latin America,⁸⁴ as well as in Western economies such

78. See, e.g., Gordon Bannerman, *The Free Trade Idea*, in *THE OXFORD HANDBOOK OF THE POLITICAL ECONOMY OF INTERNATIONAL TRADE* 37 (Lisa L. Martin ed., 2015) (explaining that Adam Smith and David Ricardo conceptualized free trade as a mechanism for nations to enhance economic efficiency, maximize wealth, and mutually benefit from exchange, forming the foundational theory that continues to underpin modern international trade).

79. Benedict Kingsbury, *Infrastructure and InfraReg: On Rousing the International Law “Wizards of Is,”* 8 *CAMBRIDGE INT'L L.J.* 171, 172 (2019); Benedict Kingsbury, *Introduction to the Symposium on Infrastructuring International Law*, 117 *AJIL UNBOUND* 1 (Jan. 2023) (as well as the other contributions of the symposium).

80. See generally BRETT M. FRISCHMANN, *INFRASTRUCTURE: THE SOCIAL VALUE OF SHARED RESOURCES* (2012), <https://doi.org/10.1093/acprof:oso/9780199895656.001.0001> [<https://perma.cc/CHB6-6QXE>].

81. See, e.g., Infrastructure Development Act 23 of 2014 (S. Afr.); and The Philippines, An Act Facilitating The Acquisition Of Right-Of-Way Site Or Location For National Government Infrastructure Projects, Rep. Act No. 10752 (Mar. 7, 2016) (Phil.), <https://www.officialgazette.gov.ph/2016/03/07/republic-act-no-10752/> [<https://perma.cc/DB38-T8HR>].

82. See *Programme for Infrastructure Development in Africa*, AFRICAN DEV. BANK, <http://www.afdb.org/en/topics-and-sectors/initiatives-partnerships/programme-for-infrastructure-development-in-africa-pida/> [<https://perma.cc/KF5T-BQX2>] (last visited Sep. 16, 2024).

83. Liang Chuan, *Infrastructure Development in China*, in *ECON. RSCH. INST. FOR ASEAN & E. ASIA, INTERNATIONAL INFRASTRUCTURE DEVELOPMENT IN EAST ASIA—TOWARDS BALANCED REGIONAL DEVELOPMENT AND INTEGRATION* 85-104 (Nagesh Kumar ed., 2008), <https://www.eria.org/RPR-2007-2.pdf> [<https://perma.cc/LHH4-X2KK>].

84. Aaron Timms, *Brazil Is Betting on a New Growth Model: Infrastructure*, *INST. INV.* (Sep. 10, 2014), <https://www.institutionalinvestor.com/article/2bsuah6qq8ykpee880npc/portfolio/brazil-is-betting-on-a-new-growth-model-infrastructure> [<https://perma.cc/G3U5-7NMG>].

as Australia,⁸⁵ Canada,⁸⁶ Ireland,⁸⁷ the UK,⁸⁸ and the US.⁸⁹ An alternative route that has been followed by developing and emerging economies, as well as some developed economies, is to develop high quality infrastructure in the enclosed space of Special Economic Zones (SEZs).⁹⁰ Because this enclosed type of infrastructure is relatively inexpensive to build and develop, SEZs have generally been successful in the developing world and in emerging economies.

Construction, regulation, and management of infrastructure and infrastructure utilities is now becoming an integral aspect of international economic law as well. International Financial Institutions and Multilateral Development Banks are actively engaged in regulating infrastructure through investment projects. As early as 1994, the World Development Report issued by the World Bank was dedicated to “Infrastructure for Development.”⁹¹ In the years since 1994, infrastructure—including transport, water, energy and information and communications technology—has become the largest investment area for the World Bank Group (WBG); the WBG has become the largest multilateral financier for infrastructure in the world as a result of a major scale-up as of 2003, which has led to 43% of WBG assistance being streamlined to infrastructure development.⁹²

The World Bank’s strategy is based on three pillars. The first pillar, “Core Engagement,” enables the World Bank to continue its focus on sector-based projects—a traditional WBG activity.⁹³ The second pillar, “Transformational Engagement,” supports countries’ efforts to tackle more complex infrastructure challenges.⁹⁴ This includes optimizing benefits across various infrastructure sectors, balancing infrastructure with environmental and social development, and enhancing regional benefits. Key aspects of this pillar involve green,

85. *Infrastructure Australia Act 2008* (Cth) (Austl.).

86. Government of Canada, Housing, Infrastructure and Communities Canada, information available at <https://housing-infrastructure.canada.ca/index-eng.html> [<https://perma.cc/G58Q-A4MW>].

87. Planning and Development (Strategic Infrastructure) Act 2006 (Act No.27/2006) (Ir.), <https://www.irishstatutebook.ie/eli/2006/act/27/enacted/en/pdf> [<https://perma.cc/V7FS-XAXN>].

88. Infrastructure Act 2015, c. 7 (UK), <http://www.legislation.gov.uk/ukpga/2015/7/contents/enacted> [<https://perma.cc/9PUN-R65K>]; see also The Infrastructure Act 2015 (Commencement No.1) Regulations 2015, SI 2015/481 (Eng.), <http://www.legislation.gov.uk/uksi/2015/481/made> [<https://perma.cc/MU79-S54V>]; Infrastructure and Projects Authority (Cabinet Office and HM Treasury) [formerly known as Infrastructure UK], information available at <https://www.gov.uk/government/organisations/infrastructure-and-projects-authority> [<https://perma.cc/JH93-PYFQ>].

89. *National Infrastructure Development Bank Act of 2017*, H.R. 547, 115th Congress; Press Release. The White House, FACT SHEET—Building a 21st Century Infrastructure: Modernizing Infrastructure Permitting (May 14, 2014), <https://obamawhitehouse.archives.gov/the-press-office/2014/05/14/fact-sheet-building-21st-century-infrastructure-modernizing-infrastructure> [<https://perma.cc/9UNU-F37C>]; Exec. Order No. 13,805, 3 C.F.R. 365 (2018); Exec. Order No. 13,807, 3 C.F.R. 369 (2018); see also section II.B.1.

90. Julien Chaisse & Georgios Dimitropoulos, *Special Economic Zones in International Economic Law: Towards Unilateral Economic Law*, 24 J. INT’L ECON. L. 229, 253 (2021).

91. WORLD BANK, WORLD DEVELOPMENT REPORT 1994: INFRASTRUCTURE FOR DEVELOPMENT (1994).

92. World Bank Group, Infrastructure Strategy Update: Transformation through Infrastructure 6 (2012) <https://documents1.worldbank.org/curated/en/430271468176674381/pdf/678290WP0P12740ghinfrastructurefull.pdf> [<https://perma.cc/8JPN-2FTA>].

93. *Id.*, at 12-17.

94. *Id.*, at 17-22.

inclusive, and regional infrastructure initiatives. The third pillar, “Mobilization of Private Capital,” aims to attract more private sector financing into infrastructure projects with the goal of maximizing private sector capital investment.⁹⁵ To support these efforts, the World Bank has developed a comprehensive set of policies for infrastructure development in host countries.⁹⁶

Regional international organizations, such as the African Development Bank, Programme for Infrastructure Development in Africa (PIDA), the Asian Development Bank, and the Islamic Development Bank, have also been increasingly involved in infrastructure development. A new multilateral bank, the Asian Infrastructure Investment Bank (AIIB), has even been created in Asia with an exclusive focus on infrastructure.⁹⁷

The Sustainable Development Goals (SDGs) of the United Nations present a more holistic approach to development. They adopt a set of goals to end poverty, protect the planet, and ensure prosperity for all parts of the world.⁹⁸ To achieve these objectives, governments, the private sector, and civil society ought to be involved.⁹⁹ The SDGs further highlight the infrastructural turn in more recent economic development. SDG 9, for instance, is dedicated to “Building Resilient Infrastructure, Promoting Sustainable Industrialization and Fostering Innovation.”¹⁰⁰ It recognizes that technological progress is the cornerstone for achieving environmental objectives, such as enhancing resource and energy efficiency. It underscores that, without technology and innovation, industrialization cannot occur, and without industrialization, development remains elusive.

International trade law was to take a similar turn, too. During the Doha Round for Development, concerns were raised—particularly by developing countries—about supply-side constraints to trade, such as poor infrastructure. According to some members, supply-side trade constraints should be seen as obstacles to the implementation of WTO commitments.¹⁰¹ One of the primary objectives during the initial stages of the Round was to develop infrastructure to facilitate trade and investment. According to the Hong Kong Ministerial Declaration:

Aid for Trade should aim to help developing countries, particularly LDCs, to build the supply-side capacity and trade-related infrastructure that they need to assist them to implement and benefit from WTO Agreements and more broadly to expand their trade.¹⁰²

95. *Id.*, at 22-28.

96. See WORLD BANK, OPERATIONAL MANUAL: OP 4.12 - INVOLUNTARY RESETTLEMENT (2001); WORLD BANK, BANK POLICY: INVESTMENT PROJECT FINANCING (2018); see WORLD BANK, OPERATIONAL MANUAL: BP 4.01 - ENVIRONMENTAL ASSESSMENT (1999).

97. NATALIE LICHTENSTEIN, A COMPARATIVE GUIDE TO THE ASIAN INFRASTRUCTURE INVESTMENT BANK I (2018).

98. G.A. Res. 70/1, Transforming our world: the 2030 Agenda for Sustainable Development (Sept. 25, 2015).

99. See 3D INT'L CONF. ON FIN. FOR DEV., ADDIS ABABA ACTION AGENDA (2015).

100. *Goal 9: Build resilient infrastructure, promote sustainable industrialization and foster innovation*, UN, <https://www.un.org/sustainabledevelopment/infrastructure-industrialization/> [<https://perma.cc/L4X5-RZD7>] (last visited Sept. 17, 2024). At least another two SDGs refer directly or indirectly to infrastructure.

101. INT'L MONETARY FUND & WORLD BANK, DOHA DEVELOPMENT AGENDA AND AID FOR TRADE (2005), <https://www.imf.org/external/np/pp/eng/2005/091905.pdf> [<https://perma.cc/PWT4-8YF5>].

102. World Trade Organization, Ministerial Declaration of 18 December 2005 ¶ 57, WTO Doc. WT/MIN(05)/DEC (2005).

These goals were not further pursued.

Instead, a branch of international (economic) law, led by China, has placed a primary emphasis on infrastructure. China's economic model, known as state capitalism,¹⁰³ permits an active role for the state in economic activities, either directly or through State-Owned Enterprises (SOEs).¹⁰⁴ SOEs are also very active internationally:¹⁰⁵ Sovereign Wealth Funds (SWFs) have increasingly become popular instruments for governments to make investments globally.¹⁰⁶ One of their main areas of investment is infrastructure.¹⁰⁷

China's conception of international law purportedly places a higher emphasis on respect for national sovereignty when compared to the Western-dominated international law of the LIO.¹⁰⁸ As China's global influence grows, it reshapes the international economic order. China's influence is mostly exerted through its state-backed outbound investment and infrastructure development program, the Belt and Road Initiative (BRI).¹⁰⁹ Since its inception in 2013,

103. See generally Ian Bremmer, *State Capitalism Comes of Age: The End of the Free Market?*, 88 FOREIGN AFFS. 40 (2009), (describing the rise of state capitalism, as compared to the free-market model); Li-Wen Lin & Curtis J. Milhaupt, *We are the (National) Champions: Understanding the Mechanisms of State Capitalism in China*, 65 STAN. L. REV. 697 (2013) (discussing the mechanisms of state capitalism in China); see also Niall Ferguson, *We're All State Capitalists Now*, FOREIGN POL'Y (Feb. 9, 2012), <https://foreignpolicy.com/2012/02/09/were-all-state-capitalists-now/> <https://perma.cc/U3LF-FHU5>].

104. See Julien Chaisse, *Untangling the Triangle: Issues for State-Controlled Entities in Trade, Investment and Competition Law*, in INTERNATIONAL ECONOMIC LAW GOVERNANCE: ESSAYS IN HONOUR OF MITSUO MATSUSHITA 233, 239 (Julien Chaisse & Tsai-yu Lin eds., 2016); HENRY GAO & WEIHUAN ZHOU, BETWEEN MARKET ECONOMY AND STATE CAPITALISM: CHINA'S STATE-OWNED ENTERPRISES AND THE WORLD TRADING SYSTEM 4-5 (2022), (discussing SOEs in state capitalism and international economic law).

105. See generally STATE CAPITALISM AND INTERNATIONAL INVESTMENT LAW (Panagiotis Delimatsis, Georgios Dimitropoulos & Anastasios Gourgourinis eds., 2023).

106. SWFs may be defined as State-owned investment funds generated by the government and often derived from the surplus reserves of a country; see generally Markus Burgstaller, *Sovereign Wealth Funds and International Investment Law*, in EVOLUTION IN INVESTMENT TREATY LAW AND ARBITRATION 163 (Chester Brown & Kate Miles eds., 2011) (analyzing history of SWFs and whether they have recourse against national protectionist measures under international investment agreements).

107. World Economic Forum, *Sovereign Wealth Funds Are Playing an Increasingly Important Role in Economies Everywhere*, WORLD ECON. F. (Nov. 2023), <https://www.weforum.org/stories/2023/11/sovereign-wealth-funds-are-playing-an-increasingly-important-role-in-economies-everywhere/> [<https://perma.cc/97EU-82JT>].

108. Ministry of Foreign Affs. of China, *Five Principles of Peaceful Coexistence*, Ministry of Foreign Affs. of China (May 27, 2024), https://www.fmprc.gov.cn/eng/wjwb/wjzb/jh/202405/t20240527_11312100.html [<https://perma.cc/F89S-HDDR>].

109. See generally Julien Chaisse & Mitsuo Matsushita, *China's 'Belt and Road' Initiative: Mapping the World Trade Normative and Strategic Implications*, 52 J. WORLD TRADE 163, 167 (2018) (suggesting that China is developing a new approach in international economic law); Julien Chaisse, *Introduction: China's International Investment Law and Policy Regime—Identifying the Three Tracks*, in CHINA'S INTERNATIONAL INVESTMENT STRATEGY: BILATERAL, REGIONAL, AND GLOBAL LAW AND POLICY 1, 12 (Julien Chaisse ed., 2019), <https://doi.org/10.1093/oso/9780198827450.003.0001> [<https://perma.cc/4LCF-ACCT>] (highlighting the rulemaking role of China in the new order of international economic law); NADEGE ROLLAND, NAT'L BUREAU OF ASIAN RSCH., *CHINA'S VISION FOR A NEW WORLD ORDER* 47-51 (2020) (discussing the role of China in the global South); but see Gregory C. Shaffer & Henry Gao, *A New Chinese Economic Order?*, 23 J. INT'L ECON. L. 607, 609 (2020) (arguing that China's model repurposes Western law and institutions); Prasenjit Duara, *The Chinese World Order in Historical Perspective: Soft Power or the Imperialism of Nation-States?* 23 (Duke Glob. Working Paper Series, Working Paper No. 14, 2019).

the BRI has rapidly become the main motor of China's international economic policy.¹¹⁰

A main difference between the BRI and "traditional" Western-driven approaches to international law is its focus on infrastructure.¹¹¹ The BRI facilitates the movement of goods, services, capital and labor on land and sea from the Pearl River Delta into the four corners of the globe. Above all, it contributes towards building and managing infrastructure and utilities from Beijing to the whole world. China is, for example, the most important trading partner as well as source of FDI in Africa.¹¹² It has undertaken projects in energy production, telecommunications, and mining, and has financed the building of roads, airports, ports, railways, and schools all over the continent.¹¹³ Much of the financing takes place through the AIIB.

Through the BRI, China also transposes its rules, norms, practices, and governance values to emerging and developing economies.¹¹⁴ The role of law, including international law, in these initiatives is heavily debated. Chinese-led international law shows a preference for "informal bilateralism."¹¹⁵ Economic and other collaboration in the BRI is carried out based on Memoranda of Understanding and other similar soft law.¹¹⁶ Still, China is actively working to develop its own version of global governance structures and international legal frameworks, such as that of the AIIB.¹¹⁷

G7 countries have more recently been attempting to emulate this approach. The G7's Build Back Better World (B3W) initiative, launched in June 2021, aims to offer an alternative to the BRI for infrastructure development in low- and middle-income countries.¹¹⁸ B3W builds upon the Blue Dot Network

110. Shaffer & Gao, *supra* note 109, at 607-10.

111. See Heng Wang, *The Belt and Road Initiative Agreements: Characteristics, Rationale, and Challenges*, 20 *WORLD TRADE REV.* 282 (2021) (highlighting the "project-based" nature of the BRI model).

112. Eleanor Albert, *China in Africa*, COUNCIL ON FOREIGN RELS. (July 12, 2017). <https://www.cfr.org/backgroundunder/china-africa> [https://perma.cc/PJB4-TXRH].

113. *Id.*

114. See generally Matthew S. Erie, *Chinese Law and Development*, 62 *HARV. INT'L L. J.* 51 (2021) (analyzing China's recent approach to transnational legal regime especially as it relates to the BRI).

115. Ernst-Ulrich Petersmann, *International Settlement of Trade and Investment Disputes Over Chinese 'Silk Road Projects' Inside the European Union* 5 (EUI Dep't L., Rsch. Paper No. 2020-02, 2020).

116. Shaffer & Gao, *supra* note 109, at 607.

117. See generally Moritz Rudolf, *Xi Jinping Thought on the Rule of Law*, 28 *SWP Comment* 1. (2021), (discussing President Xi Jinping's approach to the rule of law abroad); Erie, *supra* note 114 (discussing the Chinese approach to law and development, and the role of extralegal and nonlegal norms alongside instruments of international economic and commercial law); Shaffer & Gao, *supra* note 109 (describing how the new model of economic governance developed by China combines private and public international law in a transnational legal ordering imbued with Chinese characteristics).

118. Press Release, The White House, *FACT SHEET: President Biden and G7 Leaders Launch Build Back Better World (B3W) Partnership* (June 12, 2021), <https://www.whitehouse.gov/briefing-room/statements-releases/2021/06/12/fact-sheet-president-biden-and-g7-leaders-launch-build-back-better-world-b3w-partnership/> [https://perma.cc/RA74-SX5B]; Jonathan Lemire & Karl Mathiesen, *G7 unveils \$600B plan to combat China's Belt and Road*, *POLITICO* (June 26, 2022), <https://www.politico.eu/article/g7-unveils-600b-plan-to-combat-chinas-belt-and-road/> [https://perma.cc/6VDN-WKNG].

(BDN).¹¹⁹ BDN is a certification mechanism for infrastructure projects that meet certain international standards. It was established by the United States, Japan, Australia, the United Kingdom, and Spain as a multilateral effort for sustainable infrastructure development. In the same context, in December 2022, the Biden administration announced the “New Initiative on Digital Transformation with Africa” (DTA).¹²⁰

These developments collectively represent a vision of international law that transcends the traditional free market framework. This new perspective differs significantly from the one prevalent during the peak years of economic globalization. The emphasis has shifted substantially towards infrastructure, rather than solely on the promotion of markets. Essentially, it is a vision that advocates for an international law focused on infrastructure.

C. A New Frontier: International Law and Digital Globalization

The digital world is the new frontier of law. With a big part of physical activity transitioning to the digital sphere, the question arises about if and how the law can regulate the digital world. Three concepts of the law of the digital world may be said to apply to digital globalization.¹²¹ The first is an aspiration for self-regulation; the second and the third are reflections of the two layers of international law presented above.

One way of understanding digital law is as rules established by the individuals and institutions that make up the digital community. This first conceptualization of digital law advocates for self-regulation within the digital world—and within its more specific domains. The *lex informatica* is regarded as the law governing the internet.¹²² The *lex informatica* is a re-iteration of “autonomous” bodies of law drawing on medieval theories of natural law and the law of nature such as *lex mercatoria*.¹²³ Expanding on the concept of

119. *Blue Dot Network*, U.S. DEP’T OF STATE, <https://www.state.gov/blue-dot-network/> [<https://perma.cc/FAF8-SA62>].

120. Press Release, The White House, FACT SHEET: New Initiative on Digital Transformation with Africa (DTA) (Dec 14, 2022), <https://www.whitehouse.gov/briefing-room/statements-releases/2022/12/14/fact-sheet-new-initiative-on-digital-transformation-with-africa-dta/> [<https://perma.cc/XRR2-6F5P>].

121. See generally Dimitropoulos, *supra* note 26 (discussing three visions on the interplay between the law and digital globalization: “digital naturalism,” “digital universalism,” and “digital nationalism.”). The legal discussion on digital globalization has mostly focused on the role of data in the digital economy; see, e.g., Mira Burri, *The Regulation of Data Flows through Trade Agreements*, 48 GEO. J. OF INT’L L. 407 (2017); Gregory Shaffer, *Trade Law in a Data-Driven Economy: The Need for Modesty and Resilience*, 20 WORLD TRADE REV. 259, 270 (2021) (hereinafter: Shaffer, *Trade Law in a Data-Driven Economy*).

122. Joel R. Reidenberg, *Lex Informatica: The Formulation of Information Policy Rules through Technology*, 76 TEX. L. REV. 553 (1998).

123. See generally Edwin D. Dickinson, *Law of Nations as Part of the National Law of the United States*, 101 U. PA. L. REV. 26 (1952); Harold J. Berman & Colin Kaufman, *Law of International Commercial Transactions (Lex Mercatoria)*, 19 HARV. INT’L L. J. 221 (1978) (*lex mercatoria* was one of the layers of the legal order of the Middle Ages. It was the body of law that emerged as a result of merchant practices. The *Lex mercatoria* was thought to be part of natural law.). Despite the shift from natural law and its *ius gentium* to state-centric and positivist interpretations of international law, *lex mercatoria* has endured to this day. It holds, for example, a strong appeal in international arbitration; see Alec Stone Sweet, *The New Lex Mercatoria and Transnational Governance*, 13 J. OF EUR. PUB. POL’Y 627 (2006).

lex informatica, a new legal domain within the realm of blockchain, known as *lex cryptographia*, has emerged.¹²⁴ Scholars now also speak of a *ius artificiale* governing AI in its various reiterations.¹²⁵

Digitalization is changing the way international commerce is conducted.¹²⁶ This comes with great challenges as well as great opportunities.¹²⁷ Some see the digital economy as a reiteration of the traditional economy supported by digital technologies—such as the internet and telecommunications networks.¹²⁸ On top of that, data is added as a fourth factor of production next to land, labor and capital.¹²⁹ The digital economy also arguably gives rise to new opportunities for foreign investment. Digital Foreign Direct Investment (FDI) is investment in both traditional but digitalized, as well as digitally native companies.¹³⁰

In this environment, it has been suggested that the law should play a role similar to its function in economic globalization during the era of the LIO. In this view, the regulation of the digital economy should occur at the international level, and its new governance framework should avoid unnecessary trade distortions—cross-border data flows, for example, should arguably remain unhindered.¹³¹

124. Aaron Wright & Primavera De Filippi, *Decentralized Blockchain Technology and the Rise of Lex Cryptographia* (Mar. 10, 2015) (unpublished manuscript) (on file with SSRN), <https://ssrn.com/abstract=2580664> [<https://perma.cc/GHP3-MUWG>].

125. Géraldine Aidan & Primavera de Filippi, *Le Ius artificiale entre intériorité et boîte noire : Le droit de l'IA est-il soluble dans le droit ?*, <https://hal.science/hal-03508217v1> [<https://perma.cc/M2WD-SKRU>].

126. See WTO, *WORLD TRADE REPORT 2018, THE FUTURE OF WORLD TRADE: HOW DIGITAL TECHNOLOGIES ARE TRANSFORMING GLOBAL COMMERCE* (2018) (highlighting the impact of the Internet of Things (IoT), Artificial Intelligence (AI), 3D printing, and Blockchain on the digital economy).

127. See generally UNCTAD, *DIGITAL ECONOMY REPORT 2021: CROSS-BORDER DATA FLOWS AND DEVELOPMENT: FOR WHOM THE DATA FLOW* (2021) (presenting a comprehensive analysis of the challenges and opportunities of digital trade for developing countries); see also *infra* fn. 135 (listing various publications of the WTO that address similar issues).

128. Michael Gestrin & Julia Staudt, *The Digital Economy, Multinational Enterprises and International Investment Policy*, (OECD, 2018) <https://www.oecd.org/investment/investment-policy/The-digital-economy-multinational-enterprises-and-international-investment-policy.pdf> [<https://perma.cc/2WQC-A2PQ>]; Lorraine Eden, *Strengthening the Global Trade and Investment System for Sustainable Development: Multinationals and Foreign Investment Policies in a Digital World* (THE E15 INITIATIVE, January 2016), <https://e15initiative.org/wp-content/uploads/2015/09/E15-Investment-Eden-Final.pdf> [<https://perma.cc/EKV7-LCBP>].

129. Taki Sarantakis, *The Fourth Factor of Production—Giving Data Its Due*, MEDIUM (April 13, 2022), <https://taki-sarantakis.medium.com/the-fourth-factor-of-production-giving-data-its-due-dab1a986774> [<https://perma.cc/6HBS-LFLB>]; see generally Joshua P. Meltzer, *A New Digital Trade Agenda*, E15Initiative, International Centre for Trade and Sustainable Development (ICTSD), and World Economic Forum (Geneva 2015), www.e15initiative.org/ [<https://perma.cc/NB6W-DA52>]; Joshua P. Meltzer, *Governing Digital Trade*, 18(S1) *WORLD TRADE REV.* S23–S48, S33 (2019).

130. See generally Bruno Casella & Lorenzo Formenti, *FDI in the Digital Economy: A Shift to Asset-Light International Footprints*, 25 *TRANSNATIONAL CORPORATIONS* 101 (2018); Matthew Stephenson, *Digital FDI: Policies, Regulations and Measures to Attract FDI in the Digital Economy*, *WORLD ECONOMIC FORUM WHITE PAPER* (September 2020).

131. On the structuring of digital globalization in the image of economic globalization see Dan Ciuriak, *Digital Trade: Is Data Treaty-Ready*, CIGI Papers No. 162, Ctr. for Int'l Gov. Innovation, Waterloo, ON, (2018) www.cigionline.org/sites/default/files/documents/Paper%20no.162web.pdf [<https://perma.cc/2Q73-FECE>] (“[...] the free flow of data across borders becomes the ‘fifth freedom,’ alongside the freedom of goods, services, capital and labour to move across borders in a globalized economy”).

International economic institutions and law have been developed to serve the physical economy.¹³² Therefore, it is still uncertain whether specific domestic measures related to the regulation of the digital economy are covered by WTO disciplines.¹³³ The same applies to international investment law, as very few bilateral investment treaties (BITs) account for developments in the digital economy.¹³⁴ For this reason, many call for the reform and adaptation of established international economic institutions to serve the needs of the digital economy.¹³⁵

132. See G20 Ministerial Statement on Trade and Digital Economy, Tsubuka, Ibaraki, Japan (9 June 2019), <http://www.g20.utoronto.ca/2019/2019-g20-trade.html> (III. Interface between Trade and the Digital Economy). See Merit E. Janow & Petros Mavroidis, *Digital Trade, E-Commerce, the WTO and Regional Frameworks*, 18(S1) *WORLD TRADE REV.* S1 (2019) (explaining the reasons why there has been no international legal framework so far in response to the rise of digital trade).

133. For example, it is not clear how some digital services are to be classified under the GATS; see Mira Burri, *The Regulation of Data Flows through Trade Agreements*, 48 *GEO. J. OF INT'L L.* 407, at 413–414 (2017). The WTO has published a series of reports on the rise of the digital economy and its impact on the international trade system; see *WORLD TRADE ORGANIZATION, WORLD TRADE REPORT 2018: THE FUTURE OF WORLD TRADE – HOW DIGITAL TECHNOLOGIES ARE TRANSFORMING GLOBAL COMMERCE* (2018), https://www.wto.org/english/res_e/publications_e/wtr18_e.htm. [<https://perma.cc/P22B-HDTY>] (examining how emerging digital technologies—such as artificial intelligence, blockchain, and the Internet of Things—are reshaping global trade by reducing costs and enabling new business models); *ADAPTING TO THE DIGITAL TRADE ERA: CHALLENGES AND OPPORTUNITIES* (Maarten Smeets & World Trade Organization eds., 2021), https://www.wto.org/english/res_e/publications_e/adtera_e.htm. [<https://perma.cc/KN6J-PGBY>] (exploring how the rapid adoption of digital technologies presents both challenges and opportunities for developing countries, emphasizing the need for policy actions in digital infrastructure, skills development, and regulatory frameworks); *WORLD TRADE ORGANIZATION & WORLD CUSTOMS ORGANIZATION, WCO/WTO STUDY REPORT ON DISRUPTIVE TECHNOLOGIES* (2022), https://www.wto.org/english/res_e/publications_e/wco-wto22_e.htm. [<https://perma.cc/43JS-UMUD>] (examining how advanced technologies can enhance the efficiency of customs processes and facilitate smoother cross-border movement of goods); *OECD & WORLD TRADE ORGANIZATION, ECONOMIC IMPLICATIONS OF DATA REGULATION: BALANCING OPENNESS AND PROTECTION* (2023), https://www.wto.org/english/res_e/publications_e/data_regulation_e.htm [<https://perma.cc/PK5B-LZX9>] (delving into the complex relationship between data governance and international trade, analyzing how varying data regulations across countries influence global commerce, innovation, and economic growth); *INTERNATIONAL MONETARY FUND, OECD, UNITED NATIONS CONFERENCE ON TRADE AND DEVELOPMENT, WORLD BANK & WTO, DIGITAL TRADE FOR DEVELOPMENT* (2023), https://www.wto.org/english/res_e/publications_e/dtd2023_e.htm [<https://perma.cc/TU6L-YV2G>] (examining the opportunities and challenges digital trade for developing economies, offering insights into policy measures and international cooperation that can harness digital trade for economic growth); see also *infra* section IV.C.2.

134. Sheng Zhang, *Protection of Cross-Border Data Flows Under International Investment Law*, in *HANDBOOK OF INTERNATIONAL INVESTMENT LAW AND POLICY* 209 (Julien Chaisse, Leila Choukroune & Sufian Jusoh eds. 2021). According to some accounts, the majority of IIAs would qualify digital assets under the definition of “international investment,” and thus grant them the protections under the relevant IIA; see Federica Cristani, *Designing a Governance System for Cybersecurity of Foreign Investment in Europe*, 3 *INT'L INV. L.J.* 102, 106 (2023).

135. See generally Meagan Nicholson, *Cross-Border Data Flows: Their importance, and The Need for a Global Framework*, *ICLR BLOG* (April 12, 2018), <https://international-and-comparative-law-review.law.miami.edu/cross-border-data-flows-importance-global-framework/> [<https://perma.cc/5GN8-QH7S>]; Andrew D. Mitchell & Neha Mishra, *Data at the Docks: Modernizing International Trade Law for the Digital Economy*, 20 *VAND. J. OF ENT. AND TECH. L.* 1073 (2018); Joshua P. Meltzer, *A WTO Reform Agenda: Data flows and International Regulatory Cooperation*, (The Brookings Inst., Wash., DC, Global Econ. & Dev. Working Paper 130, 2019), www.brookings.edu/research/a-wto-reformagenda/ [<https://perma.cc/YEE7-YFKT>]; Mira Burri *Towards a Treaty on Digital Trade*, 55 *J. OF WORLD TRADE* 77

So far, the response of international law in regulating the digital economy has mostly been through Regional Trade Agreements (RTAs). Some more recent RTAs such as the United States-Mexico-Canada Agreement (USMCA), the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP), and the EU-UK Trade and Cooperation Agreement (TCA) have addressed issues of the digital economy.¹³⁶ Most of these agreements have provisions prohibiting data localization,¹³⁷ and the imposition of source code requirements—that is the software’s instructions.¹³⁸

At the same time, digital globalization and cross-border data flows are prompting responses from national governments. Scholars estimate that between 2014 and 2019, the vast majority of policies affecting digitally enabled services worldwide were trade-restrictive.¹³⁹ The digital sphere is evolving as the new frontier of sovereignty—now taking the form of “data,”¹⁴⁰ “digital” or “cyber sovereignty.”¹⁴¹ Digital sovereignty reflects a state’s power to regulate the internet and various aspects of the digital world, including the digital economy.¹⁴²

A third vision of digital law focuses on capacity building and infrastructure development rather than the establishment of a free market for data and digital products. The Made in China 2025 plan (MIC 2025) aspires to decrease China’s dependence on foreign digital technologies, and increase the country’s self-reliance in high-tech such as semiconductors and AI.¹⁴³ Moreover, China’s “new infrastructure campaign” identifies three areas of infrastructure activities that are all tech-related—information-based infrastructure, integrated infrastructure, and innovative infrastructure.¹⁴⁴ At the same time, the Digital Silk Road (DSR) forms a significant component of the BRI; it connects the BRI by

(2021); Nivedita Sen, *Understanding the Role of WTO in International Data Flows: Taking the Liberalization or the Regulatory Autonomy Path?*, 21 J. OF INT’L ECON. L. 323 (2018). But see Shaffer, *Trade Law in a Data-Driven Economy*, *supra* note 121, at 272 (“Policy harmonization should not necessarily result.”).

136. See generally GOVERNING SCIENCE AND TECHNOLOGY UNDER THE INTERNATIONAL ECONOMIC ORDER: REGULATORY DIVERGENCE AND CONVERGENCE IN THE AGE OF MEGAREGIONALS (Shin-yi Peng, Han-Wei Liu & Ching-Fu Lin eds., 2018).

137. Article 19.12 USMCA; Article 14.13 CPTPP; Article DIGIT.6 (Title III Digital Trade) EU-UK TCA; see also Article 74(3) and (4) of the Withdrawal Agreement.

138. Article 19.16: Source Code USMCA; Article 14.17: Source Code CPTPP.

139. Francesca Casalini, Javier López-González & Taku Nemoto, Mapping Commonalities in Regulatory Approaches to Cross-Border Data Transfers, OECD Trade Policy Papers No. 248, OECD Publishing (2021).

140. ANUPAM CHANDER & HAOCHE SUN, DATA SOVEREIGNTY: FROM THE DIGITAL SILK ROAD TO THE RETURN OF THE STATE (2023).

141. See generally Julia Pohle & Thorsten Thiel, *Digital Sovereignty*, 9 INTERNET POL’Y REV. (2020), <https://doi.org/10.14763/2020.4.1532> [<https://perma.cc/69FK-9KLC>]; Milton L. Mueller, *Against Sovereignty in Cyberspace*, 22 INT’L STUD. REV., 779 (2020); Kevin Jon Heller, *In Defense of Pure Sovereignty in Cyberspace*, 97 INT’L L. STUD. (2021); Chien-Huei Wu, *Sovereignty Fever: The Territorial Turn of Global Cyber Order*, 81 HEIDELBERG J. OF INT’L L. 651 (2021).

142. Cf. also Katharina Pistor, *Statehood in the Digital Age*, 27 CONSTELLATIONS 3, 8 (2020) (discussing “digital Statehood,” and the ways in which data may be replacing territory).

143. James McBride & Andrew Chatzky, *Is “Made in China 2025” a Threat to Global Trade?*, COUNCIL ON FOREIGN RELS. (ast updated May 13, 2019), <https://www.cfr.org/background/made-in-china-2025-threat-global-trade> [<https://perma.cc/6KMG-9CWV>].

144. See China Government, Report on the Work of the Government (May 2020) (delivered at the “two sessions”).

providing cross-border digital infrastructure.¹⁴⁵ Digital infrastructure includes both purely digital infrastructures, as well as some of the physical components, such as fiber-optic cables, antennas, and data centers.¹⁴⁶

As discussed above, the focus on infrastructure is not exclusive to a Chinese understanding of international—or in this case, digital—law. The focus of the scholarship has so far been on the competition among the digital superpowers: the US, China and the EU. Differences in the preferred policies on cross-border data flows have arguably led to the development of three competing governance systems, each advanced by the three superpowers. The U.S. arguably follows a market-oriented approach, focused on nurturing and promoting the rise of tech giants, even if this comes at the expense of individual rights. This *laissez-faire* approach is based on the belief that the market is best suited to regulate itself with minimal government intervention. China, at the other end of the spectrum, adopts a state-driven model aimed at strengthening data sovereignty and achieving domestic technological dominance. Its main justification for this approach is national security considerations. Meanwhile, Europe follows a rights-based regulatory model centered on the General Data Protection Regulation (GDPR), prioritizing human rights protection and the fair distribution of the digital economy's benefits.¹⁴⁷

Even if this tripartite model held true in the early phases of digital governance,¹⁴⁸ this is no longer the case.¹⁴⁹ For example, the first pillar of the US-spearheaded DTA discussed above focuses on investing in the digital infrastructure of African nations' digital economies,¹⁵⁰ rather than merely opening up markets. More broadly, contemporary digital policies largely operate as investment policies.¹⁵¹ They are increasingly part of broader industrial policies—both domestically and internationally—designed to facilitate the

145. See Matthew S. Erie & Thomas Streinz, *The Beijing Effect: China's Digital Silk Road as Transnational Data Governance*, N.Y.U. J. INT'L L. AND POL. 1, 4 (2021).

146. *Id.* at 6.

147. See, e.g., Susan Ariel Aaronson & Patrick Leblond, *Another Digital Divide: The Rise of Data Realms and its Implications for the WTO*, 21 J. INT'L ECON. L. 245 (2018); Shaffer, *Trade Law in a Data-Driven Economy*, 20 WORLD TRADE REV. 259 (2021); Poul F. Kjaer, *The End of Trade and Investment Law as We Know It: From Singularity to Pluralism*, in WORLD TRADE AND INVESTMENT LAW REIMAGINED: A PROGRESSIVE AGENDA FOR AN INCLUSIVE GLOBALIZATION 67 (Alvaro Santos, Chantal Thomas & David Trubek eds., 2019); ANU BRADFORD, *DIGITAL EMPIRES: THE GLOBAL BATTLE TO REGULATE TECHNOLOGY* (2023).

148. Since most digital technology companies are based in the US, its pro-liberalization position may be understood as nationalist too; see also Shaffer, *Trade Law in a Data-Driven Economy*, *supra* note 149, at 268.

149. Alexandros Bakos, Amna Zaman & Georgios Dimitropoulos, *From the Ashes of the "Empires": Towards Global Convergence in Approaches to Data Governance?*, OPINIO JURIS (Jan. 20, 2025), <https://opiniojuris.org/2025/01/20/from-the-ashes-of-the-empires-towards-global-convergence-in-approaches-to-data-governance/> [https://perma.cc/2K2K-8V2B].

150. DTA, *supra* note 120, at "Pillar 1: Digital Economy and Infrastructure."

151. See generally Julien Chaisse, "The Black Pit: Power and Pitfalls of Digital FDI and Cross-Border Data Flows", 22 WORLD TRADE REV. 73 (2023). Digital infrastructure, such as internet bandwidth, Wi-Fi and fiber optics, is an increasingly important consideration for foreign investors. There seems to be a correlation between the average download speed provided by host states and the volume of foreign investments in these states; see Matthew C. Le Merie, Alison Davis & Felix O. Le Merie, *The Impact of Internet Regulation on Investment*, FIFTH ERA 10, 6-7 (2016), <https://www.fifthera.com/perspectives-blog/2016/1/7/report-the-impact-of-internetregulations-on-investment> [https://perma.cc/F4GM-6SXG] (last visited Feb. 1, 2024).

spread of digital technologies and modernize both digital and physical infrastructure to drive digital development.

Regulating the digital world represents a new frontier in both domestic and international law, advanced through emerging domestic industrial policies. The next two parts of the article examine the rise of new industrialism in domestic law and the new internationalism it has fostered.

II. New Industrialism

In the 19th century, two distinct approaches to industrial development emerged. One centered on *laissez-faire* capitalism, advocating minimal government intervention and allowing market forces to shape the economy. The other approach, in contrast, embraced substantial government intervention and regulation, with the state taking an active role in guiding and promoting economic development.¹⁵² In the US, the federal state intervened to preserve demand and to guarantee the rules of the game.¹⁵³ In continental Europe, governments intervened to take part in the competitive game between European nations.¹⁵⁴

In the last quarter of the 20th century, industrial policy became a taboo subject. Neoliberal ideology and economic globalization erased the term from the political and economic vocabulary.¹⁵⁵ However, industrial policy is now “making a come-back.”¹⁵⁶ It is on the rise everywhere. As former White House National Security Council Director for China, Taiwan, and Mongolia, Ivan Kanapathy, has pointed out, until some years ago “the term industrial policy was a bad word in Washington, and now it kind of makes sense.”¹⁵⁷ “Industrial policies have become ubiquitous,” according to UN Trade & Development.¹⁵⁸ The majority of states had in place—already in 2018—formal industrial policies; most of them were developed in the aftermath of the global financial crisis.¹⁵⁹ “Whatever the future direction,” according to Aiginger and Rodrik, “we can probably safely say that the renewed interest in industrial policy is not a short-term phenomenon. Industrial policy will be with us in the years ahead.”¹⁶⁰

This Part of the article discusses the two main features of new industrialism. First, it considers the emphasis on developing domestic digital industries. Second, it analyzes the outward-focused approach of domestic industrial

152. Patrizio Bianchi & Sandrine Labory, *From “Old” Industrial Policy to “New” Industrial Development Policies*, in INTERNATIONAL HANDBOOK ON INDUSTRIAL POLICY 3451 (2006).

153. *Id.*

154. *Id.*

155. *Id.*

156. Siripurapu & Berman, *supra* note 19.

157. Quoted by Gavin Bade, *Biden’s Trade Team: RIP Globalization*, POLITICO (May 8, 2022, 7:00 AM), <https://www.politico.com/news/2022/05/08/biden-trade-policy-russia-ukraine-00025321> [<https://perma.cc/2PKA-WUTJ>].

158. WIR 2018, *supra* note 19, at 128.

159. *Id.*

160. Karl Aiginger & Dani Rodrik, *Rebirth of Industrial Policy and an Agenda for the Twenty-First Century*, 20 J. INDUS. COMPETITION & TRADE 189, 191 (2020).

policies, particularly those of major economic superpowers. These two features are closely interconnected.

A. Features of New Industrial Policymaking

The industrial revolution led to the multiplication of factories; this sparked an unparalleled wave of urbanization, drawing individuals and families from rural areas to rapidly expanding cities.¹⁶¹ Traditional areas of law evolved to adapt to the changing conditions of the industrial revolution, while new bodies of law also emerged during this period.¹⁶² Similarly, new industrial policies are now emerging, sometimes to address and at other times to adapt to the changes and demands of the fourth industrial revolution (4IR). New industrial policies share many common features. The following sections present the main tenets of new industrialism.

1. Economic Coordination

While currently on all policymakers' lips, industrial policy is understood and defined in different ways. The hallmark of industrial policy is government intervention. This sets it apart from market-oriented policies. Market approaches to economic development only recognize a role for government intervention in addressing and correcting market failures.¹⁶³ Industrial policies go beyond that.

The resurgence of industrial policy is unexpected, given that both prevailing ideology and policymaking practices over the last decades have been oriented towards market-driven approaches. The surprise is even more pronounced in mature market economies like the US, the UK, and the EU and its member states. These mature market economies are currently building—or rebuilding—their industrial systems and capabilities through coordinated industrial policy. This is largely a response to de-industrialization that occurred during the years of economic globalization and the LIO, the shock of the 2008 global financial crisis, and the even greater shock of the challenges of product sourcing experienced during the COVID-19 pandemic.

In mature markets, industrial policies are now aimed at rebuilding the manufacturing base, employing traditional tools such as incentives and subsidies, along with an increasing emphasis on public investment and public-private partnership. A key focus of these strategies is to maintain or develop a comparative advantage in advanced technology sectors.¹⁶⁴ At the same time, these countries also need to enhance the institutional capacity of their government agencies to develop and implement effective industrial policies.¹⁶⁵

161. KARL POLANYI, *THE GREAT TRANSFORMATION: THE POLITICAL AND ECONOMIC ORIGINS OF OUR TIME* 96-97, 103 (Beacon Press, 1944, 1957, 2001).

162. *Id.*

163. The classic references from the law and economics literature include: Ronald H. Coase, *The Problem of Social Cost*, 3 J.L. & ECON. 1 (1960); Richard A. Posner, *Theories of Economic Regulation*, 5 BELL J. ECON. & MANAG. SCI. 335 (1974).

164. WIR 2018, *supra* note 19, at 129.

165. Antonio Andreoni, *Varieties of Industrial Policy: Models, Packages and Transformation Cycles*, in *EFFICIENCY, FINANCE AND VARIETIES OF INDUSTRIAL POLICY: GUIDING RESOURCES, LEARNING*

The central question for contemporary industrial policies becomes defining the breadth and depth of government intervention. “All in all, the current debate,” according to Mukhisa Kituyi, former Secretary-General of UNCTAD, “is less about whether governments should intervene, but rather how.”¹⁶⁶ The discussion is not about whether industrial policy is right or wrong; it is rather about how to create and implement the best industrial policy.¹⁶⁷

Contemporary industrial policies aim at government coordination with a view to making an impact on the structure of the economy.¹⁶⁸ Industrial policies influence the qualitative dimensions of economic growth and involve strategic public investments in emerging sectors to facilitate private as well as further public investments. Their aim is to stimulate cross-sectoral learning and maintain macroeconomic stability.¹⁶⁹ Mariana Mazzucato, Rainer Kattel, and Josh Ryan-Collins advocate an even more radical departure from market-based policies. They argue for a “mission-oriented approach” focused on creating new markets.¹⁷⁰ Expanding upon the prevailing consensus among policymakers and scholars that structural transformation cannot solely rely on market forces, the authors advocate for proactive measures to facilitate a shift towards new sectors and activities that are characterized by greater productivity.

The tools to achieve the goals of industrial policy are also changing. Instead of top down and incentive-oriented approaches, coordination between the public and the private sector is taking center stage.¹⁷¹ New industrial policies establish the institutional framework necessary to foster innovative ideas in both public-private and public-public collaborations.¹⁷² Further, policies that were initially developed are not set in stone; they undergo ongoing monitoring, evaluation, and adaptation based on the outcomes they yield.¹⁷³

While industrial policies of the previous generation were vertical—focused on the protection of specific industries, new industrial policies are horizontal. Simultaneously, the focus is shifting towards specific segments within industries rather than entire sectors.¹⁷⁴ Moreover, the pursued objectives extend beyond purely economic interests. There is a new focus on social and environmental goals, consumer welfare,¹⁷⁵ and even more generally, sustainable and equitable development.¹⁷⁶

AND TECHNOLOGY FOR SUSTAINED GROWTH 245 (A. Noman & Joseph Stiglitz eds., Colum. Univ. Press, 2016). The same is true for countries in the initial stages of development like Least Developed Countries (LDCs) that lack regulatory capacity and knowledge.

166. Mukhisa Kituyi, Secretary-General of UNCTAD, in WIR 2018, *supra* note 19, at v.

167. Dani Rodrik, *Industrial Policy: Don't Ask Why, Ask How*, 1 MIDDLE E. DEV. J. 1 (2008).

168. Aiginger & Rodrik, *supra* note 160, at 191.

169. Mariana Mazzucato, Rainer Kattel, & Josh Ryan-Collins, *Challenge-Driven Innovation Policy: Towards a New Policy Toolkit*, 20 J. INDUS. COMPETITION & TRADE 421 (2020).

170. *Id.*, at 1 (considering “grand challenges” such as the United Nation’s SDGs, the European Union Horizon 2020 research and development program, and the UK’s 2017 Industrial Strategy White Paper).

171. Aiginger & Rodrik, *supra* note 160, at 191.

172. *Id.*, at 192.

173. *Id.*

174. Dani Rodrik, *The Past, Present and Future of Economic Growth* 47 (Glob. Citizen Found., Working Paper 1, 2013)

175. Aiginger & Rodrik, *supra* note 160, at 192-3.

176. Mukhisa Kituyi, Secretary-General of UNCTAD, in WIR 2018, *supra* note 19, at iv.

Aiginger and Rodrik provide a comprehensive definition that encapsulates both descriptive and normative aspects of contemporary industrial policy:

[. . .] industrial policy is a systemic approach that coordinate innovation, regional policy, and *trade policy*, with manufacturing at its core, while affecting upstream and downstream industries, sectoral change, clusters, and networks. It should be steered by societal goals that lead to *sustainability and responsible globalization*. Extending far beyond the correction of market failures, it is a search process into the unknown that not only profits from a dialog with experts, interest groups, and citizens but must also avoid hijacking by special interest groups and populism.¹⁷⁷

Besides the above analysis, and as this definition to some extent already highlights, new industrial policies stand out for another two reasons: the focus on digital development, and their outward-looking nature. The following sections focus on these aspects of new industrial policymaking.

2. Industrial Policy for the Fourth Industrial Revolution

Some of the causes for the unexpected turn to—or return of—industrial policy are internal and endogenous. They come from within the state and its developmental needs; others are external and exogenous. They are spearheaded by broader geopolitical and geoeconomic changes. The most significant endogenous reason is disruptive technological change. In contemporary industrial policymaking, a key objective is to stimulate growth driven by digital technology.

The first industrial revolution was marked by the emergence of factory-based production and manufacturing.¹⁷⁸ For developing countries, manufacturing still presents a significant puzzle. Economic evidence indicates that focusing solely on manufacturing for economic development can be too limiting.¹⁷⁹ At the same time, it is widely acknowledged that only a handful of countries have achieved successful development without undergoing a phase of industrialization primarily driven by manufacturing—often one focused on exports.¹⁸⁰ In any event, manufacturing continues to play a pivotal role in technological advancement; the manufacturing sector serves as the primary driver of growth propelled by technology.¹⁸¹ Nowadays though, industrialization goes beyond classic manufacturing; very importantly, it should also aim to cover services.¹⁸²

Today, the 4IR is prompting an overarching digital transformation—transforming both the domestic and international economy.¹⁸³ The COVID-19

177. Aiginger & Rodrik, *supra* note 160, at 203 (emphasis added).

178. See generally POLANYI, *supra* note 161, at 78.

179. IMF, *WORLD ECONOMIC OUTLOOK: CYCLICAL UPSWING, STRUCTURAL CHANGE*, Chapter 3 (April 2018).

180. Dani Rodrik, *The Manufacturing Imperative*, PROJECT SYNDICATE (August 10, 2011).

181. WIR, *supra* note 19, at 127.

182. Dani Rodrik, *Why Services Need an Industrial Policy*, PROJECT SYNDICATE (Oct. 12, 2022), <https://www.project-syndicate.org/commentary/services-industrial-policy-good-jobs-agenda-by-dani-rodrik-2022-10> [<https://perma.cc/7LS3-PKYE>].

183. Klaus Schwab, *The Fourth Industrial Revolution: What It Means and How to Respond*, FOREIGN AFFS. (Dec. 12, 2015), <https://www.foreignaffairs.com/articles/2015-12-12/fourth->

pandemic has accelerated the digitalization of both private businesses and public sectors worldwide.¹⁸⁴ During the first industrialization era, machinery replaced manual and physical labor. The current resurgence of machines is characterized by a shift from manual labor to knowledge-based work.¹⁸⁵ Emerging technologies like AI, machine learning, digital platforms, the Internet of Things, and blockchain are poised to replace knowledge-based work. Consequently, the 4IR presents distinct challenges to law, regulation, and society at large.

It is now generally acknowledged that the *laissez-faire* approach to economics would not have led to most of the current technological innovations. New technologies are often the product of—direct or indirect—government action.¹⁸⁶ Innovations such as the internet itself are the result of government intervention.¹⁸⁷ As early as 2018, at least one-quarter of existing industrial policies primarily focused on the 4IR.¹⁸⁸

3. *Outward-Looking*

New industrial policies have another distinct feature that sets them apart from their predecessors: they are increasingly outward-looking, though in far more complex ways than earlier industrial policies. There is a growing recognition that industrial policy has a significant impact on trade policy.¹⁸⁹ Industrial policies are becoming part of a broader trade strategy. However, their outward-looking nature does not necessarily imply openness. Trade strategies may lean toward openness, protectionism, or the protection of national security interests—restricting foreign trade and investment when necessary.¹⁹⁰

In social sciences, two main theories seek to explain the macro-level relationship between societal and political systems and new technologies: techno-globalism and techno-nationalism.¹⁹¹ Techno-globalism sees technology as unifying the world. Technology crosses borders and may completely

industrial-revolution [https://perma.cc/3N3F-GF85]; UN, *The Impact of Digital Technologies* (UN75, 2020 and Beyond), https://www.un.org/en/un75/impact-digital-technologies [https://perma.cc/R8U2-LGCR].

184. World Economic Forum, *A Roadmap for Cross-Border Data Flows: Future-Proofing Readiness and Cooperation in the New Data Economy*, WEF WHITE PAPERS 5 (2020), http://www3.weforum.org/docs/WEF_A_Roadmap_for_Cross_Border_Data_Flows_2020.pdf [https://perma.cc/U4VK-KPDA].

185. See Schwab, *supra* note 183.

186. Mariana Mazzucato, *THE ENTREPRENEURIAL STATE: DEBUNKING PUBLIC VS. PRIVATE SECTOR* (2013); MARIANA MAZZUCATO, *THE VALUE OF EVERYTHING: MAKING AND TAKING IN THE GLOBAL ECONOMY* (2018) (claiming that the world's major economic advances—including railways, automobiles, pharmaceutical, as well as contemporary digital innovations—are the result of state intervention).

187. Mazzucato, Kattel & Ryan-Collins, *supra* note 169, at 425, 431.

188. WIR 2018, *supra* note 19, at 141.

189. Sullivan, *supra* note 26.

190. For a recent work on this subject, see Harlan Grant Cohen, *Toward Best Practices for Trade-Security Measures*, 27 J. INT'L ECON. L. 93 (2024).

191. SYLVIA OSTRY & RICHARD R. NELSON, *TECHNO-NATIONALISM AND TECHNO-GLOBALISM: CONFLICT AND COOPERATION* (January 1, 1995); Shigeru Nakayama, *Techno-Nationalism versus Techno-Globalism*, 6 E. ASIAN SCI., TECH. AND SOC'Y: AN INT'L J. 9 (2012); David E.H. Edgerton, *The Contradictions of Techno-Nationalism and Techno-Globalism: A Historical Perspective*, 1 NEW GLOB. STUD. 1 (2007). See also Daniele Archibugi & Jonathan Michie, *Technological Globalisation Or National Systems Of Innovation?*, 29 FUTURES 121 (1997).

disregard or even arguably abolish them; nations and states are seen—at best—as vehicles through which techno-globalist forces operate. Techno-nationalism sees the nation as the unit of analysis for the study of technology; as the driving force and purpose of all technology.¹⁹² Historically, the term has generally carried a negative meaning.¹⁹³ In the West, it has often been used in reference to countries in Asia;¹⁹⁴ Japan was once at the forefront of attention; China is now seen as an emerging techno-nationalist threat.¹⁹⁵

This debate resurfaces with the advent of the 4IR, as digitalization drives a new wave of globalization.¹⁹⁶ As a reaction to this, governments are making an effort to claim their digital sovereignty.¹⁹⁷ Concerns about digital sovereignty were first raised in developing states and emerging markets. The dominant position of Western tech companies, which is supported both politically as well as economically by the government machinery, arguably leads to new forms of exploitation in the South, as well as new imperialism by Western states.¹⁹⁸ Emerging economies and developing countries that seek to counteract these trends are then often blamed for engaging in “digital nationalism,”¹⁹⁹ and “digital protectionism.”²⁰⁰

192. See SHIGERU NAKAYAMA, *SCIENCE, TECHNOLOGY, AND SOCIETY IN POSTWAR JAPAN* (1991).

193. *Id.*, at 2.

194. *Id.*

195. Nakayama, *supra* note 191, at 12-13.

196. Dimitropoulos, *supra* note 26 (discussing the movements and counter-movements of digital globalization); STEPHEN WEYMOUTH, *DIGITAL GLOBALIZATION: POLITICS, POLICY, AND A GOVERNANCE PARADOX* (2023) (explaining how digital technologies are remaking global economic activity as well as complicating international economic cooperation).

197. See *supra* section I.C.

198. See Renata Ávila Pinto, *Digital Sovereignty or Digital Colonialism? New Tensions of Privacy, Security and National Policies*, 15 *SUR*, 15 (2018), available at <https://sur.conectas.org/en/digital-sovereignty-or-digital-colonialism/> [<https://perma.cc/D4ZT-8HCX>]; Michael Kwet, *Digital Colonialism: U.S. Empire and the New Imperialism in the Global South*, 60 *RACE & CLASS* 3 (2019); see also NICK COULDRY & ULISES A. MEJIAS, *THE COST OF CONNECTION* (2019) (comparing the rise of digital governance with colonialism). Emerging economies, such as China and Russia, have been the most vocal against such forms of “digital colonialism” and “imperialism.” See Rogier Creemers, *China’s Conception of Cyber Sovereignty*, in *GOVERNING CYBERSPACE: BEHAVIOR, POWER AND DIPLOMACY* 107 (Dennis Broeders & Bibi Berg eds., 2020); Min Jiang, *Authoritarian Informationalism, China’s Approach to Internet Sovereignty*, 30 *SAIS REV. OF INT’L AFFS.* 71 (2010); Jinghan Zeng, Tim Stevens & Yaru Chen, *China’s Solution to Global Cyber Governance: Unpacking the Domestic Discourse of “Internet Sovereignty,”* 45 *POLS. & POL’Y* 432 (2017) (discussing Chinese concepts of digital and internet sovereignty). Nocetti, J., *Contest and Conquest: Russia and Global Internet Governance*, 91 *INT’L AFFS.* 111 (2015) (discussing Russian concepts of digital and internet sovereignty). At the same time, emerging economies such as China are now accused of the exercise of a similar type of digital colonialism in parts of the world such as Africa; see Willem Gravett, *Digital Neo-Colonialism: The Chinese Model of Internet Sovereignty in Africa*, 20 *AFR. HUM. RIGHTS L. J.* 125 (2020).

199. Sabina Mihelj & César Jiménez-Martínez, *Digital Nationalism: Understanding the Role of Digital Media in the Rise of “New” Nationalism*, 27 *NATIONS AND NATIONALISM* 331 (2021). See generally Anupam Chander & Uyên P. Lê, *Data Nationalism*, 64 *EMORY L. J.* 677 (2015) (discussing “data nationalism”).

200. Martina F. Ferracane, *The Costs of Data Protectionism*, in *BIG DATA AND GLOBAL TRADE LAW* 63 (Mira Burri ed., 2021); Susan A. Aaronson, *What Are We Talking about When We Talk about Digital Protectionism?*, 18 *WORLD TRADE REV.* 541 (2019) (offering a balanced view); Svetlana Yakovleva, *Privacy Protection(ism): The Latest Wave of Trade Constraints on Regulatory Autonomy*, 74 *UNIV. OF MIAMI L. REV.* 416 (2020) (offering a historically informed view).

With the emergence of new digital technology superpowers like China, countries globally and across the political spectrum are implementing domestic policies and measures to restrict digital trade and investment.²⁰¹ In the U.S. and other Western countries, safeguarding the domestic digital market is often framed as a measure to protect national security interests—rather than as a form of digital nationalism.²⁰² However, the U.S. has historically been a leader in adopting techno-nationalist policies, and American techno-nationalism has been extensively studied by scholars in Asia.²⁰³

Contemporary industrial policies occupy an intermediate ground between techno-nationalism and techno-globalism—both when it comes to the reasons for their development, as well as their economic impact. New industrial policies may be oriented towards developing new industries or segments of industries. They may, for instance, have a fencing-off effect or impose export controls.

a. Development of New Industries

Import-substitution emerged as a predominant strategy for industrialization and economic development following the Great Depression of the 1930s and remained influential until approximately the 1970s.²⁰⁴ Import substitution is an economic policy aimed at reducing foreign dependency by replacing imported goods with domestically produced products using protectionist trade policies, including import tariffs and quotas. After the war, countries such as Germany and Japan moved away from policies that protected emerging industries from foreign competition. Instead, they focused on promoting their exports in international markets through an undervalued exchange rate, alongside leveraging reconstruction aid from the US.²⁰⁵ The prevailing view was that increased openness would lead to a wider spread of productive technology and technical expertise. As a result, export-led growth strategies gained prominence in the late 1970s. The IMF and the World Bank, as part of their offering of financial assistance to developing countries, facilitated the adoption of this new paradigm by tying aid to the governments' readiness to engage in foreign trade. By the 1980s, numerous developing nations had started to liberalize trade, shifting towards an export-oriented model of development.

Export-oriented growth and development programs began proliferating more broadly in the 1980s. Between 1970 and 1985, the Four Asian Tigers

201. Chander & Lê, *supra* note 199.

202. See Roberts, Choer Moraes & Ferguson, *supra* note 64; Helen Nissenbaum, *Where Computer Security Meets National Security*, 7 ETHICS AND INFO. TECH. 61 (2005) (discussing the ways in which computer security has been translated into national security and expanded to more areas).

203. James L. Schoff, U.S. -JAPAN TECHNOLOGY POLICY COORDINATION: BALANCING TECHNATIONALISM WITH A GLOBALIZED WORLD (Carnegie Endowment for International Peace working paper, June 29, 2020). See generally CHARLES A. KUPCHAN, ISOLATIONISM: A HISTORY OF AMERICA'S EFFORTS TO SHIELD ITSELF FROM THE WORLD (2020) (discussing isolationism in American diplomatic history).

204. Douglas A. Irwin, *The Rise and Fall of Import Substitution*, (Nat'l Bureau Econ. Res., Working Paper No. 27919 2020), <https://www.nber.org/papers/w27919> [<https://perma.cc/2EPZ-UB7Y>].

205. NAT'L BUREAU OF ECON. RSCH., A RETROSPECT AND PROSPECT ON THE POSTWAR JAPANESE ECONOMY 267. Anne O. Krueger, *Import Substitution Versus Export Promotion*, 22 FIN. & DEV. 20 (1985).

(Hong Kong, Singapore, South Korea, and Taiwan) adopted the export-led growth paradigm, which significantly contributed to their subsequent economic success.²⁰⁶ Much of their success was attributed to their ability to acquire foreign technology and effectively implement it, outpacing their competitors. Additionally, the capacity of these countries to acquire and develop technology was bolstered by attracting FDI.²⁰⁷ Following in their footsteps, some newly industrializing nations in Southeast Asia and several countries in Latin America adopted similar strategies. More recent industrial policies further emphasize export orientation. Some countries, including India, have expanded their export-driven industrial policies while transitioning out of developing-country exemptions under the WTO's Agreement on Subsidies and Countervailing Measures.²⁰⁸

A shift is underway in how new industrial policies approach export orientation. The gradual shift in recent decades towards horizontal development strategies, as identified above, now aims to boost overall industrial competitiveness, including in international markets.²⁰⁹ Supply chains and global value chains (GVCs) are shaping the patterns of international trade and development.²¹⁰ GVC-oriented industrial policies have emerged, focusing on enhancing the state's participation in global or regional supply chains.²¹¹

Overall, the goal of new industrial policies is the creation of competitive advantages in the global economy; they do so by providing a comprehensive framework for the development of new sectors and the establishment of new companies—as well as incentives and nudges for structural change of already existing sectors and companies. This contradicts the economic prescriptions developed—and dictated—during the LIO. The common wisdom of the Washington Consensus suggested that comparative advantage is a component of the developmental process; a “luxury” that only developed countries could afford, and that only naturally comes at a later stage of development.²¹²

206. See, e.g., Wan-wen Chu, *Catch-up and Learning in Taiwan: The Role of Industrial Policy*, in HOW NATIONS LEARN: TECHNOLOGICAL LEARNING, INDUSTRIAL POLICY, AND CATCH-UP (Arkebe Oqubay & Kenichi Ohno eds. Oxford, 2019) (presenting the example of Taiwan).

207. Michael Sarel, *Growth in East Asia What We Can and What We Cannot Infer*, INT'L MONETARY FUND WORKING PAPERS (Sep. 1, 1995), <https://www.imf.org/en/Publications/WP/Issues/2016/12/30/Growth-in-East-Asia-What-We-Can-and-What-We-Cannot-Infer-From-it-1291> [<https://perma.cc/C6JH-GXA4>].

208. Meyer & Dhingra, *supra* note 5, at 608.

209. H. V. Singh, *Industrial Policy and Manufacturing: Options for International Trade Policy*, Policy Options Paper, E15 Expert Group on Reinvigorating Manufacturing: New Industrial Policy and the Trade System, E15 Initiative, ICTSD and WEF, Geneva (2016); Andreoni, *supra* note 165; David G. Tarr *Government (Industrial) Policies for Competitiveness in a Global Economy* (World Bank Policy Research Working Paper 4598, 2005); European Commission, *An Integrated Industrial Policy for the Globalisation Era: Putting Competitiveness and Sustainability at Centre Stage*, BRUSSELS (2010), <https://www.kowi.de/Portaldata/2/Resources/fp7/2010-comindustrial-policy.pdf> [<https://perma.cc/RS5T-CRZX>].

210. GLOBAL VALUE CHAINS IN A POSTCRISIS WORLD: A DEVELOPMENT PERSPECTIVE, (Olivier Cattaneo, Gary Gereffi, & Cornelia Staritz eds., 2010).

211. Carlo Pietrobelli, Roberta Rabellotti & Ari Van Assche, *Making Sense of Global Value Chain-Oriented Policies: The Tripecta of Tasks, Linkages, and Firms*, 4 J. INT'L BUS. POL'Y 327 (2021).

212. Mario Cimoli, Dosi Giovanni & Joseph E. Stiglitz, *The Political Economy of Capabilities Accumulation: The Past and Future of Policies for Industrial Development*, in INDUSTRIAL POLICY

b. Fencing off

In 2013, Dani Rodrik wrote about industrial policies suggesting that their “focus these days may need to be [. . .] more on foreign investors than locals.”²¹³ This largely remains true. Still, contemporary industrial policies sometimes have a “fencing-off” aspect too. Investment screening has now become an integral component of industrial policy.²¹⁴

Under international law, states have sovereign authority to regulate the entry and establishment of foreign investors within their jurisdiction.²¹⁵ Governments are increasingly making use of this authority to restrict rather than liberalize market access.²¹⁶ There are two main ways of controlling foreign investment: outright prohibition and screening.²¹⁷ Numerous jurisdictions are expanding the reach of their Investment Screening Mechanisms (ISMs) to include addressing national security threats posed by foreign investments in digital technologies.²¹⁸ The Committee on Foreign Investment in the United States’s (CFIUS) powers, for example, have been constantly broadening in the last fifteen years.²¹⁹ CFIUS’s authority now covers “critical technologies”²²⁰ and—physical and virtual—“critical infrastructure”²²¹ as potential areas falling

AND DEVELOPMENT: THE POLITICAL ECONOMY OF CAPABILITIES ACCUMULATION, INITIATIVE FOR POLICY DIALOGUE 1, 3 (Mario Cimoli, Giovanni Dosi & Joseph E. Stiglitz eds., 2009).

213. Dani Rodrik, *The Past, Present and Future of Economic Growth* 47 (Global Citizen Found., Working Paper 1, 2013).

214. Claudia Schmucker & Stormy-Annika Mildner, *Investment Screening: Protectionism and Industrial Policy? Or Justified Policy tool to Protect National Security?*, G20 INSIGHTS, (September 30, 2021), https://www.g20-insights.org/policy_briefs/investment-screening-protectionism-and-industrial-policy-or-justified-policy-tool-to-protect-national-security/ [<https://perma.cc/L8CX-4TEJ>].

215. Government measures for the control of foreign investment aimed at market access fall thus outside the scope of most International Investment Agreements—unless market access is explicitly granted to foreign parties. See UNCTAD, *World Investment Report: Special Economic Zones* 92 (UN 2019) (hereinafter: UNCTAD, WIR: SEZs).

216. S. T. Anwar, *FDI Regimes, Investment Screening Process, and Institutional Frameworks: China versus Others in Global Business*, 46 J. OF WORLD TRADE 213 (2012) (highlighting the trend since at least since 2012.); Gisela Grieger, *EU framework for FDI screening* 4 (European Parliamentary Research Service, PE 614.667, Feb. 2019).

217. See also Markus Burgstaller, *Sovereign Wealth Funds and International Investment Law*, in *EVOLUTION IN INVESTMENT TREATY LAW AND ARBITRATION* 163 (Chester Brown & Kate Miles eds., 2011) (presenting a tripartite categorization).

According to UNCTAD there are three major types of ISMs: sector-specific, cross-sectoral, and entity-specific; UNCTAD, WIR: SEZs, at 93. See generally Wint A., *Liberalizing Foreign Direct Investment Regimes: The Vestigial Screen*, 20 WORLD DEV. 1515 (1992); Karl P. Sauvant, *Driving and Countervailing Forces: A Rebalancing of National FDI Policies*, in *YEARBOOK ON INTERNATIONAL INVESTMENT LAW & POLICY* 215 (Karl P. Sauvant ed., 2009); Theodore H. Moran, *CFI U.S. and National Security: Challenges for the United States, Opportunities for the European Union*, PETERSON INST. FOR INT’L ECON. (2017).

218. WIR 2018, at 80-81 (highlighting that this trend has been taking place mostly amongst Western countries). Also historically, ISMs partly owe their existence to cross-border transactions in high-tech products. The establishment of the Committee on Foreign Investment in the United States (CFIUS) was spearheaded to help address – among others – further expansion of Japanese investment in tech companies in the US. See James K. Jackson, *The Committee on Foreign Investment in the United States (CFIUS)*, CONG. RSCH. SERV. REP. RL33388 (updated February 26, 2020).

219. See Foreign Investment Risk Review Modernization Act (FIRREA) of 2018, Pub. L. No. 115-232, 132 Stat. 1636.

220. Defense Production Act of 1950 § 721(a)(4), 50 U.S.C. § 4565(a)(4).

221. Defense Production Act of 1950 § 721(a)(4), 50 U.S.C. § 4565(a)(6).

under the scope of national security review. The EU FDI Screening Regulation, in force since October 2020, has very similar provisions on critical infrastructure and critical technologies.²²² Since its introduction, many EU member states, such as Germany²²³ and Luxembourg have followed its example.²²⁴

Similar trends are unfolding in many more jurisdictions that have traditionally been open to foreign investment. Post-Brexit UK adopted the UK National Security and Investment Act. The Act defines a number of sensitive sectors for investment screening, and almost all of them are drawn from the field of new and digital technologies.²²⁵ In a similar move, the traditionally economically liberal Singapore enacted the Significant Investments Review Act (SIRA) in February 2024.²²⁶ The Act empowers the Minister for Trade and Industry to designate entities as critical to Singapore's national security interests, which can include those in the digital technology sector.²²⁷

c. Export controls

On the flipside, export controls on products and capital are also becoming part of new industrial policymaking.²²⁸ The focus of new industrial export control regulations is mostly on the most important hardware necessary for digital technologies: semiconductors. Semiconductors are the most critical component of computers used for AI development. The CHIPS and Science Act of August 9, 2022 have both expanded and exercised this export control power.²²⁹ Besides incentives for domestic production, the new semiconductor regime imposes restrictions on the exportation of semiconductors, as well as on outward investment directed at foreign semiconductor companies. On August 9, 2023, exactly one year after the CHIPS and Science Act came into force,

222. Regulation 2019/452 of the European Parliament and of the Council of 19 March 2019 Establishing a Framework for the Screening of Foreign Direct Investments into The Union, art. 4(1)(a)-(b), 2019 O.J. (L 79I) 1, 7.

223. *Investment Policy Monitor, Germany - FDI screening expanded over high-tech*, UNCTAD, <https://investmentpolicy.unctad.org/investment-policy-monitor/asures/3699/fdi-screening-expanded-over-high-tech> [<https://perma.cc/B4K2-UJ6J>] (May 1, 2021).

224. See *Loi du 14 juillet 2023 portant mise en place d'un mécanisme de filtrage des investissements directs étrangers susceptibles de porter atteinte à la sécurité ou à l'ordre public* [Act of 14 July 2023 establishing a mechanism for filtering foreign direct investment that could endanger security or public order] J.O. A411 2023 (Lux.). Article 5 covers nanotechnology and biotechnology, while Article 7 covers a whole range of digital infrastructures and digital technologies.

225. See *National Security and Investment Act 2021 c. 25* (U.K.). The sensitive sectors include advanced robotics, artificial intelligence, computing hardware, cryptographic authentication, data infrastructure, quantum technologies, and synthetic biology.

226. *Significant Investments Review Act, 2024* (Act No. 1/2024) (Sing.).

227. E.g., *ST Engineering Digital Systems Pte. Ltd. has been designated under SIRA*; see Office of Significant Investments Review, <https://www.osir.gov.sg/designation/designated-entities/> [<https://perma.cc/99MP-NZML>].

228. See generally CHIEN-HUEI WU, *LAW AND POLITICS ON EXPORT RESTRICTIONS: WTO AND BEYOND* (2021); Daniel C K Chow, *Export Restrictions in the Post-COVID World: Another Step in the Demise of the World Trade Organization*, 25 J. INT'L ECON. L. 507 (2022).

229. Press Release, The White House, Fact Sheet: CHIPS and Science Act Will Lower Costs, Create Jobs, Strengthen Supply Chains, and Counter China, (Aug. 9, 2022), <https://www.whitehouse.gov/briefing-room/statements-releases/2022/08/09/fact-sheet-chips-and-science-act-will-lower-costs-create-jobs-strengthen-supply-chains-and-counter-china/> [<https://perma.cc/T9C3-87Y4>].

President Biden signed an Executive Order regulating U.S. outward investment in “national security technologies and products.”²³⁰ The annex of the EO includes a list of “countries of concern,” where outward investment is restricted. The annex only mentions China as a country of concern.

Before the restrictions in outward investment were imposed, in October 2022, the U.S. Department of Commerce’s Bureau of Industry and Security (BIS) already added certain advanced computing chips and related semiconductor manufacturing equipment to the Commerce Control List (CCL), and expanded the Export Administration Regulations (EAR) to cover certain foreign-produced advanced computing items and imposed licensing requirements on semiconductor technologies exported to China.²³¹ These were further expanded in late 2023.²³² The latest regulations revise and extend the limitations on certain advanced computing items. Further, they impose stricter parameters on existing restrictions for semiconductor integrated circuits, enhance limits on semiconductor manufacturing equipment, and add Chinese companies to the Entity List.²³³

In response, China has imposed its own export controls on critical minerals essential for semiconductor and defense technology manufacturing, such as gallium and germanium. These measures are expected to have significant implications for global supply chains, given China’s dominant position in the production of these materials.²³⁴

At the invitation of the U.S. government,²³⁵ the EU developed the European Chips Act.²³⁶ Preparing for its comeback in semiconductor manufacturing leadership, Japan has adopted a series of measures to boost its

230. Exec. Order No. 14,105, 89 FR. 54,867 (Aug. 9, 2023).

231. Press Release, U.S. Department of Commerce, Bureau of Industry and Security, Commerce Implements New Export Controls on Advanced Computing and Semiconductor Manufacturing Items to the People’s Republic of China (PRC) (Oct. 7, 2022), <https://www.bis.doc.gov/index.php/documents/about-bis/newsroom/press-releases/3158-2022-10-07-bis-press-release-advanced-computing-and-semiconductor-manufacturing-controls-final/file> [<https://perma.cc/A8U8-F54F>].

232. Implementation of Additional Export Controls: Certain Advanced Computing Items; Supercomputer and Semiconductor End Use; Updates and Corrections, 88 Fed. Reg. 73458 (Oct. 25, 2023) (to be codified at 15 C.F.R. pts. 732, 734, 736, 740, 742, 744, 746, 748, 758, 770, 772, 774).

233. While they are anticipated to boost domestic production, these controls are not expected to hinder production of semiconductors in China. Gary Clyde Hufbauer & Megan Hogan, *CHIPS Act Will Spur U.S. Production but not Foreclose China*, PETERSON INST. FOR INT’L ECON. (Oct. 2022) <https://www.piie.com/publications/policy-briefs/chips-act-will-spur-us-production-not-foreclose-china#:~:text=More%20US%20semiconductor%20fabrication%20plants,next%20two%20or%20three%20years> [<https://perma.cc/9686-5UMM>]; Sarah Bauerle Danzman & Emily Kilcrease, *The Illusion of Controls: Unilateral Attempts to Contain China’s Technology Ambitions Will Fail*, FOREIGN AFFS. (Dec. 30, 2022), <https://www.foreignaffairs.com/united-states/illusion-controls> [<https://perma.cc/V6QX-HF6G>].

234. Gracelin Baskaran & Meredith Schwartz, China Imposes Its Most Stringent Critical Minerals Export Restrictions Yet Amidst U.S. Tech Controls, CTR. FOR STRATEGIC & INT’L STUD. (Dec. 4, 2024), <https://www.csis.org/analysis/china-imposes-its-most-stringent-critical-minerals-export-restrictions-yet-amidst> [<https://perma.cc/Uy2S-NAXY>].

235. Kevin Whitelaw, *U.S. Asks Europe to Consider Export Controls on China*, BLOOMBERG, (Oct. 31, 2022, 2:00 AM), <https://www.bloomberg.com/news/newsletters/2022-10-31/us-asks-europe-to-consider-export-controls-on-china> [<https://perma.cc/MG9J-3K32>].

236. EURO. COMM’N, *European Chips Act*, (2024), https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/europe-fit-digital-age/european-chips-act_en?utm_source=chatgpt.com [<https://perma.cc/X8MU-AFLC>].

semiconductor industry.²³⁷ The most important semiconductor manufacturing nation, Taiwan, has enacted legislation to bolster its semiconductor industry, similar to the CHIPS and Science Act. In January 2023, Taiwan amended its Statute for Industrial Innovation to introduce substantial tax incentives aimed at encouraging semiconductor manufacturers to invest in advanced production and research within the country.²³⁸

B. Examples of New Industrialism

The present section discusses in greater detail examples of outward-looking industrial policies that also focus on digital development, centering on the three digital superpowers: the US, China, and the EU.

1. United States

In the early United States, economic development was driven by protectionist policies that shielded emerging domestic industries from dominant British industrial competition, fostering industrial growth and economic independence.²³⁹ Beginning in the 19th century, however, the U.S. shifted toward a more market-oriented economic policy. Decisions about the direction of economic development had since been left to the private sector and the market. The federal state intervened to preserve competition and market demand, and to safeguard the rules of the game of the market under the supply and demand principle.²⁴⁰

Industrial policy is back in the US,²⁴¹ support for industrial policy spans the entire political spectrum.²⁴² Economic policy of more recent years

237. Takashi Mochizuki, Cagan Koc & Peter Elstrom, *Japan to Join U.S. Effort to Tighten Chip Exports to China*, BLOOMBERG, (Dec. 12, 2022, 8:57 AM), <https://www.bloomberg.com/news/articles/2022-12-12/japan-is-said-to-join-us-effort-to-tighten-chip-exports-to-china> [<https://perma.cc/X78A-FZPR>]; Sujai Shivakumar, Charles Wessnerand & Thomas Howell, *Japan Seeks to Revitalize Its Semiconductor Industry*, CTR. FOR STRATEGIC & INT'L STUD. (Aug. 25, 2023), <https://www.csis.org/analysis/japan-seeks-revitalize-its-semiconductor-industry> [<https://perma.cc/HT82-PGN8>].;

238. Debby Wu, *Taiwan Passes Its Chips Act, Offers Tax Credits to Chipmakers*, BLOOMBERG (Jan. 9, 2023, 9:26 PM); <https://www.bloomberg.com/news/articles/2023-01-09/taiwan-passes-its-chips-act-offers-tax-credits-to-chipmakers> [<https://perma.cc/RP2R-ME39>].

239. Sergio G. Lazzarini, *Strategizing by the government: Can industrial policy create firm-level competitive advantage?: "Strategizing by the Government,"* 36 STRAT. MGMT. J. 97, 97 (2015), <https://onlinelibrary.wiley.com/doi/10.1002/smj.2204> [<https://perma.cc/SNE6-Y89R>] (last visited Oct 21, 2022).

240. Bianchi & Labory, *supra* note 152, at 7.

241. *The Biden White House Plan for a New U.S. Industrial Policy*, ATL. COUNCIL (Jun. 23, 2021) <https://www.atlanticcouncil.org/commentary/transcript/the-biden-white-house-plan-for-a-new-us-industrial-policy/> [<https://perma.cc/64XJ-UR44>]; Joseph Brusuelas & Ethan Schmidt, *The Rebirth of Industrial Policy in the United States*, RSM REAL ECON. BLOG, (Jul. 8, 2021), <https://realeconomy.rsmus.com/the-rebirth-of-industrial-policy-in-the-united-states/> [<https://perma.cc/ECY9-ZBDE>]; Martijn Rasser et al., *Reboot: Framework for a New American Industrial Policy*, CTR. FOR A NEW AM. SEC., (May 24, 2022), https://s3.us-east-1.amazonaws.com/files.cnas.org/documents/CNAS-Tech-Reboot_May22_FinalB.pdf [<https://perma.cc/D3KS-R5GT>]; Robert H. Wade, *The paradox of U.S. industrial policy: The Developmental State in Disguise*, in INTERNATIONAL LABOUR OFFICE, TRANSFORMING ECONOMIES: MAKING INDUSTRIAL POLICY WORK FOR GROWTH, JOBS AND DEVELOPMENT (José Manuel Salazar-Xirinachs, Irmgard Nübler & Richard Kozul-Wright, eds., 2014); see also Robert B. Reich, *Why the U.S. Needs an Industrial Policy*, 60 HARV. BUS. REV. 74 (1982) (presenting arguments in favor of industrial policy already in the beginning of the 1980s).

242. Aiginger & Rodrik, *supra* note 160, at 190 (with further references); see also Michael Strain, *The Trump-Biden Consensus on the Economy is Bad for Business*, FINANCIAL TIMES (Jan.

recognizes that government intervention can play a positive role in supporting workers and certain industries, particularly those that are critical to national security or that are facing intense international competition. The more active industrial policy of recent years includes increasing funding for research and development, investment in infrastructure, and provision of tax incentives and other forms of support for targeted industries. At the same time, U.S. industrial policy is less centralized and top-down compared to other countries; it focuses more on establishing collaboration between the public and private sectors with a view to promoting productivity.²⁴³

The call for a new industrial policy is driven by the decline in manufacturing and its reduced contribution to employment. Moreover, U.S. industrial policy is shifting also towards new forms of economic growth such as the services industry.²⁴⁴ Furthermore, international dynamics, especially the competitive challenge posed by China, are significant factors fueling such initiatives. “The U.S. national security establishment [...] is increasingly concerned” according to Aiginger and Rodrik, “about technology transfer to a strategic and geopolitical rival and loss of U.S. technological edge.”²⁴⁵ This has led to “both a hard line against China and a desire for more robust industrial policies at home.”²⁴⁶

As mentioned above, Ivan Kanapathy, who served on the National Security Council as director for China, Taiwan, and Mongolia between 2018 and 2021, claimed that some years ago: “the term industrial policy was a bad word in Washington, and now it kind of makes sense.”²⁴⁷ Trying to justify the return of industrial and other interventionist policies, he continued: “But truthfully, if you go back before the postwar era, we did a lot of this. We just need to sort of flex those muscles, and it’s not as much about China as it is going back to our own history.”²⁴⁸

“Bidenomics” put industrial policy and industrial strategy at the forefront of the economic agenda.²⁴⁹ In June 2021, then-National Economic Council Director, Brian Deese, stated during a talk at the Atlantic Council: “Strategic public investment to shelter and grow champion industries is a reality of the twenty-first century economy. We cannot ignore or wish this away.”²⁵⁰ “So given this evolving landscape,” according to Deese in 2022, “I think the most

20, 2024), <https://www.ft.com/content/3cb2c4fd-58eb-4e25-9750-99c5566d0fdf> [https://perma.cc/7T32-9M3X].

243. Karl Aiginger & Susanne Sieber, *The Matrix Approach to Industrial Policy*, 20 INT’L REV. APPLIED ECON. 573 (2006).

244. Aiginger & Rodrik, *supra* note 160, at 201.

245. *Id.*, at 190.

246. *Id.*

247. Bade, *supra* note 157.

248. *Id.*

249. Press Release, The White House, *Bidenomics Is Working: The President’s Plan Grows the Economy from the Middle Out and Bottom Up—Not the Top Down* (June 28, 2023), <https://www.whitehouse.gov/briefing-room/statements-releases/2023/06/28/bidenomics-is-working-the-presidents-plan-grows-the-economy-from-the-middle-out-and-bottom-up-not-the-top-down/> [https://perma.cc/67JG-9CHZ]; see also Noam Scheiber, *The Biden Team Wants to Transform the Economy. Really.*, N.Y. Times Mag. (Nov. 3, 2021), <https://www.nytimes.com/2021/02/11/magazine/biden-economy.html> [https://perma.cc/8FMD-9WYW].

250. Atlantic Council, *The Biden White House plan for a new U.S. industrial policy*, (2021), *supra* note 2.

pertinent question for all of us is how do we re-underwrite the case for a modern American industrial strategy?"²⁵¹ President Biden, in the State of the Union 2022 address, proclaimed: "Instead of relying on foreign supply chains, let's make it in America."²⁵²

The Build Back Better Plan was proposed by President Biden between 2020 and 2021 as a comprehensive plan for a new U.S. industrial policy.²⁵³ This initiative was intended to be a substantial public investment on a national scale, focusing equally on social, environmental, and infrastructural programs.²⁵⁴ According to a commentator,

The program includes a thicket of sector-specific initiatives, such as tax credits for domestic solar and battery factories, as well as broader incentives for new energy projects to use American-made metals and components. Taken together, they amount to the most ambitious attempt at government-guided industrial policy since the Great Depression.²⁵⁵

Despite considerable deliberation and adjustments to the draft, strong opposition to the original mega-bill led to its withdrawal by 2022.²⁵⁶ Instead of pursuing a single comprehensive plan, the strategy was then divided into several components. The industrial policy program was implemented through a combination of executive actions and a series of bills. The United States Innovation and Competition Act of 2021 authorized more than \$100 billion for basic and advanced technology research in artificial intelligence, semiconductors, quantum computing, and other digital and advanced technologies. The three main legislative pillars of the revamped BBB plan are the Bipartisan Infrastructure Law, the CHIPS and Science Act, and the Inflation Reduction Act.²⁵⁷

251. Deese, *supra* note 3.

252. President Joe Biden, State of the Union Address (The White House, March 1, 2022), <https://bidenwhitehouse.archives.gov/state-of-the-union-2022/> [<https://perma.cc/LQ34-PJH6>].

253. Asma Khalid & Barbara Sprunt, *Biden Counters Trump's 'America First' With 'Build Back Better' Economic Plan* (July 9, 2020) <https://www.npr.org/2020/07/09/889347429/biden-counters-trumps-america-first-with-build-back-better-economic-plan> [<https://perma.cc/DCL5-ZD7F>]; Press Release, The White House, President Biden Announces the Build Back Better Framework (October 28, 2021), <https://www.whitehouse.gov/briefing-room/statements-releases/2021/10/28/president-biden-announces-the-build-back-better-framework/> [<https://perma.cc/QE7K-SUJS>].

254. THE WHITE HOUSE, *The Build Back Better Framework*, <https://www.whitehouse.gov/build-back-better/> [<https://perma.cc/B3PP-GSFW>].

255. Bade, *supra* note 157.

256. Lindsey McPherson, *How 'Build Back Better' Started, and How It's Going: A Timeline*, ROLL CALL (July 21, 2022), <https://rollcall.com/2022/07/21/how-build-back-better-started-and-how-its-going-a-timeline/> [<https://perma.cc/642N-QJE6>].

257. The social policy aspects of the plan were incorporated into American Families Plan. Press Release, The White House, FACT SHEET: The American Families Plan (Apr. 28, 2021) <https://www.whitehouse.gov/briefing-room/statements-releases/2021/04/28/fact-sheet-the-american-families-plan/> [<https://perma.cc/69KY-KGE4>]. However, this too struggled to pass in the Build Back Better Act and sections of it were incorporated in the Inflation Reduction Act.

Building on past initiatives,²⁵⁸ the Infrastructure Investment and Jobs Act (IIJA), also known as the Bipartisan Infrastructure Law (BIL), was signed into law by President Biden in November 2021. The Act includes about \$550 billion in additional investment.²⁵⁹ The Inflation Reduction Act (IRA) of 2022 may be seen as the backbone of the original Build Back Better Act.²⁶⁰ The IRA includes \$369 billion in climate-friendly subsidies. Eventually, the CHIPS and Science Act, signed into law by President Biden on August 9, 2022, authorizes roughly \$280 billion in new funding to boost domestic research and manufacturing of semiconductors.²⁶¹ A similar approach has been followed by the Biden administration in foreign economic policy.

The first Trump administration used economic foreign policy tools to encourage U.S. industry, reopen American factories, and revive local industry in such places as Detroit.²⁶² The COVID-19 pandemic also brought renewed attention to the need for government support for industries in healthcare and manufacturing, given extreme shortages during the time of the pandemic.²⁶³ The pandemic confirmed the need for self-sufficiency in certain sectors, especially for medical and personal protective equipment such as masks, gloves, gowns, and face shields.²⁶⁴

For a while, it was unclear what the new industrialist agenda of the Biden administration meant for foreign economic policy. This policy was originally defined as a “more nuanced” approach, and eventually as “worker-centered.”²⁶⁵ Newer versions of new American internationalism are a blend between domestic and international politics and law.²⁶⁶ Overall, and as noted above, recent policymaking in Washington reflects a dual focus: advancing an industrial strategy to rebuild American manufacturing, while simultaneously adopting a

258. See section I.B.

259. Press Release, House Comm. Transp. & Infrastructure, Chairs DeFazio, Norton, and Payne Introduce the INVEST in America Act to Create Millions of Jobs Bringing Our Infrastructure into the Modern Era (June 4, 2021) <https://web.archive.org/web/20210723033513/https://transportation.house.gov/news/press-releases/chairs-defazio-norton-and-payne-introduce-the-invest-in-america-act-to-create-millions-of-jobs-bringing-our-infrastructure-into-the-modern-era/> [https://perma.cc/EW7J-YLGF].

260. Inflation Reduction Act of 2022, Pub L. No. 117-169, 136 Stat. 1818 (2022).

261. See also *supra* section II.A.3.c.

262. David J. Lynch and Damian Paletta, *Trump announces steel and aluminum tariffs Thursday over objections from advisers and Republicans*, WASH. POST, <https://www.washingtonpost.com/news/business/wp/2018/03/01/white-house-planning-major-announcement-thursday-on-steel-and-aluminum-imports/> [https://perma.cc/QC4W-Z8R9] (last visited Sep. 28, 2022).

263. *Id.* at 188.

264. Timothy Meyer, *Trade Law and Supply Chain Regulation in a Post-COVID-19 World*, 114 AM. J. INT. LAW 637, 637 (2020).

265. Bade, *supra* note 157; see generally Kathleen Claussen, *The Worker-Centered Trade Policy: From Trump to Biden* (December 15, 2021). Univ. of Zurich, Europa Institute Yearbook, 253 (transcribed distinguished lecture, 2022), available at SSRN: <https://ssrn.com/abstract=4430044> [https://perma.cc/M7Z6-QDX9]; Desiree LeClercq, *A Worker-Centered Trade Policy*, 61 COLUM. J. OF TRANSNAT'L L. 733 (2023) (discussing the worker-centered approach of U.S. foreign economic policy).

266. “If Biden hopes to build a new internationalism,” according to Charles Kupchan and Peter Trubowitz, “he must transform the American political ecosystem.” Charles A. Kupchan & Peter L. Trubowitz, *The Home Front: Why an Internationalist Foreign Policy Needs a Stronger Domestic Foundation*, 100 FOREIGN AFFS. 92 (2021), at 95.

firm stance and a more assertive approach toward China.²⁶⁷ Both aspects of the policy are connected. Domestic industrial policy is now fundamentally reshaping U.S. foreign policy, especially in the field of digital technologies.

The prevailing concern is that the U.S. will lose its traditional technological advantage and that the center of tech development will shift to its main geopolitical and geoeconomic rival.²⁶⁸ “The Innovation and Competition Act,” according to one account, “was ostensibly passed to counter China’s economic dominance and emerging geopolitical influence. A bipartisan group of 68 senators voted to allow the government to make economic decisions, overriding the hands-off approach that has been sacrosanct for proponents of free-market enterprise.”²⁶⁹ Besides the measures discussed above,²⁷⁰ the government has banned Chinese tech giant Huawei from using American networks.²⁷¹ On September 15, 2022, President Biden signed an EO to further tighten the CFIUS’s process, restrict Chinese investment in technology sectors, and limit its access to the data of individual citizens.²⁷²

Domestic industrial policy is thus directly connected to international economic policy, as the Biden administration tried to rebalance the trade relationship with China and other economies. In her appearances before lawmakers in late March 2022, USTR Katherine Tai called for a more expansive trade policy that goes beyond tariffs and sanctions and embraces “rebuilding our industrial base” through the tax credits in Build Back Better.²⁷³ “It is absolutely a call to Congress, and a desire to work with Congress going forward on an agenda where trade policy is incorporated into a bigger picture, and all of these policy areas are pulling in the same direction,” according to Tai.²⁷⁴

2. China

Socialist ideology advocates for government intervention in shaping economic policy across each of short, medium, and long-term periods. Following their ascension to power in the Soviet Union, the Bolsheviks formulated 5-year plans as a means to implement economic policy in the medium term.²⁷⁵ China

267. Aiginger & Rodrik, *supra* note 160, at 190.

268. *Id.*

269. Joseph Brusuelas & Ethan Schmidt, *The Rebirth of Industrial Policy in the United States*, THE REAL ECON. BLOG (July 8, 2021), <https://realeconomy.rsmus.com/the-rebirth-of-industrial-policy-in-the-united-states/> <https://perma.cc/A5RE-GAMU>].

270. See sections II.A.3.b. and II.A.3.c.

271. Jill C. Gallagher, *U.S. Restrictions on Huawei Technologies: National Security, Foreign Policy, and Economic Interests*, CONG. RSCH. SERV. (2022).

272. David E. Sanger, *Biden Issues New Order to Block Chinese Investment in Technology in the U.S.*, N. Y. TIMES, <https://www.nytimes.com/2022/09/15/us/politics/biden-china-tech-executive-order.html> [[HTTPS://PERMA.CC/Z6LU-V6E8](https://perma.cc/Z6LU-V6E8)] (last visited Sep. 29, 2022).

273. Ambassador Katherine Tai, *Testimony Before the Senate Finance Committee Hearing on the President’s 2022 Trade Policy Agenda*, 117th Cong. (Mar. 31, 2022), <https://ustr.gov/about-us/policy-offices/press-office/speeches-and-remarks/2022/march/testimony-ambassador-katherine-tai-senate-finance-committee-hearing-presidents-2022-trade-policy> [<https://perma.cc/9G4Y-BPWP>].

274. *Id.*

275. See, e.g., ALEC NOVE, AN ECONOMIC HISTORY OF THE USSR, 1917–1991 72–89 (3d ed. Penguin Books 1992).

built on this approach to planned economic policymaking. Since 1953, China's Five-Year Plans have effectively served as industrial policies, guiding economic development. The term "industrial policy" was first explicitly used by the Chinese government in the seventh Five-Year Plan (1986–1990).²⁷⁶

The Chinese economic industrial policy has been mostly based on economic development through SOEs. China is also slowly embracing the American and European approach to industrial policy that looks to the private sector for economic development.²⁷⁷ The approach is more pertinent in the sphere of digital tech development.²⁷⁸

China's "new-type industrialization" initiative, announced already in 2002, represents a comprehensive strategy designed to promote the country's ongoing industrial development while attaining technological self-sufficiency.²⁷⁹ The MIC 2025—announced by Prime Minister Li Keqiang in 2015—has the goal of establishing China as a worldwide powerhouse in industries associated with disruptive and digital technology.²⁸⁰ The goal is to encourage indigenous innovation, technological self-reliance, industrial upgrading, and investment in homegrown technological capabilities, hence diminishing the country's dependency on imported technologies.²⁸¹

At the same time, MIC 2025 expands industrial policy to the private sector. Through this and similar initiatives, the state is increasingly engaging private companies—not only as beneficiaries but also as key implementers of these policies.²⁸² These efforts are aimed at enabling China to cultivate businesses that are competitive both domestically and globally.²⁸³ Equally, China sees MIC 2025 as an opportunity to enhance collaboration with industrialized economies and advance its integration into the global manufacturing system.²⁸⁴

In September 2023, President Xi and other high-ranking officials reaffirmed digital development—alongside sustainability—as key components of

276. Dic Lo & Mei Wu, *The State and Industrial Policy in Chinese Economic Development*, in *TRANSFORMING ECONOMIES: MAKING INDUSTRIAL POLICY WORK FOR GROWTH, JOBS AND DEVELOPMENT* 307, 315 (Int'l Lab. Org., 2014).

277. Georgios Dimitropoulos & Mohammed Al-Ahmadani, *International Commercial Courts in the Age of State Capitalism*, in *STATE CAPITALISM AND INTERNATIONAL INVESTMENT LAW* 245 (Panagiotis Delimatsis, Georgios Dimitropoulos & Anastasios Gourgourinis eds., Hart/Bloomsbury, 2023).

278. The common model in this sector involves private innovation supported by government funding; see Mazzucato, *THE ENTREPRENEURIAL STATE*, *supra* note 186, at 33-43 and 88-115.

279. Giulia Interesse, *Understanding China's New-Type Industrialization: An Explainer*, CHINA BRIEFING (Nov. 29, 2023), <https://www.china-briefing.com/news/understanding-chinas-new-type-industrialization-an-explainer/> [<https://perma.cc/ETQ7-WUAM>].

280. INS. FOR SEC. & DEV. POL'Y, <https://isdpc.eu/content/uploads/2018/06/Made-in-China-Background.pdf> [<https://perma.cc/T6BB-KGCY>] (last visited Oct. 8, 2022).

281. *Id.* at 1.

282. People's Republic of China (PRC) Ministry of Industry and Information Technology, 'Guiding Opinions of 16 Departments including the Ministry of Industry and Information Technology on Giving Full Play to the Role of Private Investment to Promote the Implementation of the Strategy of Manufacturing Power' (2017); see also Barry Naughton, *Financialisation of the State Sector in China*, in *CHINA'S ECONOMIC MODERNIZATION AND STRUCTURAL CHANGES: ESSAYS IN HONOUR OF JOHN WONG* 167 (Zheng Yongnian & Sarah Y. Tong eds., 2019).

283. *Id.* at 1.

284. *Id.* at 1.

China's broader new industrial policy.²⁸⁵ The new approach to digital industrial policy is gradually influencing national, regional, and city-wide initiatives.²⁸⁶

3. European Union

European countries have traditionally been involved in industrial policymaking.²⁸⁷ More recently, both the EU and its member states have renewed their focus on industrial policies with greater rigor.²⁸⁸

Title XVII of the Treaty on the Functioning of the European Union is dedicated to industry and industrial competitiveness. On March 10, 2020, one day before the World Health Organization (WHO) declared COVID-19 a pandemic, the European Commission introduced "A New Industrial Strategy for Europe."²⁸⁹ The overarching goal of the EU Industrial Strategy is to spearhead the "twin transition" towards a sustainable and digital economy. It enumerates a list of actions to support green and digital transitions in EU industry and outlines three drivers for industrial transformation: global competition, climate neutrality, and a digital future.

During the COVID-19 pandemic, fiscal rules and state aid were designed to support affected sectors, particularly SMEs, through measures such as the activation of the general escape clause under the Stability and Growth Pact, the Temporary Framework for State Aid, the European Instrument for Temporary Support to Mitigate Unemployment Risks in an Emergency (SURE), and the Coronavirus Response Investment Initiative.²⁹⁰ Building on this framework, the

285. Giulia Interesse, *Understanding China's New-Type Industrialization: An Explainer*, CHINA BRIEFING (Nov. 29, 2023), <https://www.china-briefing.com/news/understanding-chinas-new-type-industrialization-an-explainer/> [<https://perma.cc/W7QQ-3XY3>].

286. *Id.*

287. See, e.g., Jacques Pelkmans, *European Industrial Policy*, in INTERNATIONAL HANDBOOK ON INDUSTRIAL POLICY 56 (Patrizio Bianchi & Sandrine Labory eds., 2006).

288. *General principles of EU industrial policy: General principles of EU industrial policy*, EUROPEAN PARLIAMENT, <https://www.europarl.europa.eu/factsheets/en/sheet/61/general-principles-of-eu-industrial-policy#:~:text=The%20EU's%20industrial%20policy%20aims,growth%20and%20employment%20in%20Europe> [<https://perma.cc/AN8Y-G7RV>]; *A Franco-German Manifesto for a European Industry Policy for the twenty-first century* (2019), https://www.bmwk.de/Redaktion/DE/Downloads/F/franco-german-manifesto-for-a-european-industrial-policy.pdf?3F__blob%3DpublicationFile%26v%3D2.

289. European Commission, *European Industrial Strategy*, https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/europe-fit-digital-age/european-industrial-strategy_en [<https://perma.cc/5GHY-Y5C3>] (last visited Nov. 13 2022). Since the early 2000s, the Union has been gradually developing a coherent industrial policy through a series of initiatives: "Fostering Structural Change: an Industrial Policy for an Enlarged Europe," the 2002 Communication on "Industrial Policy in an Enlarged Europe" and the 2003 Communication "Some Key Issues in Europe's Competitiveness—Toward an Integrated Approach," which structured a new concept of industrial policy.

290. European Commission, *Communication from the Commission — Temporary Framework for State Aid Measures to Support the Economy in the Current COVID-19 Outbreak*, 2020 O.J. (C 91 I), available at [https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52020XC0320\(03\)](https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52020XC0320(03)) [<https://perma.cc/L7QB-8TJU>]; Council of the European Union, Council Regulation (EU) 2020/672 of 19 May 2020 Establishing a European Instrument for Temporary Support to Mitigate Unemployment Risks in an Emergency (SURE) Following the COVID-19 Outbreak, 2020 O.J. (L 159) 1, available at <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32020R0672> [<https://perma.cc/NK9T-2EJC>]; European Parliament and Council of the European Union, Regulation (EU) 2020/460 of the European Parliament and of

President of the European Commission proposed the Single Market Emergency Instrument (SMEI) to introduce structural solutions that strengthen the three key aspects. These include enhanced Single Market governance tools and procedures, greater transparency and coordination, mechanisms to facilitate the movement of goods and services, targeted measures to accelerate product availability, and improved market surveillance.²⁹¹ Notably, market surveillance is emphasized as a key priority for member states.²⁹²

An update to the 2020 industrial strategy was published in May 2021. “European Industrial Strategy: 2020 Industrial Strategy and Update to the Industrial Strategy” is partly a reaction to the COVID-19 pandemic. It assesses the Single Market of the EU and offers a tailored assessment of the needs of each industrial ecosystem and how each market player can best work together.²⁹³ The update highlights three key focus areas: first, maintaining the free movement of people, goods, services, and capital within the single market; second, analyzing and addressing strategic technological and industrial dependencies; and third, reinforcing the commitment to green and digital development.²⁹⁴

The gradual move towards industrial policy in its more recent mint has its own mirror image in international trade policy. The September 2017 State of the Union address of former EU Commission President Jean Claude Jucker marked a different approach to the international trade policy of the EU compared to past approaches.²⁹⁵ As a follow-up, in May 2017, the European Commission issued a Reflection Paper, “Harnessing Globalisation,” to assess the current status of the impact of globalization on the EU.²⁹⁶ The new economic foreign policy approach of the EU has mostly manifested itself in the proposal for a Multilateral Investment Court (MIC), as well as the FDI Regulation establishing a framework for the screening of foreign direct investment coming into the EU.²⁹⁷

the Council of 30 March 2020 Amending Regulations (EU) No 1301/2013, (EU) No 1303/2013 and (EU) No 508/2014 as Regards Specific Measures to Mobilise Investments in the Healthcare Systems of Member States and in Other Sectors of Their Economies in Response to the COVID-19 Outbreak, 2020 O.J. (L 99) 5.

291. Opening speech by the President at the EU Industry Days 2021, (Feb. 23 2021), https://ec.europa.eu/commission/presscorner/detail/en/speech_21_745 [<https://perma.cc/J7FR-JSVL>].

292. See Regulation (EU) 2019/1020 of the European Parliament and of the Council of 20 June 2019 on market surveillance and compliance of products and amending Directive 2004/42/EC and Regulations (EC) No 765/2008 and (EU) No 305/2011.

293. Communication from the Commission of the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions, Updating the 2020 New Industrial Strategy: Building a stronger Single Market for Europe’s Recovery (May. 5 2022), https://commission.europa.eu/document/download/9ab0244c-6ca3-4b11-bef9-422c7eb34f39_en?filename=communication-industrial-strategy-update-2020_en.pdf [<https://perma.cc/LZ9K-6WX3>].

294. *Id.*

295. State of the Union Address by the President, (Sep. 12, 2017), https://ec.europa.eu/commission/presscorner/detail/en/SPEECH_17_3165 [<https://perma.cc/W2RB-CEJ8>].

296. European Commission, Reflection Paper On Harnessing Globalisation, COM(2017) 240 of 10 May 2017. Already in 2015, it had proposed a new trade and investment strategy for the EU under the title “Trade for All: Towards a More Responsible Trade and Investment Policy.” European Commission, Trade for All: Towards a More Responsible Trade and Investment Policy (2015).

297. See European Commission, Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of

More recent industrial and trade policy in the EU is a reaction to U.S. policy—and, more specifically, the IRA and the rise of China.²⁹⁸ The IRA—and the fear that green projects would shift to the US—sparked real concerns about European competitiveness in these contexts.²⁹⁹ The problem arises in that, to prevent unfair subsidies and promote the single market, the EU treaties place strict limits on national industrial policies. The EU has thus been facing a dilemma between promoting more protective policies as opposed to the internal market. On November 22, 2022, the Ministers of Economy of France and Germany issued a joint statement calling for a renewed focus on European industrial policy.³⁰⁰ Some months later, the French President, Emmanuel Macron, called for a “Made in Europe” strategy.³⁰¹

On March 9, 2023, the European Commission adopted the Temporary Crisis and Transition State aid Framework (TCTF), which aims to maintain and boost clean tech investments in Europe.³⁰² It does so through an unprecedented relaxation of EU state aid regulations. A new regulation, the European Chips Act, mimicking the U.S. CHIPS Act, entered into force in September 2023 as discussed above.³⁰³ This legislative initiative aims to strengthen Europe’s competitiveness and resilience in semiconductor technologies and applications, as well as further contribute to achieving digital and green transitions. The European Chips Act is a key component of the EU’s wider strategy to ensure Europe is not dependent on countries like China for the technology that drives contemporary innovations.³⁰⁴ Finally, the European Commission announced a new package in January 2024, to reinforce the “EU’s economic security,” which involves further strengthening foreign investment screening, further tightening export controls, and examining EU investments abroad.³⁰⁵ That is, it covers all

the Regions: A Balanced and Progressive Trade Policy to Harness Globalisation, COM(2017) 492 final, Brussels, 13.9.2017.

298. Amy Bounds & Sam Fleming, *EU demands rapid response to Joe Biden’s \$369bn green subsidy package European ministers seek to head off transatlantic trade war over Inflation Reduction Act*, FIN. TIMES (Nov. 25, 2022), <https://www.ft.com/content/d8d31263-8ebf-49cf-83d5-3134563e6175> [<https://perma.cc/Z6Z3-Z8MV>].

299. *European industry pivots to U.S. as Biden subsidy sends ‘dangerous signal,’* FINANCIAL TIMES (Nov. 20, 2022), <https://www.ft.com/content/59a8d135-3477-4d0a-8d12-20c7ef94be07> [<https://perma.cc/85A5-PDDN>].

300. Joint statement by Bruno Le Maire and Robert Habeck: “We call for a renewed impetus in European industrial policy”, SALLE DE PRESSE (2022) <https://presse.economie.gouv.fr/22112022-joint-statement-by-bruno-le-maire-and-robert-habeck-we-call-for-a-renewed-impetus-in-european-industrial-policy/> [<https://perma.cc/9PHC-A5N5>].

301. Paola Tamma and Samuel Stolton, *Revealed: France’s massive ‘Made in Europe’ strategy: The EU is reeling as it debates how to respond to a recent U.S. subsidy push*, POLITICO (Jan. 13, 2023), <https://www.politico.eu/article/france-europe-strategy-revealed-revealed-frances-massive-made-in-europe-strategy/> [<https://perma.cc/9FN8-WAR4>].

302. Nils Redeker, *Go Big or Go Home—How to make European Industrial Policy Work*, HERTIE SCHOOL JACQUES DELORS CENTRE, <https://www.delorscentre.eu/en/publications/detail/publication/go-big-or-go-home-how-to-make-european-industrial-policy-work> [<https://perma.cc/27SB-8VWJ>].

303. See *supra* section A.3.c.

304. Antonia Hmadi and Rebecca Arcesati, *Why Europe Struggles with U.S. Export Controls on China*, THE DIPLOMAT (2022) <https://thediplomat.com/2022/12/why-europe-struggles-with-us-export-controls-on-china/> [<https://perma.cc/4WTC-ZTEV>].

305. European Commission, *New Tools Reinforce EU’s Economic Security*, https://commission.europa.eu/news/new-tools-reinforce-eus-economic-security-2024-01-24_en [<https://perma.cc/XKZ9-RC5N>].

three aspects of contemporary industrial policies mentioned above. EU's new internationalism has now been dubbed "Open Strategic Autonomy."³⁰⁶

4. *Beyond the Three Major Trading Blocks*

In the UK, the Industry Act 1975 grants the government broad authority to intervene in corporate shareholding for companies involved in industrial manufacturing.³⁰⁷ The Act establishes a National Enterprise Board with broad powers, primarily the authority to block changes in control of manufacturing industry undertakings if non-UK residents are involved. If control is transferred to a non-UK resident, the Board has the power to mandate the acquisition of the capital or assets of such undertakings. Despite the UK's traditional reliance on market-driven growth, recent governments have moved toward establishing a comprehensive industrial policy framework. The "industrial strategy" introduced under Prime Minister Boris Johnson was later abandoned.³⁰⁸ While the UK National Security and Investment Act discussed above consolidates the transition to new industrialism and new internationalism, it is unclear what the future holds for the overarching industrial strategy in the UK given differences across governments and among parties.³⁰⁹

Japan has traditionally built its economy around a strong automotive and electronics industry. To diversify and strengthen its industrial base, the country adopted various industrial policies and implemented a range of measures early on. Since 1999, the Japanese government has introduced multiple programs to promote manufacturing in the tech sector.³¹⁰ In 2001, the Japanese government launched the Industrial Cluster Policy to develop regional innovation hubs modeled after Silicon Valley.³¹¹ Newer policies such as the New Robot Strategy³¹² and Society 5.0³¹³ should be seen as industrial policies aiming at building up the competitive edge of Japan in the global tech market.

306. European Commission, *2023 Strategic Foresight Report: sustainability and wellbeing at the heart of Europe's Open Strategic Autonomy* (July 6, 2023).

307. J.T. Winkler, *Law, State and Economy: The Industry Act 1975 in Context*, 2 BRITISH J. L. & SOC. 103 (1975). See generally Ha-Joon Chang, Antonio Andreoni & Ming Leong Kuan, *International Industrial Policy Experiences and the Lessons for the UK*, (Centre for Business Research, University of Cambridge, Working Paper No. 450, 2013) (discussing industrial policy in the UK).

308. UK Gov't, *The UK's Industrial Strategy*, <https://www.gov.uk/government/topical-events/the-uks-industrial-strategy> [<https://perma.cc/C4NJ-APEM>].

309. For the relevant debate in Parliament, see "Industrial Strategy," Hansard Volume 831: debated on Tuesday 20 June 2023 <https://hansard.parliament.uk/lords/2023-06-20/debates/A32E6D0B-426B-44B1-90FE-B2182AE8AE3E/IndustrialStrategy> [<https://perma.cc/S9AS-R3U3>]; see also <https://www.iiss.org/en/publications/strategic-comments/2023/the-united-kingdoms-policy-on-strategic-industries/> [<https://perma.cc/47Y5-AHNC>] (explaining the differences among parties).

310. Basic Act on the Promotion of Core Manufacturing Technology (Act No. 2 of 1999); Japan Revitalization Strategy: Japan's challenge for the future (Revised in 2014) (June 24, 2014).

311. Hiroaki Kuwajima, *Japan's Industrial Cluster Policy Revisited*, THE TOKYO FOUND. FOR POL'Y RSCH. (June 27, 2020).

312. HEADQUARTERS FOR JAPAN'S ECON. REVITALIZATION, NEW ROBOT STRATEGY--JAPAN'S ROBOT STRATEGY: VISION, STRATEGY, ACTION PLAN (2015).

313. Government of Japan Cabinet Office, *Society 5.0*, https://www8.cao.go.jp/cstp/english/society5_0/index.html [<https://perma.cc/43XD-7TA5>].

These policies are managed by the powerful Ministry of Economy, Trade, and Industry (METI).

In developing economies, traditional manufacturing still plays an important role.³¹⁴ Meanwhile, several emerging and developing economies are formulating and implementing coherent industrial policies and legislative frameworks to enhance their digital economies and strengthen capabilities across various 4IR sectors.³¹⁵ Regulating cross-border data flows, enforcing data localization requirements, and, in some cases, imposing more classic trade and investment-related restrictions are often key components of industrial strategy.³¹⁶ South Africa is a notable example. Since 2007, the country has implemented a comprehensive Industrial Policy Action Plan (IPAP), overseen by the Department of Trade and Industry.³¹⁷ IPAP 2018/19—2020/21, for example, targets traditional heavy industry sectors and automotive production, as well as the innovation economy.³¹⁸ IPAP highlights the need for an industrial policy in the global context;³¹⁹ more recent approaches explicitly aim at developing a “digital industrial policy.”³²⁰

III. New Internationalism

The resurgence of industrial policy is profoundly reshaping the international order. New industrialism’s shift towards prioritizing national economic and security objectives and institutions over international markets is reconfiguring international relations as well as challenging the foundations of international law. As a result, shifts in domestic policy are now fundamentally changing international economic law. This Part of the Article addresses two interconnected issues: first, the feasibility of new industrialism within existing international economic law. Second, the emergence of a new “industrial” layer in international law. It outlines the political framework proposed by G7 leaders in 2021 in Cornwall. The focus is on the IPEF as the first large-scale implementation of the Cornwall framework and the most significant development in the emerging paradigm of new internationalism.

A. Towards A New Layer of International Law?

1. Domestic Industrial Policy Under Current International Economic Law

Market-oriented international law continues to retain the lion’s share in international law. This raises the question of whether there is room for industrial

314. See also *supra* section II.A.2.

315. See, e.g., Economic Planning Unit, Prime Minister’s Department, Government of Malaysia, National Fourth Industrial Revolution (4IR) Policy, <https://www.ekonomi.gov.my/sites/default/files/2021-07/National-4IR-Policy.pdf> [<https://perma.cc/7ZFW-385K>].

316. See *supra* section I.C.

317. Industrial Policy Action Plan of 2018/19—2020/21, https://www.gov.za/sites/default/files/gcis_document/201805/industrial-policy-action-plan.pdf [<https://perma.cc/MMZ2-8MYR>].

318. *Id.*

319. *Id.* at 4.

320. Justin Barnes, Anthony Black & Simon Roberts, *Towards a Digital Industrial Policy for South Africa: A Review of the Issues*, INDUS. DEV. THINK TANK, UNIV. OF JOHANNESBURG (July 17, 2019).

policy within the existing international economic regime.³²¹ The international economic law framework of the LIO has imposed significant restrictions on developing countries' ability to adopt and implement certain types of industrial policies.³²² WTO law, for example, wields significant influence over industrial policy, often acting as a constraint.³²³ This was evident recently in efforts to curb subsidies³²⁴ and antidumping measures³²⁵ embedded in new industrial policies of developing countries and emerging economies.

With the exponential growth and qualitative changes in industrial policymaking, domestic measures are now more likely to be brought before the WTO dispute settlement system.³²⁶ For example, the U.S. challenged industrial policy measures of India before the dispute settlement mechanism of the WTO in *India—Export Related Measures*.³²⁷ What the U.S. did not expect was that its own industrial policy measures would be challenged in turn. China and other countries contested the U.S. government's tariffs on steel and aluminum, imposed during the first Trump administration, which were intended to boost domestic production in those sectors.³²⁸ Measures included in the CHIPS Act,³²⁹ as well as the IRA,³³⁰ have also been challenged by China before the WTO dispute settlement system. European leaders have used the WTO too to push back against the United States' new industrial policies. European Commission President Ursula von der Leyen, in response to the IRA, warned that "...

321. See generally Sudip Ranjan Basu, Hiroaki Kuwahara & Fabien Dumesnil, *Industrial Policy and the WTO*, UNCTAD Policy Issues in International Trade and Commodities Study Series No. 6 (2000); Keith Nurse, *Industrial Policy, LDCs and the WTO Regime*, CDP Policy Review No. 5 (2016); SHERZOD SHADIKHODJAEV, *INDUSTRIAL POLICY AND THE WORLD TRADE ORGANIZATION: BETWEEN LEGAL CONSTRAINTS AND FLEXIBILITIES* (2018); WTO, *World Trade Report 2020: Government Policies to Promote Innovation in the Digital Age* (2020); Chad P. Bown, *Modern Industrial Policy and the WTO*, Working Papers 23-15 (December 2023).

322. Dani Rodrik, *Industrial Policy for the Twenty-First Century*, *supra* note 4, at 32-36.

323. The TRIPS Agreement is often seen as prohibiting many industrial policy measures. Michelle Rattón Sanchez Badin, *Developmental Responses to the International Trade Legal Game: Cases of Intellectual Property and Export Credit Law Reforms in Brazil*, in *LAW AND THE NEW DEVELOPMENTAL STATE: THE BRAZILIAN EXPERIENCE IN LATIN AMERICAN CONTEXT* (David M. Trubek, Helena Alviar Garcia, Diogo R. Coutinho & Alvaro Santos eds., 2013).

324. Meyer & Dhingra, *supra* note 5; see also Loretta Feris, *Subsidies as an Instrument of Industrial Policy: Are they WTO Compliant?*, SAIIA POLICY BRIEFING NO. 31 (2011).

325. Michael O. Moore & Mark Wu, *Antidumping and Strategic Industrial Policy: Tit-for-Tat Trade Remedies and the China-X-Ray Equipment Dispute*, 14 *WORLD TRADE REV.* 239-286 (2015); see also *id.* at 240 ("Antidumping measures can therefore play an important role in advancing (or countering) a government's industrial policy and/or improving the competitive positions of firms in an oligopolistic industry").

326. Meyer & Dhingra, *supra* note 5, at 606. See generally Peter Draper et al., *Industrial Subsidies as a Major Policy Response since the Global Financial Crises: Consequences and Remedies*, G20 POLY BRIEF, https://www.g20-insights.org/policy_briefs/industrial-subsidies-as-a-major-policy-response-since-the-global-financial-crises-consequences-and-remedies/ [<https://perma.cc/C5VX-KW2W>].

327. Panel Report, *India—Export Related Measures*, WT/DS541/R (circulated 31 October 2019).

328. Georgios Dimitropoulos, *The WTO's New National Security Challenge*, in *THE ELGAR COMPANION TO THE WORLD TRADE ORGANIZATION* 619, 630-631 (Julien Chaisse & Cristián Rodríguez-Chiffelle eds., 2023).

329. *United States — Measures on Certain Semiconductor and other Products, and Related Services and Technologies*, WT/DS615/1 (Dec. 12, 2022).

330. *United States — Certain Tax Credits Under the Inflation Reduction Act*, WT/DS623/1 (July 26, 2024).

[w]e need to look at three aspects that are particularly challenging: First, the ‘Buy American’ logic that underpins part of the IRA. Second, tax breaks that could lead to discrimination. And third, production subsidies that could lead to a subsidies race.”³³¹ This suggests that the EU may eventually take action before the WTO.

2. International Industrial Layer

Global trade volumes have been decreasing for over a decade.³³² Furthermore, cross-border FDI flows have been on a downward trend since at least 2016,³³³ The trend accelerated significantly after the outbreak of the COVID-19 pandemic.³³⁴ The decline in global economic flows has been characterized as a process of “slowbalization” or even “de-globalization.”³³⁵ Others suggest that economic globalization has just reached its peak.³³⁶

International institutionalism—the hallmark of the LIO—is also subject to criticism.³³⁷ This is symptomatic of what may be called legal and institutional de-globalization.³³⁸ Many countries are developing domestic frameworks for the management of foreign economic flows;³³⁹ for some, domestic frameworks may replace the international ones, while others only complement international rules.

331. Speech by President von der Leyen at the College of Europe in Bruges, European Commission (2022) https://ec.europa.eu/commission/presscorner/detail/en/speech_22_7487 [<https://perma.cc/WZJ3-JZDB>].

332. See IRC Trade Task Force, *Understanding the Weakness in Global Trade: What is the New Normal?*, OCCASIONAL PAPER SERIES NO. 178 (September 2016), <https://www.ecb.europa.eu/pub/pdf/scpops/ecbop178.en.pdf> [<https://perma.cc/P3AB-AUSF>].

333. See UNCTAD, *Global Investment Trends Monitor*, Issue No. 33 (January 2020); UNCTAD, *World Investment Report 2019—Special Economic Zones* (UNCTAD, 2019).

334. Douglas Irwin, *The Pandemic adds Momentum to the Deglobalisation Trend*, VoxEU (5 May 2020), <https://voxeu.org/article/pandemic-adds-momentum-deglobalisation-trend> [<https://perma.cc/P3NP-B3UM>].

335. See Walden Bello, *DEGLOBALIZATION: IDEAS FOR A NEW WORLD ECONOMY* (2002) (on “deglobalization”); Luca D’Urbino, *Slowbalisation: The steam has gone out of globalisation*, *THE ECONOMIST* (Jan. 24, 2019), <https://www.economist.com/leaders/2019/01/24/the-steam-has-gone-out-of-globalisation> [<https://perma.cc/W942-GEF4>] (on the latter). *But see* Martin Wolf, *The Big Mistakes of the Anti-Globalisers*, *FINANCIAL TIMES* (June 21, 2022).

336. Martin Wolf, *The Big Mistakes of the Anti-Globalisers*, *FINANCIAL TIMES* (June 21, 2022), <https://www.ft.com/content/fa1f3a82-99c5-4fb2-8bff-a7e8d3f65849> [<https://perma.cc/NS7E-DCFA>].

337. MAZOWER, *supra* note 65, at Introduction, xiii (2012); James Crawford, *The Current Political Discourse Concerning International Law*, 81 *MODERN L. REV.* 1 (2018); David Singh Grewal, *Three Theses on the Current Crisis of International Liberalism*, 25 *IND. JO. OF GLOB. L. STUD.* 595 (2018); Alexander Kentikelenis & Erik Voeten, *Legitimacy Challenges to the Liberal World Order: Evidence from United Nations Speeches, 1970–2018*, *REV. INT’L ORGAN.* (2020). The criticism in international economic law has largely been framed as a ‘backlash’ against international investment arbitration; see, *THE BACKLASH AGAINST INVESTMENT ARBITRATION: PERCEPTIONS AND REALITY* (Michael Waibel et al eds., 2012); Georgios Dimitropoulos, *The Conditions for Reform: A Typology of “Backlash” and Lessons for Reform in International Investment Law and Arbitration*, 18 *LP ICT* 416 (2020).

338. See also the earlier discussion in the American Society of International Law Annual Meeting: José Alvarez, *Introduction*, in *PROCEEDINGS OF THE ANNUAL MEETING OF THE AMERICAN SOCIETY OF INTERNATIONAL LAW*, Vol. 100 287–89 (2006).

339. Julien Chaisse & Georgios Dimitropoulos, *Domestic Investment Laws and International Economic Law in the Liberal International Order*, 22 *WORLD TRADE REV.* 1 (2023).

The international system is undergoing a comprehensive process of re-negotiation. Globalization—political, economic, cultural, and beyond—is no longer embraced without question.³⁴⁰ Scholars have begun making the case for the need to reconfigure existing international institutions or develop new ones that are better-suited to the needs of infrastructure development and the 4IR. New paradigms of international ordering are emerging, with some describing this as a process of “strategic reglobalization.”³⁴¹

International organizations have begun expanding or refocusing their programs to address issues such as infrastructure and the rise of global value chains. The World Bank, the Organisation for Economic Co-operation and Development (OECD), and the United Nations Conference on Trade and Development (UNCTAD) are the most pertinent examples.³⁴²

The World Bank—initially an advocate of the Washington Consensus—had already started moving in the 1990s towards infrastructure development.³⁴³ It later embraced the idea of industrial policy and initiated the process of “building competitive industries.”³⁴⁴ The appointment of its first non-G7 chief economist in 2008, Justin Yifu, further pushed the World Bank towards industrial policy.³⁴⁵ Yifu argued for structural changes in the production structure of national economies. In 2010, Janamitra Devan was appointed the World Bank’s Vice President for financial and private sector development. He advocated public support for some industries by forming the Competitive Industries and Innovation Program, which operated until 2022.³⁴⁶

Industrial policies may vary across countries at different stages of development. However, there remains an opportunity for cooperation in addressing contemporary global challenges and pursuing responsible globalization.³⁴⁷ The question remains whether the current institutional framework of international law needs a major overhaul or replacement. Many argue that a significant re-orientation of international law is required, with a growing view that international economic institutions such as WTO should be reformed to allow for greater domestic policy space.³⁴⁸ Therefore, above all, developing countries should seek greater space for industrial policy in their

340. David Grewal, *NETWORK POWER: THE SOCIAL DYNAMICS OF GLOBALIZATION* (2008); John Grey, *FALSE DAWN: THE DELUSIONS OF GLOBAL CAPITALISM* (2008).

341. Daniel Ikenson, *Strategic Reglobalization: Great Power Rivalry Comes for the Multilateral Trading System*, HINRICH FOUND. (Oct. 26, 2022), <https://www.hinrichfoundation.com/research/wp/sustainable/strategic-reglobalization/> [<https://perma.cc/7BXS-VGHJ>]; see also PETER ZEIHAN, *THE END OF THE WORLD IS JUST THE BEGINNING: MAPPING THE COLLAPSE OF GLOBALIZATION* (2022); Rana Foroohar, *My Guide to a Deglobalising World*, FINANCIAL TIMES (Oct. 21, 2022), <https://www.ft.com/content/f4c17c8c-9097-417e-94d6-36825fe85c24> [<https://perma.cc/GJ7M-TDV3>].

342. GLOBAL VALUE CHAINS IN A POSTCRISIS WORLD: A DEVELOPMENT PERSPECTIVE, (Olivier Cattaneo, Gary Gereffi, & Cornelia Staritz eds., 2010).

343. See *supra* section I.B.

344. Robert H. Wade, *Return of Industrial Policy?*, 26 INT’L REV. OF APPLIED ECON. 223 (2012).

345. *Id.* at 233–234.

346. World Bank, *Competitive Industries and Innovation Program: Annual Report 2021-2022 and Final Completion Report 2012-2022* (2022).

347. Aiginger & Rodrik, *supra* note 160, at 203.

348. Alvaro Santos, *Carving Out Policy Autonomy for Developing Countries in the World Trade Organization: The Experience of Brazil & Mexico*, 52 VA. J. INT’L L. 551 (2012).

trade negotiations.³⁴⁹ Aiginger and Rodrik call for an “International Forum for Industrial Policy Shaping Responsible Globalization” as an annual international platform to discuss industrial policy with different legal, political, and economic actors.³⁵⁰

The next section discusses efforts towards the formation of a new industrial law-based layer of international law.

B. The Cornwall Consensus: A New Global Framework?

The challenges to economic globalization and neoliberalism have turned states away from formal international organizations, and towards more political international fora such as the Group of 7 (G7) and the Group of 20 (G20), and others.³⁵¹ A few years ago, the G7 formed a Panel on Economic Resilience, chaired by Lord Mark Sedwill and comprised of representatives from all seven countries. The panel developed key policy recommendations for the future of international ordering.³⁵² The G7 leaders, building on the work of the panel, issued in June 2021 the Carbis Bay G7 Summit Communiqué titled “Our Shared Agenda for Global Action to Build Back Better.” The overall goal is to agree on “a new consensus and restore public trust in a rules-based, free, fair and open economic system.”³⁵³ The result of this process became known as the “Cornwall Consensus;” a pact that mimics in its title the Washington Consensus and takes its own name after the location where the G7 meeting took place. The G7 leaders hope to replace the Washington Consensus with the Cornwall Consensus as the constitution of a post-financial crisis and post-pandemic world.³⁵⁴

The Cornwall Consensus outlines a vision for a fairer world—one that accounts for digital globalization and is more responsive to those in need of protection. The high-level postulates of Cornwall have begun to materialize through the actions of various group members, with Cornwall’s order taking more concrete form recently through the Indo-Pacific Economic Framework for Prosperity.

C. The Indo-Pacific Economic Framework for Prosperity

The IPEF is a newly launched regional economic initiative that reflects fundamental shifts in the global geopolitical balance. This section first provides an overview of the development of the “Indo-Pacific” as a key area in international law developments, explores the political motivations behind the IPEF, and examines its relationship to other regional agreements. It then delves into the specifics of the agreement.

349. Dani Rodrik, *Industrial Policy for the Twenty-First Century*, *supra* note 4, at 35.

350. Aiginger & Rodrik, *supra* note 160, at 203.

351. *See generally* Dimitropoulos, *supra* note 328, at 633-636.

352. G7 Panel on Economic Resilience, Key Policy Recommendations.

353. Cornwall Consensus, *supra* note 29, at 1.

354. Mariana Mazzucato, *A New Global Economic Consensus*, PROJECT SYNDICATE (Oct 13, 2021), <https://www.project-syndicate.org/commentary/cornwall-consensus-rebuilding-global-governance-by-mariana-mazzucato-2021-10?barrier=accesspaylog> [https://perma.cc/YJ2V-2ENX].

1. The “Indo-Pacific” Region

The term “Indo-Pacific” is largely a constructed concept, reflecting the intention of U.S. governments to shift focus from the “Asia-Pacific” region to a newly envisioned Indo-Pacific region.

As far back as 1865, the area where the Indian and Pacific Oceans meet was referred to as “Australindia.”³⁵⁵ In the 20th century, the term Asia-Pacific was the prevailing name of the region for cooperation among governments in that same part of the world.³⁵⁶ However, the concept of a “broader Asia” was introduced by the late Japanese Prime Minister, Shinzo Abe, in his influential speech titled “Confluence of the Two Seas,” delivered before the Indian Parliament in 2007.³⁵⁷ In this speech, Abe highlighted the deep-rooted Asian connections between the nations bordering the Indian and Pacific Oceans.³⁵⁸ This terminology gained further traction through the development of a strategic understanding between Japan, India, Australia, and the United States—known as the Quadrilateral Security Dialogue (Quad).³⁵⁹

The first use of the term “Indo-Pacific” by a U.S. official occurred in 2012 during President Barack Obama’s first term, when Secretary of State Hillary Clinton used it in an address in Hawai‘i.³⁶⁰ Following the establishment of the Indo-Pacific Economic Corridor (IPEC) initiative,³⁶¹ President Obama created the Trans-Pacific Partnership (TPP) as a regional economic agreement that would not include China. President Trump’s withdrawal from the agreement in 2017 significantly altered the course of events. The TPP was pursued as the CPTPP by the other participating countries, and the U.S. was left without an institutional forum in the region. Furthermore, during President Trump’s first term, the concept of the Free and Open Indo-Pacific (FOIP) emerged in response to China’s Belt and Road Initiative (BRI).³⁶² The first clear foreign policy framework for the Indo-Pacific region was articulated in the National Security Strategy of the United States in December 2017.³⁶³

355. Harsh V. Pant & Anant Singh Mann, *The Indo-Pacific: From Theory to Practice*, in BRASS TACKS: UNPACKING THE INDO-PACIFIC TEMPLATE 12, 13 (Pratnashree Basu ed., 2021).

356. *Id.*

357. “Confluence of the Two Seas,” Speech by H.E. Mr. Shinzo Abe, Prime Minister of Japan at the Parliament of the Republic of India, <https://www.mofa.go.jp/region/asia-paci/pmv0708/speech-2.html> [<https://perma.cc/8VNA-5XGG>].

358. Pant & Mann, *supra* note 355, at 12.

359. Some have referred to the Quad as a “mini Indo-Pacific NATO” due to the shared goals and collaborative efforts of the partners in the broader region. David Scott, *Intersections Between Free and Open Indo-Pacific and Other Regional Templates*, in BRASS TACKS: UNPACKING THE INDO-PACIFIC TEMPLATE 19, 29 (Pratnashree Basu ed., 2021).

360. Hillary Rodham Clinton, *Remarks on America’s Engagement in the Asia-Pacific*, U.S. Dep’t of State (Oct. 28, 2010), <https://2009-2017.state.gov/secretary/20092013clinton/rm/2010/10/150141.htm> [<https://perma.cc/TQ32-5654>].

361. USAID, *Indo-Pacific Economic Corridor (IPEC) Phase I: Coordinated Regional Trade Analysis* (April 2015), https://pdf.usaid.gov/pdf_docs/PA00KZQ1.pdf [<https://perma.cc/HF6E-LW9L>].

362. Congressional Research Service, *The Trump Administration’s “Free and Open Indo-Pacific:” Issues for Congress*, R45396 (Updated October 3, 2018).

363. NATIONAL SECURITY STRATEGY OF THE UNITED STATES OF AMERICA (Dec. 2017), at 45-47 and *passim*; see generally MICHAEL L. BEEMAN, *WALKING OUT: AMERICA’S NEW TRADE POLICY IN THE ASIA-PACIFIC AND BEYOND* (2024) (discussing the shifts in U.S. trade policy with a focus on the Indo-Pacific).

Other countries and international institutions, including Japan, Australia, India, and the Association of Southeast Asian Nations (ASEAN), began adopting the term. Even countries outside the broader region, such as France, embraced it.³⁶⁴

The Indian Ocean is increasingly gaining prominence as a crucial trade route and has emerged as an alternative to the traditionally dominant Atlantic corridor.³⁶⁵ Above all, though, the Indo-Pacific is a political term and is therefore neither purely descriptive nor value-neutral.³⁶⁶ Indeed, the main justifications for shifting focus to the Indo-Pacific are political, aiming to counterbalance China's growing political and economic influence.³⁶⁷ China has had an increasing naval presence in the Indian and Pacific Oceans since the late 1990s that has been further strengthened by the Maritime Silk Road.³⁶⁸ Thus, the Indo-Pacific framework serves as a balancing strategy for the United States to reaffirm its power in the region vis-à-vis China. It pursues this goal in two ways: by excluding China and by elevating India's strategic position.³⁶⁹

By contrast, China has rejected the Indo-Pacific as a geographic or political framework. China's response came with RCEP, which marked its most significant multilateral economic agreement outside the WTO, strengthening its economic ties in the region. This partnership aims to demonstrate that states can cooperate without U.S. leadership – while simultaneously expanding China's influence in the broader region.³⁷⁰ From a legal drafting perspective, RCEP largely follows the framework of traditional economic treaties while placing greater emphasis on respecting national sovereignty compared to agreements signed by the U.S. and the EU.³⁷¹

2. A New Framework Agreement: An Alternative to the WTO?

U.S. officials have been hinting at alternatives to the WTO for quite some time.³⁷² The Obama administration initially refused to appoint members to

364. Felix Heiduk & Gudrun Wacker, *From Asia-Pacific to Indo-Pacific: Significance, Implementation and Challenges*, SWP Research Paper 2020/RP 09 (2020) at 5.

365. Riad A Ajami, *Strategic Trade and Investments Framework and Geopolitical Linkages across Asia-Pacific Economies*, 23 J. OF ASIA-PACIFIC BUS. 183 (2022).

366. Heiduk & Wacker, *supra* note 364, at 8.

367. Pant & Mann, *supra* note 355, at 12-13.

368. Scott, *supra* note 359, at 19.

369. *Id.*, 36.

370. Jaeyoung Kim, *The Agency of Secondary States in Order Transition in the Indo-Pacific*, 37 THE PACIFIC REV. 1, 2 (2022).

371. See Dusheng Zhai, *RCEP Rules on Cross-Border Data Flows: Asian Characteristics and Implications for Developing Countries*, 33 ASIA PACIFIC L. REV. 24 (2024) (the article examines how the Regional Comprehensive Economic Partnership (RCEP) addresses digital trade and data flow regulations, highlighting its unique "Asian characteristics" that balance economic integration with respect for national regulatory autonomy).

372. Melissa K. Griffith, Richard H. Steinberg & John Zysman, *From Great Power Politics to a Strategic Vacuum: Origins and Consequences of the TPP and TTIP*, 19 (Special Issue 4) BUS. & POLS. 573, 582 and *passim* (2017) (discussing the TPP, which was eventually abandoned by the US, and TTIP, the negotiations for which have been abandoned as an attempt for the U.S. to redefine trade rules outside the traditionally supported institutions, build a new multilateral regime, and create a "WTO 2.0." This move is similar to the move from GATT 1994 to the WTO, according to the authors).

the WTO Appellate Body, a stance later continued by the Trump and Biden administrations.³⁷³

The direction of the Biden administration's foreign policy was unclear in the first months.³⁷⁴ In the beginning, it had imposed on itself a moratorium on trade negotiations. The thinking changed over time. Biden's team started putting the principles of the USMCA to use to build a network of like-minded nations that agree to support new causes such as higher wages and higher standards of worker protection, stricter climate and environmental rules, as well as digital economy rules. Countries that do not adhere to the rules—such as China and, eventually, Russia—would not only be subject to higher tariffs and other trade enforcement measures, as was previously the case, but would also be excluded from the new system. This would impact American and other companies, forcing them to show their allegiances.³⁷⁵

In the aftermath of Cornwall, then USTR Katherine Tai advocated for a more expansive trade policy that extends beyond traditional tariffs and sanctions, emphasizing the importance of rebuilding the U.S. industrial base, and highlighting the need for industrial policies to support high-tech sectors and enhance domestic manufacturing capabilities.³⁷⁶ In April 2022, Treasury Secretary Janet Yellen endorsed the idea of establishing a “network of plurilateral trade agreements” with friendly nations as a means “to achieve free but secure trade,”³⁷⁷ as well as to address growing economic challenges, especially in digital services.³⁷⁸

In May 2022, President Biden, together with the Prime Ministers of India and Japan, officially announced the launch of the IPEF in Tokyo.³⁷⁹ There are fourteen initial partner states. In addition to the US, India and Japan, they include Australia, New Zealand, Singapore, Indonesia, Malaysia, Korea, Vietnam, Brunei, the Philippines, and Thailand. They represent 40% of global GDP.³⁸⁰

IPEF diverges from the orthodoxy of traditional trade agreements—including the USMCA and CPTPP, as well as RCEP—more significantly than initially expected.³⁸¹ It is not a trade agreement per se, as it does not include

373. *United States Continues to Block New Appellate Body Members for the World Trade Organization, Risking the Collapse of the Appellate Process*, 113 AM. J. INT'L L. 822, 822–31 (2019).

374. See also *supra* section II.B.1.

375. See *supra* at Introduction.

376. Ambassador Katherine Tai, *Testimony Before the Senate Finance Committee Hearing on the President's 2022 Trade Policy Agenda*, 117th Cong. (Mar. 31, 2022), <https://ustr.gov/about-us/policy-offices/press-office/speeches-and-remarks/2022/march/testimony-ambassador-katherine-tai-senate-finance-committee-hearing-presidents-2022-trade-policy> [<https://perma.cc/2LTC-KCAS>].

377. Janet L. Yellen, *Remarks on Way Forward for the Global Economy*, U.S. DEP'T OF THE TREASURY (Apr. 13, 2022).

378. *Id.*

379. Press Release, The White House, FACT SHEET: In Asia, President Biden and a Dozen Indo-Pacific Partners Launch the Indo-Pacific Economic Framework for Prosperity, (May 23, 2022), <https://www.whitehouse.gov/briefing-room/statements-releases/2022/05/23/fact-sheet-in-asia-president-biden-and-a-dozen-indo-pacific-partners-launch-the-indo-pacific-economic-framework-for-prosperity/> [<https://perma.cc/D9Q6-UAYC>]; see generally *Indo-Pacific Economic Framework*, U.S. DEP'T OF COM. <https://www.commerce.gov/ipef> [<https://perma.cc/A2CN-XPCD>] (Last visited June 26, 2024).

380. *Indo-Pacific Economic Framework*, *supra* note 379.

381. The IPEF—as well as its implementation agreements—incorporate variants of model language from other recently signed agreements such as the USMCA. Rozlyn C.

binding commitments such as tariff reductions or market access concessions.³⁸² Rather, it is a structured legal framework for future negotiations, and is thus described as an “initiative” or “administrative arrangement.”³⁸³ The IPEF serves as a platform for shaping future global economic frameworks, focusing on issue-specific progress. While non-binding, it signals a shift in power and the emergence of a new economic region.

IPEF retains the themes of Biden’s Build Back Better World (B3W) initiative,³⁸⁴ as well as Cornwall’s vision to “build back the State.”³⁸⁵ It is based on four pillars: connected economy; resilient economy; clean economy; fair economy.³⁸⁶ The innovative structure of the four pillars demonstrates flexibility of commitment. The pillars only set a foundational framework for future agreements and the participating states’ intentions for further negotiations and collaboration. The agreements under the IPEF umbrella and substantive commitments of the individual agreements would suggest various legal effects—whether binding or non-binding.³⁸⁷

The IPEF is thus a loosely-designed economic bloc.³⁸⁸ It is based on an open architecture logic.³⁸⁹ As announced by Tai and Yellen, the IPEF lends itself to the formation of open plurilateral agreements by allowing flexibility in the adoption of the four pillars.³⁹⁰ As part of the open architecture, parties can pick and choose which pillar they would like to join or withdraw from. For example, India is not a part of the trade pillar since it is linked to environmental and labor rights.³⁹¹ At the same time, the framework includes an open invitation for other countries to join.

Following the IPEF’s announcement, informal ministerial negotiations took place to define the objectives of each pillar of the framework. Within the first pillar of trade, ministers expressed the intention to “craft high-standard, inclusive, free, fair, and open trade commitments that build upon the rules-based multilateral

Engel & Tobin Hansen, *The United States: A Cautious Return to Internationalism*, in *REWIRING GLOBALIZATION* 37, 40 (Sinan Ülgen et al., 2022).

382. Demetri Sevastopulo, *Joe Biden Waters Down Indo-Pacific Economic Framework to Win More Support*, *FINANCIAL TIMES* (May 20, 2022); Ryan Mulholland, *The IPEF Supply Chain Agreement Is A Win for U.S. Industrial Policy*, *CTR. AM. PROGRESS* (Nov. 20, 2023), <https://www.americanprogress.org/article/the-ipef-supply-chain-agreement-is-a-win-for-u-s-industrial-policy/> [<https://perma.cc/E796-HY44>].

383. As a result, the Biden administration did not need to seek congressional approval to participate in the IPEF. *AM. J. INT’L L.*, *supra* note 37, at 869.

384. Rahul Mishra & Peter Wang, *IPEF Introduces Institutional Reality to Indo-Pacific Region*, *ASIA TIMES* (May 30, 2022), <https://asiatimes.com/2022/05/ipef-introduces-institutional-reality-to-indo-pacific-region/> [<https://perma.cc/L53E-S2BW>].

385. See *supra* section III.B and *infra* section IV.A.1.

386. Press Release, The White House, Statement on Indo-Pacific Economic Framework for Prosperity (May 23, 2022), <https://www.whitehouse.gov/briefing-room/statements-releases/2022/05/23/statement-on-indo-pacific-economic-framework-for-prosperity/> [<https://perma.cc/5X8U-QVEX>]; see The White House Fact Sheet: In Asia, President Biden and a Dozen Indo-Pacific Partners Launch the Indo-Pacific Economic Framework for Prosperity, *supra* note 38.

387. *AM. J. INT’L L.*, *supra* note 37, at 871.

388. Riad A Ajami, *Strategic Trade and Investments Framework and Geopolitical Linkages across Asia-Pacific Economies* (2022) 23 *J. ASIA-PACIFIC BUS.* 183, 183.

389. See also discussion *infra* Section IV.A.1.

390. Mishra & Wang, *supra* note 384.

391. *AM. J. INT’L L.*, *supra* note 37, at 871.

trading system.”³⁹² In addition, the framework will target a new nexus of trade and technology—resilient and sustainable economic development—while helping protect and support vulnerable sections of the population, such as women, workers, and consumers, as well as micro, small, and medium enterprises (MSMEs).³⁹³ The challenge for digital trade lies in the binding provisions already established in traditional regional agreements like CPTPP and RCEP.³⁹⁴

In the second pillar, states are willing to ensure “transparency, diversity, security, and sustainability in [. . .] supply chains to make them more resilient, robust, and well-integrated.” The partners confirm their commitment to other multilateral obligations under WTO and international labor law obligations.³⁹⁵ In the third pillar of clean energy, the partners recognize the need for energy transition and their goals under the Paris agreement.³⁹⁶ In the fourth pillar of a fair economy, states aim to strengthen efforts to combat corruption and tax evasion, promoting accountability and the rule of law.³⁹⁷

Substantial progress was made at the IPEF Leaders’ Meeting in San Francisco in November 2023. The meeting led to an Overarching Agreement.³⁹⁸ This establishes an umbrella IPEF Council, which will meet annually. Heads of States meetings will be taking place every two years.

Following a significant completion of negotiations in May 2023, the IPEF Ministers formalized IPEF’s first substantial agreement by signing and announcing it at the San Francisco Ministerial Meeting. The first plurilateral agreement arising out of the IPEF is the IPEF Supply Chain Agreement.³⁹⁹ This has been characterized as a “a win for U.S. industrial policy.”⁴⁰⁰ The IPEF Clean Economy Agreement,⁴⁰¹ as well as the IPEF Fair Economy Agreement

392. Ministerial Statement, Pillar I Of The Indo-Pacific Economic Framework For Prosperity, IPEF (Sep. 2022), [https://ustr.gov/sites/default/files/2022-09/IPEF%20Pillar%201%20Ministerial%20Text%20\(Trade%20Pillar\)_FOR%20PUBLIC%20RELEASE%20\(1\).pdf](https://ustr.gov/sites/default/files/2022-09/IPEF%20Pillar%201%20Ministerial%20Text%20(Trade%20Pillar)_FOR%20PUBLIC%20RELEASE%20(1).pdf) [https://perma.cc/KAE9-RDLX].

393. *Id.*

394. Andreyka Natalegawa and Gregory B. Poling, *The Indo-Pacific Economic Framework & Digital Trade in Southeast Asia*, CTR. FOR STRATEGIC AND INT’L STUD. (CSIS) (May 2022) 3.

395. See Ministerial Statement, Pillar II Of The Indo-Pacific Economic Framework For Prosperity, IPEF (Sep. 2022), <https://www.mofa.go.jp/files/100391689.pdf> [https://perma.cc/42NQ-2G4B].

396. See Ministerial Statement, Pillar III Of The Indo-Pacific Economic Framework For Prosperity, IPEF, <https://www.commerce.gov/sites/default/files/2022-09/Pillar-III-Ministerial-Statement.pdf> [https://perma.cc/9YP7-PX8V].

397. See Ministerial Statement, Pillar II Of The Indo-Pacific Economic Framework For Prosperity, IPEF, <https://www.commerce.gov/sites/default/files/2022-09/Pillar-IV-Ministerial-Statement.pdf> [https://perma.cc/SYX3-MPVM].

398. Press Release, Statement on Indo-Pacific Economic Framework for Prosperity Meetings in San Francisco, (Nov. 16 2023), <https://www.commerce.gov/news/press-releases/2023/11/joint-statement-indo-pacific-economic-framework-prosperity-partner> [https://perma.cc/9AJK-J584].

399. Indo-Pacific Economic Framework For Prosperity Agreement Relating To Supply Chain Resilience, Nov. 14, 2023, <https://www.commerce.gov/sites/default/files/2023-09/2023-09-07-IPEF-Pillar-II-Final-Text-Public-Release.pdf>; see also discussion *infra* section IV.B [https://perma.cc/6YB9-TLZA].

400. Mulholland, *supra* note 382.

401. Indo-Pacific Economic Framework for Prosperity Agreement Relating to a Clean Economy, June 6, 2024, <https://investmentpolicy.unctad.org/international-investment-agreements/treaty-files/8471/download> [https://perma.cc/4VP4-3E3H].

were also signed in June 2024.⁴⁰² I will return below to the discussion of some of the aspects of IPEF and the Supply Chain Agreement.⁴⁰³

D. Beyond the IPEF

The IPEF is not only laying the groundwork for future plurilateral agreements within its own framework, but is also influencing the development of other economic initiatives. Following its launch, a similar initiative emerged in the Americas—the Americas Partnership for Economic Prosperity (APEP)—which was announced in June 2022. Despite targeting different geographical regions, both frameworks share similar areas of focus and a comparable legal nature, functioning as formalized arrangements rather than traditional trade agreements.⁴⁰⁴ In September 2023, another framework similar to the IPEF was established: the India-Middle East-Europe Economic Corridor (IMEC). Presented during the G20 summit in New Delhi, IMEC was signed by Saudi Arabia, the EU, India, the UAE, France, Germany, Italy, and the U.S. through a Memorandum of Understanding. The agreement commits to advancing the corridor,⁴⁰⁵ aiming to strengthen trade connections and economic integration between South Asia, the Arabian Gulf, and Europe.⁴⁰⁶

The EU-U.S. Trade and Technology Council (TTC) announced in June 2021 also falls under the same type of programmatic cooperation.⁴⁰⁷ The EU-U.S. TTC aims to enhance transatlantic cooperation on new industrial policy-related issues with a broader focus on regulatory alignment and shared values in technology and trade policies. Its work is structured around 10 working groups.⁴⁰⁸

402. Indo-Pacific Economic Framework for Prosperity Agreement Relating to a Fair Economy, June 6, 2024, <https://www.commerce.gov/sites/default/files/2024-03/IPEF-PIV-Fair-Economy-Agreement.pdf> [<https://perma.cc/T893-YD5N>].

403. See discussion *infra* section IV.A.3. and IV.B.

404. Notably, the IPEF was introduced through a joint statement with its initial partners, whereas the APEP was originally announced unilaterally by the United States. AM. J. INT'L L. *supra* note 37 at 869-72; Press Release, The White House, Fact Sheet: President Biden Announces the Americas Partnership for Economic Prosperity (June 8, 2022), <https://www.whitehouse.gov/briefing-room/statements-releases/2022/06/08/fact-sheet-president-biden-announces-the-americas-partnership-for-economic-prosperity/> [<https://perma.cc/H2S6-D8FR>]; *Americas Partnership for Economic Prosperity*, U.S. DEP'T STATE, <https://www.state.gov/americas-partnership-for-economic-prosperity/> [<https://perma.cc/8ZMS-PK2X>] (last accessed June 27, 2024).

405. Press Release, The White House, Memorandum of Understanding on the Principles of an India—Middle East—Europe Economic Corridor (Sept. 9, 2023), <https://www.whitehouse.gov/briefing-room/statements-releases/2023/09/09/memorandum-of-understanding-on-the-principles-of-an-india-middle-east-europe-economic-corridor/> [<https://perma.cc/S5EM-XY62>].

406. Abdul Moiz Khan, *The India-Middle East-Europe Economic Corridor (IMEC): Too Little, Too Late?*, CARNEGIE ENDOWMENT FOR PEACE: SADA (Dec. 12, 2023), <https://carnegieendowment.org/sada/91214> [<https://perma.cc/PU5R-G2MS>].

407. *EU-U.S. Trade and Technology Council (2021-2024)*, EUR, COMM'N, <https://digital-strategy.ec.europa.eu/en/factpages/eu-us-trade-and-technology-council-2021-2024> [<https://perma.cc/QD29-8M2W>].

408. These are the following: Technology Standards; Climate and Clean Tech; Secure Supply Chains; ICTS Security and Competitiveness; Data Governance and Technology Platforms; Misuse of Technology Threatening Security & Human Rights; Cooperation on Export Controls of Dual Use Items; Investment Screening Cooperation; Promoting SME

The new approach to economic ordering is by no means exclusively American. In fact, the first economic agreement of this kind may be said to be the Digital Economy Partnership Agreement (DEPA), which was signed virtually between Australia, Chile and New Zealand in June 2020.⁴⁰⁹ DEPA has very similar features to the IPEF in that it is not a classic trade agreement, but rather a “living agreement.”⁴¹⁰ First, besides the original signatories, it allows more states to join. On May 3, 2024, South Korea joined as a full member.⁴¹¹ Seven additional states from all over the world have formally applied to join the agreement: China, Canada, Costa Rica, Peru, the United Arab Emirates (UAE), El Salvador, and Ukraine.⁴¹² Moreover, DEPA operates based on a modular design. The work of the members is structured into several modules, which can be developed independently.⁴¹³

Finally, the EU replicated the EU-U.S.TTC model in its economic collaboration with India. The EU-India Trade and Technology Council is a platform established in 2021 to deepen cooperation on trade, technology, and digital issues, focusing on areas such as supply chains, green energy, and digital connectivity.⁴¹⁴

IV. Principles of A New Industrial and Digital Economic Order

Domestic law is changing. International law is changing too. The Article has so far demonstrated how industrial policy is reshaping international governance and giving rise to a new industrial layer of international law. The final part of the Article explores a blueprint of principles and building blocks for the emerging international industrial and digital order. It identifies structural, economic, and technological principles. The central claim is that international agreements must do more to address issues related to the digital economy. Accordingly, it advocates for the explicit inclusion of provisions aimed

Access To and Use of Digital Technologies; Global Trade Challenges; see https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/stronger-europe-world/eu-us-trade-and-technology-council_en#ways-of-working [<https://perma.cc/5H5U-4MBH>].

409. Digital Economy Partnership Agreement, Singapore-Chile-N.Z., June 12, 2020, available at <https://www.mti.gov.sg/Trade/Digital-Economy-Agreements/The-Digital-Economy-Partnership-Agreement> [<https://perma.cc/83PG-F2FB>].

410. New Zealand, Foreign Affairs & Trade, *DEPA Modules*, https://www.mfat.govt.nz/en/trade/free-trade-agreements/free-trade-agreements-in-force/digital-economy-partnership-agreement-depa/depa-modules?utm_source=chatgpt.com [<https://perma.cc/WC55-JQVW>].

411. Ministry of Trade and Industry, Singapore, *The Digital Economy Partnership Agreement*, <https://www.mti.gov.sg/Trade/Digital-Economy-Agreements/The-Digital-Economy-Partnership-Agreement> [<https://perma.cc/BX7G-QHBU>].

412. *Id.*

413. Examples of modules include: Business and Trade Facilitation (Module 2); Treatment of Digital Products and Related Issues (Module 3); Data Issues (Module 4); Wider Trust Environment (Module 5); Business and Consumer Trust (Module 6); Digital Identities (Module 7); Emerging Trends and Technologies (Module 8); Innovation and the Digital Economy (Module 9); Small and Medium Enterprises Cooperation (Module 10); Digital Inclusion (Module 11).

414. *First EU-India Trade and Technology Council Focused on Deepening Strategic Engagement on Trade and Technology*, EUR, COMM'N (May 15, 2023), https://ec.europa.eu/commission/presscorner/detail/en/ip_23_2728 [<https://perma.cc/JAA9-S2WU>].

at preserving the public nature of digital technologies, ensuring technological due process in their use, and ultimately fostering interoperability between digital systems and across digital and physical infrastructures.

A. Structural Principles

According to one account, the launch of the IPEF reflects four major shifts in the restructuring of the broader Indo-Pacific region: a shift from the primacy of economic values to security, a transition from bottom-up to top-down regionalism, a reorientation from classic multilateralism to minilateralism, and a move from inclusion to exclusion of China.⁴¹⁵ Some of these principles align with the broader wave of new internationalism that is emerging. This section identifies three structural features of new internationalism: plurilateralism, minilateralism, and geoeconomics.

1. Plurilateralism

In the post-World War II era, multilateralism became the prevailing approach to structuring economic relationships among states. Economic cooperation was intended to occur at the international level, among as many partners as possible, and be reinforced by multilateral treaties and international institutions. In this context, the General Agreement on Tariffs and Trade (GATT), later succeeded by the WTO and its own broader framework of agreements, shaped the LIO.⁴¹⁶

The main alternative to multilateral agreements has long been the adoption of Regional or Preferential Trade Agreements (RTAs or PTAs). They still maintain a close connection with multilateralism. Often, during periods when multilateralism experiences stagnation, economic relationships have been organized on a regional basis. In policy and theoretical debates among lawyers and economists, RTAs/PTAs are frequently classified as either beneficial or harmful to multilateralism. One approach argues that RTAs/PTAs pose a threat to the integrity of multilateralism and the multilateral trading system—referred to as the “spaghetti bowl effect” of RTAs/PTAs.⁴¹⁷ The opposing view posits that RTAs/PTAs offer an alternative route towards multilateralism—referred to as the “domino effect” of RTAs/PTAs.⁴¹⁸

Since the 1990s, international (economic) law became primarily a body of law aimed at harmonizing domestic legal orders.⁴¹⁹ Moreover, Slaughter and

415. Boas Lieberherr & Linda Maduz, *Indo-Pacific: The Reconstruction of a Region*, in STRATEGIC TRENDS 2022: KEY DEVELOPMENTS IN GLOBAL AFFAIRS 89, 95-102 (Brian G. Carlson & Oliver Thränert eds., 2022).

416. The continuous efforts—despite the repeated failures—of multilateralizing international investment law are very telling of this trend; see Georgios Dimitropoulos, *The Conditions for Reform: a Typology of “Backlash” and Lessons for Reform in International Investment Law and Arbitration*, 18 L. & PRACTICE OF INT’L CTS. & TRIBUNALS 416 (2020).

417. Jagdish Bhagwati, *U.S. Trade Policy: The Infatuation with Free Trade Agreements*, in THE DANGEROUS DRIFT TO PREFERENTIAL TRADE AGREEMENTS 1, 17 (Jagdish Bhagwati & Anne O. Krueger, 1995); JAGDISH BHAGWATI, TERMITES IN THE TRADING SYSTEM 49-88 (2008).

418. Richard Baldwin, *A Domino Theory of Regionalism*, in EXPANDING MEMBERSHIP OF THE EUROPEAN UNION 25 (Richard Baldwin, Pertti Haaparanta & Jaakko Kiander eds., 1995).

419. See *supra* section I.A.

Burke-White argued in 2007 that “the future of international law is domestic.”⁴²⁰ International law’s function, according to the authors, would eventually be similar to that of EU law.⁴²¹ In the EU, directives provide the framework and leave some space for domestic legislators and courts to tailor their own approaches. The Court of Justice of the European Union and the European Commission check compliance with the commitments.⁴²² International law would “backstop,” “strengthen,” and “compel” domestic legal systems, governments, and institutions.⁴²³

Similarly, international law has been conceptualized and utilized as a tool for locking in economic reform. Ratifying international agreements or joining international organizations is arguably often used by states as a tool for promoting domestic social and economic changes.⁴²⁴ Accepting international legal obligations by a state raises the expectations for compliance and make it costly to break their commitments.⁴²⁵ The strategy of “embedded international law” is to downstream international obligations of a treaty deeper into the domestic legal fabric, which includes modifying current laws or passing new ones.⁴²⁶ Embedding international law at the domestic level creates thicker layers of legal obligations and locks in politics—thus, achieving the stability of the domestic legal systems and “making it harder and more time-consuming for subsequent governments to reverse course.”⁴²⁷

However, these harmonizing and embedding functions of international law were not what was originally envisaged, proclaimed, let alone announced, in the immediate post-WWII years. Some commentators questioned early on whether harmonization and this type of embeddedness through multilateral regulatory disciplines should be part of the work of international economic institutions like the WTO, or whether the WTO and other institutions should focus exclusively on trade liberalization through tariff reduction. The argument is that free trade is most efficient when differences among nations can be exploited by the industry seeking to specialize.⁴²⁸

420. Anne-Marie Slaughter & William Burke-White, *The Future of International Law is Domestic (or, The European Way of Law)*, in *NEW PERSPECTIVES ON THE DIVIDE BETWEEN NATIONAL AND INTERNATIONAL LAW* 110, 131 (Janne Nijman & Andre Nollkaemper eds., 2007).

421. *Id.* at 115.

422. *Id.*

423. ABRAM CHAYES & ANTONIA HANDLER CHAYES, *THE NEW SOVEREIGNTY: COMPLIANCE WITH INTERNATIONAL REGULATORY AGREEMENTS* 122–127 (1998).

424. Jappe Eckhardt & Hongyu Wang, *China’s New Generation Trade Agreements: Importing Rules to Lock in Domestic Reform?*, 15 *REGUL. & GOVERNANCE* 581, 584 (2021).

425. *Id.* China’s accession to the WTO, for example, was arguably influenced by the elites’ aim to reform the domestic economic market and enforce a more liberal market; *id.* at 886.

426. Karen J. Alter, *The Future of Embedded International Law: Democratic and Authoritarian Trajectories*, SSRN J. 6 (2022), <https://www.ssrn.com/abstract=4068506> [<https://perma.cc/RU5M-7BRK>] (last visited Oct 22, 2022).

427. *Id.* at 4. Professor Harold Koh has famously described this as a “transnational legal process;” Harold Hongju Koh, *The 1994 Roscoe Pound Lecture: Transnational Legal Process*, 75 *NEB. L. REV.* 181 (1996).

428. Jagdish Bhagwati, *Fair Trade, Reciprocity and Harmonization: The Novel Challenge to the Theory and Policy of Free Trade*, in *PROTECTIONISM AND WORLD WELFARE* (Dominick Salvatore ed., Cambridge Univ. Press 1993); Jagdish Bhagwati, *Free Trade: Old and New Challenges*, 104 *THE ECON. J.* 231, 231–246 (1994); Jagdish Bhagwati, *Trade Liberalisation and ‘Fair Trade’ Demands: Addressing the Environmental Standards and Labour Standards Issues*, 18 *THE WORLD*

Recent international agreements diverge from the harmonizing, universalizing model of the LIO, though. Frameworks like the Cornwall Consensus, IPEF, DEPA, EU-U.S. TTC and EU-India TTC introduce a new approach to shaping the emerging economic order. Design priorities are different compared to the past. Under the Cornwall framework, domestic and international rules are accorded equal importance in a forward-looking vision of enhanced governance, aimed at bolstering collective economic resilience.⁴²⁹ The starting point of the Cornwall Consensus is domestic law;⁴³⁰ the goal is to “build back the State.”⁴³¹

A move away from the above discussed role of PTAs is also envisaged. To be sure, Cornwall does not condemn multilateralism or regionalism. It does, however, suggest a departure from the WTO’s single-undertaking approach.⁴³² Despite this, it anticipates that future international coordination and cooperation, extending beyond traditionally understood multilateralism, will take place within the broader scope of international framework agreements, such as the IPEF or the WTO itself.⁴³³

Overall, Cornwall and new international economic agreements aspire to a more flexible international order. The means to combine flexibility with multilateral cooperation is plurilateralism.⁴³⁴ The concept of “variable geometry” is often used in the WTO context to describe the flexibility to allow different members different types of commitments.⁴³⁵ This is a vision of international ordering which allows members to engage in negotiations and adopt commitments suited to their specific needs and interests.

ECON. 745, 745-759 (1995); FAIR TRADE AND HARMONIZATION: PREREQUISITES FOR FAIR TRADE (Jagdish N. Bhagwati & Robert E. Hudec eds., 1996).

429. Cornwall Consensus, *supra* note 29, at 2. Domestic laws regulating cross-border investment and trade have been proliferating in jurisdictions all over the world. Georgios Dimitropoulos, *National Sovereignty and International Investment Law: Sovereignty Reassertion and Prospects of Reform*, 21 J. WORLD INV. & TRADE 71 (2020); see also Sergio Puig & Gregory Shaffer, *Imperfect Alternatives: Institutional Choice and the Reform of Investment Law*, 112 AM. J. OF INT’L L. 361 (2018); Georgios Dimitropoulos, *The Right to Hospitality in International Economic Law: Domestic Investment Laws and the Right to Invest*, 22 WORLD TRADE REV. 90, 90-108 (2023) (on the process of “domestication” or “devolution” in international economic law); Dimitropoulos, *supra* note 26 (discussing similar processes in the digital sphere).

430. Cornwall Consensus, *supra* note 29, at 1 (“[E]conomic resilience starts at home and primarily owes itself to sound, inclusive and sustainable domestic policies . . .”).

431. See also discussion *supra* section II.A.4.a. (discussing the President Biden’s Build Back Better plan).

432. WTO Agreement art. II.2, 1944.

433. The IPEF Supply Chain Agreement embodies this principle. Article 18 states that its implementation must not conflict with WTO obligations.

434. Carbis Bay G7 Summit *Communiqué* ¶ 28, WHITE HOUSE (June 13, 2021), <https://www.whitehouse.gov/briefing-room/statements-releases/2021/06/13/carbis-bay-g7-summit-communicue/> [<https://perma.cc/KPM4-U7LF>].

435. See generally Philip I. Levy, *Do We Need an Undertaker for the Single Undertaking? Considering the Angles of Variable Geometry*, in ECONOMIC DEVELOPMENT AND MULTILATERAL TRADE COOPERATION 417–437 (Bernard M. Hoekman & Simon J. Evenett eds., Palgrave Macmillan & World Bank 2005); Robert Z. Lawrence, *Rulemaking Amidst Growing Diversity: A Club-of-Clubs Approach to WTO Reform and New Issue Selection*, 9 J. INT’L ECON. L. 823, 823-835 (2006); see also Bernard M. Hoekman & Petros C. Mavroidis, *WTO ‘à la carte’ or ‘menu du jour’? Assessing the Case for More Plurilateral Agreements*, 26 EUR. J. INT’L L. 319 (2015).

The origins of variable geometry and plurilateralism can be traced to the Tokyo Round of multilateral trade negotiations that took place between 1973 and 1979.⁴³⁶ The Tokyo Round differed from both earlier and later trade negotiations⁴³⁷ but closely resembles the current politico-economic climate. Tariff reductions were no longer viewed as essential for liberalization.⁴³⁸ New instruments were negotiated and devised to address new priorities, while accommodating liberalization only where feasible and politically desirable.⁴³⁹

Meanwhile, Non-Tariff Barriers (NTBs) were seen as even more significant than tariffs, becoming a central focus for negotiators. Considered less political and more technical, NTBs were viewed as easier to resolve. This shift of focus facilitated the emergence of new “international codes of behavior.”⁴⁴⁰ agreements on anti-dumping measures, government procurement, customs valuation, and technical barriers to trade were adopted. These agreements—not being multilateral—became known as “codes,” or “arrangements.”⁴⁴¹ The codes prescribe rules aimed at reducing NTBs or at making them more transparent. Finally, the Tokyo Round departed from unconditional Most Favored Nation (MFN) treatment.⁴⁴²

In the history of international trade law and negotiations as developed since Tokyo, two types of plurilaterals have emerged: open and closed.⁴⁴³ Closed plurilaterals are regulated under Article II.3 of the Marrakesh Agreement. They bind only members that accept them. Although integrated into the WTO legal framework, they don’t oblige non-accepting members. However, adopting a closed plurilateral requires consensus from all WTO members.⁴⁴⁴ Open plurilaterals developed alongside the formal WTO negotiation and treaty making process.⁴⁴⁵ “A distinguishing feature of open plurilateral agreements” according to Berger et al. “is that they enter into effect when

436. See generally Stephen D. Krasner, *The Tokyo Round: Particularistic Interests and Prospects for Stability in the Global Trading System*, 23 INT’L STUD. Q. 491, 491-531 (1979); Ria Kemper, *The Tokyo Round of Multilateral Trade Negotiations: Results and Implications*, (World Bank Staff Working Paper No. 372, Oct. 1979); Hugh Corbet, *Tokyo Round: Twilight of a Liberal Era or a New Dawn?*, NATL. WESTMINSTER BANK Q. REV. 19-29 (Feb. 1979). For a compilation of pre-WTO texts see *Pre-WTO Legal Texts*, WORLD TRADE ORG., https://www.wto.org/english/docs_e/legal_e/prevto_legal_e.htm [<https://perma.cc/S9ET-YMQA>].

437. See generally Mario A. Kakabadse, *The Tokyo Round and After*, 37 THE WORLD TODAY 304, 305-306, 308 (1981).

438. *Id.* at 308. The rise of protectionism during the Tokyo Round is analyzed by Richard Blackhurst et al., *Trade Liberalisation, Protectionism, and Interdependence*, GATT STUD. IN INT’L TRADE, no. 5 (1997).

439. Kakabadse, *supra* note 437, at 305.

440. *Id.* at 306.

441. GILBERT R. WINHAM, *INTERNATIONAL TRADE AND THE TOKYO ROUND NEGOTIATION* (Princeton Univ. Press 1986).

442. Krasner, *supra* note 436, at 500.

443. Axel Berger et al., *Improving Key Functions of the World Trade Organization: Fostering Open Plurilaterals, Regime Management, and Decision-Making*, GLOBAL SOL. INITIATIVE (Dec. 10, 2020), https://www.g20-insights.org/policy_briefs/improving-key-functions-of-the-world-trade-organization-fostering-open-plurilaterals-regime-management-and-decision-making/ [<https://perma.cc/XRL9-EPH6>].

444. Currently, two such agreements are in force in the WTO framework: the Agreement on Civil Aircraft and the Government Procurement Agreement.

445. The Information Technology Agreement (ITA) and the Agreement on Basic Telecommunications (ABT) were adopted at the end of the 1990s as open plurilaterals.

participants with a share of world trade in the covered products, considered to be the critical mass, have accepted the obligations.”⁴⁴⁶ Consent by non-signatories is not needed, but the concessions of the signatories are extended to the whole membership through MFN.

This approach to economic governance emerged outside the WTO’s purview. New international agreements like the IPEF and DEPA, among others, share a similar structure. They operate as plurilateral frameworks that allow for the development of individual plurilateral negotiations and agreements within their scope.⁴⁴⁷ Moreover, they remain open for other countries to join after being initially established by a core group.⁴⁴⁸ Overall, they work as master frameworks that allow for plurilateral agreements amongst a subset of the group membership to take place.

Plurilateralism is an increasingly important mode of international cooperation among states; plurilateral agreements are the specific instruments that implement this mode of cooperation. Plurilateralism as a mode of international cooperation does not reveal much about content. Content-wise, another shift is envisaged in the new agreements. The next section turns to this point.

2. Minilateralism

The goal of most states nowadays engaging in international economic negotiations is to achieve progress in specific areas and on particular issues.⁴⁴⁹ Groups of states come together to discuss and negotiate targeted agreements, focusing on specific issues to achieve focused progress. This approach is known as “minilateralism.”⁴⁵⁰ Adopting “trade mini-deals” is increasingly emerging as a prevalent strategy in U.S. trade negotiations.⁴⁵¹ Notable examples are the trilateral security cooperation between Japan, South Korea and the U.S.,⁴⁵² the

446. Berger et al., *supra* note 445.

447. Georgios Dimitropoulos, Richard C. Chen & Julien Chaisse, 26 *Plurilateralism: A New Form of International Economic Ordering?*, J. WORLD INV. & TRADE 1 (2025).

448. Charles F. Sabel & Bernard Hoekman, *Open Plurilateral Agreements, International Regulatory Cooperation and the WTO*, 10 GLOBAL POL’Y 297, 299 (2019); see also Bernard Hoekman & Charles F. Sabel, *In a World of Value Chains: What Space for Regulatory Coherence and Cooperation in Trade Agreements*, in MEGAREGULATION CONTESTED: GLOBAL ECONOMIC ORDERING AFTER TPP 217, 217-239 (Benedict Kingsbury et al. eds., 2019).

449. See Rozlyn C. Engel & Tobin Hansen *The United States: A Cautious Return to Internationalism*, in CARNEGIE EUR. 37, 37-50 (Carnegie Endowment for Int’l Peace 2022), <https://carnegieendowment.org/2022/02/17/united-states-cautious-return-to-internationalism-pub-86314> [<https://perma.cc/99XZ-9FJU>] (speaking about “issue-specific wins through plurilateral deals”).

450. Aarshi Tirkey, *Minilateralism: Weighing the Prospects for Cooperation and Governance*, OBSERVER RSCH. FOUND. ISSUE BRIEF (Sept. 1, 2021), <https://www.orfonline.org/research/minilateralism-weighing-prospects-cooperation-governance/> [<https://perma.cc/P2JE-ALJC>]; Nickolay Mladenov, *Minilateralism: A Concept That Is Changing the World Order*, WASH. INST. FOR NEAR E. POL’Y (Apr. 14, 2023), <https://www.washingtoninstitute.org/policy-analysis/minilateralism-concept-changing-world-order> [<https://perma.cc/P832-AZV4>].

451. Kathleen Claussen, *Trade’s Mini-Deals*, 62 VA. J. INT’L L., 315 (2022).

452. *Camp David Principles*, THE WHITE HOUSE (Aug. 18, 2023), <https://www.whitehouse.gov/briefing-room/statements-releases/2023/08/18/camp-david-principles/> [<https://perma.cc/J6WQ-NACS>]; *The Spirit of Camp David: Joint Statement of Japan, the Republic of Korea, and the United States*, THE WHITE HOUSE (Aug. 18, 2023), <https://www.whitehouse.gov/briefing-room/statements-releases/2023/08/18/the-spirit->

U.S.-Dutch-Japanese Semiconductor Export Controls Deal,⁴⁵³ and the Global Arrangement on Sustainable Steel and Aluminum (GASSA).⁴⁵⁴ The EU has been pursuing a similar approach.⁴⁵⁵

Plurilateral frameworks discussed above often aim to organize and formalize the negotiation and adoption of minilateral agreements. In the IPEF, for example, the work of participating countries is structured around “pillars,” while in the DEPA, it is organized into “modules.”

Minilateralism is not new either. It is as old as plurilateralism in international trade negotiations. The U.S. has been backing a “sectoral approach” to trade negotiations since the Kennedy Round.⁴⁵⁶ This was dictated by multiple factors, including a decline at the time in its economic power as well as lack of negotiating mandates.⁴⁵⁷ Furthermore, it reflected shifting views on trade and a growing recognition among trade experts that trade could be promoted even while departing from traditional orthodoxies about trade negotiations. “The success of the new [single sector] approach” according to then Deputy USTR Jeffrey Lang, “promises to quicken the tempo of trade liberalisation. It appears we can now negotiate agreements more or less continually, as long as countries are prepared to make the necessary commitments.”⁴⁵⁸ This bears a striking resemblance with contemporary international economic deals inspired by domestic industrial policies.

Thematic priorities are also shifting in international economic law. A talk by former National Security Advisor Jake Sullivan at the Brookings Institution summarizes the U.S. position, as well as a more general sentiment, on the themes of minilateral collaboration. The idea is to “more deeply integrate

of-camp-david-joint-statement-of-japan-the-republic-of-korea-and-the-united-states/ [https://perma.cc/EBH5-LPKL]; Jim Garamone, *Japan, South Korea, U.S. Strengthen Trilateral Cooperation*, U.S. DEP’T OF DEF. (Aug. 18, 2023), <https://www.defense.gov/News/News-Stories/Article/Article/3498451/japan-south-korea-us-strengthen-trilateral-cooperation/> [https://perma.cc/M75D-XF6E].

453. Gregory C. Allen, et al., *Japan and the Netherlands Announce Plans for New Export Controls on Semiconductor Equipment*, C. FOR STRATEGIC & INT’L STUD. (Apr. 10, 2023), <https://www.csis.org/analysis/japan-and-netherlands-announce-plans-new-export-controls-semiconductor-equipment> [https://perma.cc/MP4F-4QNW].

454. Trevor Sutton & Mike Williams, *Trade Beyond Neoliberalism: Concluding a Global Arrangement on Sustainable Steel and Aluminum*, C. FOR AM. PROGRESS (Dec. 4, 2023), <https://www.americanprogress.org/article/trade-beyond-neoliberalism-concluding-a-global-arrangement-on-sustainable-steel-and-aluminum/#:~:text=Were%20it%20to%20be%20concluded,toward%20greater%20sustainability%2C%20protect%20the> [https://perma.cc/4A8A-58L9].

455. Lucian Cernat, *The Art of the Mini-Deals: The Invisible Part of EU Trade Policy*, ECIPE POL’Y BRIEFS (Oct. 2023). See, e.g., *Memorandum of Understanding on a Strategic Partnership on Sustainable Raw Materials Value Chains between the EU and Argentina*, EUROPEAN COMM’N (June 13, 2023), https://single-market-economy.ec.europa.eu/system/files/2023-07/MoU_EU_Argentina_20230613.pdf [https://perma.cc/RZC6-SKKN].

456. Krasner, *supra* note 436, at 499-500; Barbara Fliess & Pierre Sauvé, *Of Chips, Floppy Disks and Great Timing: Assessing the Information Technology Agreement*, INSTITUT FRANÇAIS DES RELATIONS INTERNATIONALES & THE TOKYO CLUB FOUND. GLOBAL STUD., 1997, at 46.

457. Krasner, *supra* note 436; Barbara Fliess & Pierre Sauvé, *Of Chips, Floppy Disks and Great Timing: Assessing the Information Technology Agreement*, INSTITUT FRANÇAIS DES RELATIONS INTERNATIONALES & THE TOKYO CLUB FOUND. GLOBAL STUD., 1997, at 46. The USTR had limited negotiating authority given that the fast-track negotiating mandate was not renewed. On the features of the sectoral strategy of the U.S. see *id.*, at 47.

458. Quoted in Guy de Jonquieres, *Template for Trade Talks*, FINANCIAL TIMES, (Feb. 18, 1990).

domestic policy and foreign policy”⁴⁵⁹ to make a “foreign policy for the middle class.”⁴⁶⁰ The strategy is to “mov[e] beyond traditional trade deals to innovative new international economic partnerships focused on the core challenges of our time.”⁴⁶¹ “Simply put: In today’s world, trade policy needs to be about more than tariff reduction, and trade policy needs to be fully integrated into our economic strategy, at home and abroad.”⁴⁶²

One important focus is worker protection.⁴⁶³ Another focus is on both domestic and cross-border infrastructure. In the same address, Sullivan repeatedly mentions both physical and digital infrastructure.⁴⁶⁴ Overall, governance of the digital economy is a prominent feature in nearly all new and multilateral agreements. The WTO already established a work program on e-commerce in 1998; this has delivered little results so far—except that it has maintained a moratorium on duties on electronic transmissions. The stalemate was to some extent overcome during the 11th Ministerial Conference in Buenos Aires in December 2017. A number of WTO members, including the U.S. and the EU, have since been plurilaterally negotiating an agreement on e-commerce within the WTO.⁴⁶⁵ Participating countries concluded a stabilized text in July 2024.⁴⁶⁶

Overall, negotiations on the governance of the digital economy have largely become plurilateral—while taking place both within and outside the WTO.⁴⁶⁷ The Cornwall Consensus documents four themes central to economic resilience: health, trade, climate, and digital.⁴⁶⁸ The digital domain is raised to the status of one of the four key themes critical for economic resilience.⁴⁶⁹ Cyberspace is acknowledged as a frontier of the future.⁴⁷⁰ The new consensus also recognizes both the significant societal potential and the related societal risks of digital technologies.⁴⁷¹ The first of IPEF’s four pillars is a connected

459. Sullivan, *supra* note 26.

460. *Id.*

461. *Id.*

462. *Id.*

463. See *supra* section II.B.1.

464. Sullivan, *supra* note 26.

465. *Joint Statement on Electronic Commerce*, WTO Doc. WT/L/1056 (Jan. 25, 2019). See Ines Willems, *Agreement Forthcoming? A Comparison of EU, US, and Chinese RTAs in Times of Plurilateral E-Commerce Negotiations*, 23 J. INT’L ECON. L. 221 (2020); Asif Khan et al., *Plurilateral Negotiation of WTO E-commerce in the Context of Digital Economy: Recent Issues and Developments*, 26 J. LAW & POL. SCI. 28-54 (2021); Henry Gao, *Across the Great Wall: E-commerce Joint Statement Initiative Negotiation and China*, in *ARTIFICIAL INTELLIGENCE AND INTERNATIONAL ECONOMIC LAW: DISRUPTION, REGULATION, AND RECONFIGURATION* 295 (Shin-yi Peng, Ching-Fu Lin & Thomas Streinz eds., 2021).

466. INF/ECOM/87.

467. Georgios Dimitropoulos, *Digital Plurilateralism in International Economic Law: Towards Unilateral Multilateralism?*, 26 J. WORLD INV. & TRADE 116 (2025).

468. See G7 Panel on Economic Resilience, *Key Policy Recommendations*, available at <https://www.mofa.go.jp/files/100200091.pdf> [<https://perma.cc/BR3T-XWEM>] (last visited June 17, 2024).

469. See G7 Panel on Economic Resilience, *Key Policy Recommendations*, available at <https://www.mofa.go.jp/files/100200091.pdf> [<https://perma.cc/J7W8-WR3P>] (last visited June 17, 2024).

470. Carbis Bay Communiqué, *supra* note 29, at para. 31.

471. *Id.*

economy, which includes the digital economy—alongside a resilient, clean, and fair economy.⁴⁷²

This can be understood as an effort to bring minilateral digital trade deals into a larger framework of collaboration.⁴⁷³ At the same time, the plurilateralization of digital economy agreements has allowed countries like India and Brazil to remain outside these negotiations, both within the WTO and outside, such as in the IPEF.

New digital plurilateral and minilateral agreements mark a further shift in the tools used to achieve emerging industrial policy goals. While LIO treaties focused on market liberalization, government interventionism—now central to new industrialism—is no longer viewed negatively. States generally have the power under international economic law to regulate their markets as well as access to them.⁴⁷⁴ While the GATT typically acknowledges market access rights for products from WTO member states, the provisions for market access in the GATS and other WTO agreements come with numerous qualifications and exceptions. In investment law, the Convention on the Settlement of Investment Disputes between States and Nationals of Other States (ICSID Convention) does not include rules on pre-entry protection. Only a limited number of IIAs grant market access rights—or any other pre-entry safeguards—to prospective investors.⁴⁷⁵

Several new plurilateral and minilateral agreements go even beyond this. New internationalism is no longer centered on tariff reduction or traditional market access; instead, it prioritizes different objectives.⁴⁷⁶ For example, the IPEF Supply Chain Agreement does not include tariff reductions or market access obligations, raising questions about its primary focus. The following sections explore these issues.

472. Press Release, The White House, Statement on Indo-Pacific Economic Framework for Prosperity (May 23, 2022), <https://www.whitehouse.gov/briefing-room/statements-releases/2022/05/23/statement-on-indo-pacific-economic-framework-for-prosperity/> [<https://perma.cc/3DY3-YXNH>].

473. Similarly, the U.S. and Japan, signed an additional side agreement on digital trade in the frame of the broader US-Japan Trade Agreement; Agreement on Trade, Japan-U.S., Oct. 7, 2019, <https://ustr.gov/countries-regions/japan-korea-apec/japan/us-japan-trade-agreement-negotiations/us-japan-trade-agreement-text> [<https://perma.cc/ZFN9-A589>]. The side agreement bans taxes on digital products, forbids data localization measures, and ensures consumer privacy protections, among other things.

474. See UNCTAD, WIR: SEZs, *supra* note 223, at 92; see also Report of the Panel, *Canada—Administration Of The Foreign Investment Review Act*, ¶ 5.1, L/5504 - 30S/140 (Feb. 7, 1984).

475. Also, pre-entry International Investment Agreements (IIAs) often grant a right of establishment that is typically limited in scope, subject to national law clauses, or articulated as soft or best-effort obligations. See, e.g., FED, MINISTRY FOR ECON. AND TECH., GERMAN MODEL TREATY CONCERNING THE ENCOURAGEMENT AND RECIPROCAL PROTECTION OF INVESTMENTS, art. 2(1) (2008), available at <https://investmentpolicy.unctad.org/international-investment-agreements/treaty-files/2865/download> [<https://perma.cc/YL4B-KCRT>]; U.K. GOV'T, MODEL AGREEMENT FOR THE PROMOTION AND PROTECTION OF INVESTMENTS, art. 2(1) (2008), available at <https://investmentpolicy.unctad.org/international-investment-agreements/treaty-files/2847/download> [<https://perma.cc/AP7Q-WUP8>]. See generally U.N., Conf. on Trade & Dev't., Most-Favoured-Nation Treatment at 8, U.N. Doc. UNCTAD/ITE/IIT/10, U.N. Sales No. E.99.II.D.11 (1999) 8 (differentiating between “post-entry” and “pre-entry” investment treaties).

476. See also Timothy Meyer, *Taxing, Regulating, and Trading Carbon: An Introduction to the Symposium*, 116 AJIL UNBOUND 191 (2022), doi:10.1017/aju.2022.35 [<https://perma.cc/879L-T5PC>] (discussing similar developments at the intersection of trade and climate change law).

3. Geoeconomics

A new geopolitical and geoeconomic world order now claims the role of neoliberalism as the dominant ideology and political economy in the contemporary international order.⁴⁷⁷ Liberalization, the opening up of markets, once the economic cornerstone of the LIO, is no longer the main consideration for economic engagement among nations—not even among Western partners. Different considerations now take precedence.

Mega-regionals, such as the (now abandoned) Trans-Atlantic Trade and Investment Partnership (TTIP) and the (now reformed) Trans-Pacific Partnership (TPP), had already signaled a turn from traditional market economics to new geoeconomics.⁴⁷⁸ They are FTAs that include linkage chapters, while extending the scope to investment and regulatory cooperation.⁴⁷⁹ Early projections suggested that mega-regionals would only have minimal impact in increasing trade and/or improving economic welfare.⁴⁸⁰ Their minimal economic impact would be complemented by economic advantages such as the further reduction of transaction costs that producers were subject to given the large number of existing PTAs/RTAs, as well as foreign investor protection.⁴⁸¹

Griffith, Steinberg and Zysman showcase that the original motivations behind the TTIP and the TPP, for example, were driven by geopolitical, strategic, and geoeconomic considerations.⁴⁸² They were efforts to establish new trade rules—especially in light of the deadlock within the WTO. They were also designed to drive economic growth through competitive liberalization, establish trade rules aligned with U.S. interests, and leverage geostrategic advantages by reinforcing historical alliances while countering the growing influence of emerging powers and partnerships between Europe and the Asia-Pacific.⁴⁸³ They presented first attempts and a strategic endeavor to contain rising powers such as China in a broader balance of power game.⁴⁸⁴

These mega-regionals, as well as the USMCA, paved the way for today's U.S. strategy, and prepared the ground for the new generation agreements that were eventually pursued by the Biden administration—above all, the IPEF.

The concurrent shift toward plurilaterals and minilaterals highlights that liberalization is no longer the absolute mantra of international law and international relations⁴⁸⁵—as in the first layer of international law presented above.⁴⁸⁶

477. Roberts, Choer, Moraes & Ferguson, *supra* note 64.

478. See *supra* section III.C.2.

479. MEGAREGULATION CONTESTED: GLOBAL ECONOMIC ORDERING AFTER TPP, LAW AND GLOBAL GOVERNANCE (Benedict Kingsbury et al. eds., 2019).

480. Griffith et al., *supra* note 374, at 580-81.

481. *Id.* at 578-79.

482. *Id.* at 574-75.

483. *Id.* at 586.

484. *Id.*

485. But see William Alan Reinsch, *The End of Neoliberalism?*, CTR. FOR STRATEGIC INT'L STUD. (January 3, 2023), <https://www.csis.org/analysis/end-neoliberalism> [<https://perma.cc/GSL6-TY2X>] (discussing approvingly the move towards an industrial-law informed domestic and foreign trade policy, but criticizing new international agreements as a missed chance of liberalizing, as well as a mistaken move away from the rules-based multilateral trading order).

486. See discussion *supra* Section I.A.

It is not solely about infrastructure development either. Other priorities take precedence; above all, the protection of national security interests.⁴⁸⁷

Former U.S. Treasury Secretary Janet Yellen called for “friend-shoring” in global economic relations in 2022, which she described as follows: to work with “a group of countries that have strong adherence to a set of norms and values about how to operate in the global economy and about how to run the global economic system;” this would allow “to deepen our ties with those partners and to work together to make sure that we can supply our needs of critical materials.”⁴⁸⁸ Yellen referred specifically to China’s “special relationship with Russia” and warned that “[g]oing forward, it will be increasingly difficult to separate economic issues from broader considerations of national interest, including national security.”⁴⁸⁹

New industrial policies safeguard domestic policy space, as well as make space for national security considerations. These considerations play out mostly in the area of digital technologies.⁴⁹⁰ New geoeconomics is largely a digital geoeconomics. In response to geoeconomic considerations, the U.S. government moved away from its longstanding commitment to the free flow of data, a principle that had shaped previous international economic agreements. In October 2023, the USTR issued a statement announcing a re-evaluation of its approach to data and source code in the WTO and other international e-commerce negotiations. The rationale is to “provide enough policy space” and not to “prejudice or hinder [. . .] domestic policy considerations.”⁴⁹¹

The next sections turn to the discussion of economic as well as technological principles for the new international economic order.

B. Economic Principles

This section examines which principles of the previous economic order will persist in the emerging order of new internationalism, as well as how they might evolve. It also explores the rise of new economic principles shaping this emerging order.

487. National security is one of the most important considerations for the roll out of the BRI and the DSR. See generally RICHARD GHIASY, CHINA’S BELT AND ROAD INITIATIVE: SECURITY IMPLICATIONS AND WAYS FORWARD FOR THE EUROPEAN UNION (Stockholm Int’l Peace Research Inst., Sept., 2018), available at https://www.sipri.org/sites/default/files/2018-11/bri_digital_policy_brief_and_key_findings.pdf [<https://perma.cc/AJQ6-RMZ3>] (describing the security implications of the BRI in general and the EU response to such security issues).

488. Janet Yellen, U.S. Sec’y of the Treasury, Special Address at the Atlantic Council, (Apr. 13, 2022) (transcript available at <https://www.atlanticcouncil.org/news/transcripts/transcript-us-treasury-secretary-janet-yellen-on-the-next-steps-for-russia-sanctions-and-friend-shoring-supply-chains/> [<https://perma.cc/GN8H-SKRF>]).

489. *Id.*

490. Benjamin Cedric Larsen, *The Geopolitics of AI and the Rise of Digital Sovereignty*, BROOKINGS INST. (Dec. 8, 2022), <https://www.brookings.edu/research/the-geopolitics-of-ai-and-the-rise-of-digital-sovereignty/> [<https://perma.cc/R893-MZ7E>].

491. Press Release, United States Trade Representative, USTR Statement on WTO E-Commerce Negotiations (Oct. 24, 2023), <https://ustr.gov/about-us/policy-offices/press-office/press-releases/2023/october/ustr-statement-wto-e-commerce-negotiations> [<https://perma.cc/6LVR-7PGR>].

Non-discrimination is the cornerstone of the international economic order.⁴⁹² The essence of non-discrimination is to provide foreign market actors “access to a domestic market under equal competitive parameters compared to domestic market actors.”⁴⁹³ National Treatment disallows parties to an international economic treaty from treating domestic market actors more favorably than foreign market actors; MFN forbids parties to an international agreement from treating foreign market actors from certain countries more favorably than from others.⁴⁹⁴

These principles continue to play a fundamental role in the order of new internationalism. The IPEF Supply Chain Agreement, for example, aims at safeguarding nondiscriminatory treatment in supply chain management. Article 3(2) of the agreement states that “[e]ach Party intends to the extent possible to foster the increased availability of and investment in long-term and cold-chain warehousing near or easily accessible to ports of entry, and to *avoid discriminatory policies and procedures* that limit warehousing options for imported goods.”⁴⁹⁵

At the same time, it envisages a double expansion of the scope of nondiscrimination. First, in the means of achieving nondiscriminatory treatment. As discussed above, market access has remained a sovereign prerogative of the state. Still, agreements such as the GATT as well as a small number of IIAs have made concessions to provide for market access. The IPEF introduces a new mode of managing market access for supply chains: the establishment of governance institutions and mechanisms, such as the IPEF Supply Chain Council, the IPEF Supply Chain Crisis Response Network, and the IPEF Labor Rights Advisory Board. These bodies, consisting of representatives from all signatories, oversee the implementation of the agreement. This reflects a shift toward managed market access within the IPEF.

The reaffirmation of nondiscrimination through governance institutions and mechanisms aligns with previous efforts in certain international agreements involving emerging and developing economies. Since 2015, for example, Brazil has introduced a new model of investment agreements, the Cooperation and Facilitation of Investments Agreement (CFIA). This model has since been used to sign investment agreements with multiple countries in Latin America

492. Gráinne de Búrca, *Unpacking the Concept of Discrimination in EC and International Trade Law*, in *THE LAW OF THE SINGLE EUROPEAN MARKET: UNPACKING THE PREMISES* 181 (Catherine Barnard & Joanne Scott eds., 2002); Nicholas A. DiMascio & Joost Pauwelyn *Nondiscrimination in Trade and Investment Treaties: Worlds Apart or Two Sides of the Same Coin?*, 102 *AM. J. INT'L L.* 48 (2008); Nicholas F. Diebold, *Standards of Non-Discrimination in International Economic Law*, 60(4) *INT'L & COMP. L.Q.* 831-886 (2011); Aphiwan Natasha King, *National Treatment in International Economic Law: The Case for Consistent Interpretation in new Generation EU Free Trade Agreements*, 49 *GEO. J. INT'L LAW* 929 (2018); James M. Claxton, *The Standard of Most-Favored-Nation Treatment in Investor-State Dispute Settlement Practice*, in *HANDBOOK OF INTERNATIONAL INVESTMENT LAW AND POLICY* 271 (Julien Chaisse, Leila Choukroune & Sufian Jusoh eds., 2021); Manini Brar, *The National Treatment Obligation: Law and Practice of Investment Treaties* in *HANDBOOK OF INTERNATIONAL INVESTMENT LAW AND POLICY* 235 (Julien Chaisse, Leila Choukroune & Sufian Jusoh eds., 2021).

493. Diebold, *supra* note 494, at 832.

494. *Id.* at 831.

495. Emphasis added.

and Africa.⁴⁹⁶ The primary innovation of the new agreements lies in institutional governance. Unlike traditional BITs, CFIA's establish governance institutions for the management of cross-border investment activities. The most notable among these are the Joint Committees⁴⁹⁷ and the Focal Points or Ombudspersons.⁴⁹⁸ The primary institutional role of Joint Committees – composed of representatives from the governments of the signatory states – is to facilitate dialogue and coordination between states and investors, ultimately aiming for dispute avoidance.⁴⁹⁹ The Ombudsperson's role involves hearing claims from states or investors and suggesting remedies after consulting relevant authorities.⁵⁰⁰

The IPEF Supply Chain Agreement also expands nondiscrimination beyond its traditional content in international economic law. It focuses very heavily on employment-related issues and the representation of workers in its governance. Besides core trade law provisions, the agreement includes extensive provisions for the protection of labor rights. In the definition of labor rights, the Supply Management Agreement follows the ILO definitions, including for “effective abolition of child labor,”⁵⁰¹ and the overarching “elimination of discrimination in respect of employment and occupation.”⁵⁰²

An even more striking development, aligning with the move away from market access in new international economic agreements, is the removal of MFN—and thus the restriction of classic nondiscrimination—from some agreements of the new internationalism era. MFN has a non-linear and very

496. See, e.g., *Side-by-side Comparison of the Brazil-Mozambique and Brazil-Angola Cooperation and Investment Facilitation Agreements* (Martin Dietrich Brauch trans.), INT'L INST. FOR SUSTAINABLE DEV'T (June 2015), <http://www.iisd.org/sites/default/files/publications/comparison-cooperation-investment-facilitation-agreements.pdf> [https://perma.cc/H4J6-R4ZF]; José Henrique Vieira Martins, *Brazil's Cooperation and Facilitation Investment Agreements (CFIA) and Recent Developments*, INT'L INST. FOR SUSTAINABLE DEV'T INV. TREATY NEWS (June 12, 2017), <https://www.iisd.org/itn/2017/06/12/brazils-cooperation-facilitation-investment-agreements-cfia-recent-developments-jose-henrique-vieira-martins/> [https://perma.cc/HS93-DHF2]; Nitish Monebhurrin, *Novelty in International Investment Law: The Brazilian Agreement on Cooperation and Facilitation of Investments as a Different International Investment Agreement Model*, 8 J. INT'L DISPUTE SETTLEMENT 79 (2017); Michelle Rattón Sanchez Badin & Fabio Morosini, *Navigating between Resistance and Conformity with the International Investment Regime: the Brazilian Agreements on Cooperation and Facilitation of Investments (ACFIs)*, in RECONCEPTUALIZING INTERNATIONAL INVESTMENT LAW FROM THE GLOBAL SOUTH 218 (Fabio Morosini & Michelle Rattón Sanchez Badin eds., 2017); Geraldo Vidigal & Beatriz Stevens, *Brazil's New Model of Dispute Settlement for Investment: Return to the Past or Alternative for the Future?*, 19 J. WORLD INV. & TRADE 475 (2018).

497. See, e.g., *Side-by-side Comparison of the Brazil-Mozambique and Brazil-Angola Cooperation and Investment Facilitation Agreements*, *supra* note 498, at art. 4.

498. See *id.* at art 5.

499. See generally Badin & Morosini, *supra* note 498.

500. *Id.* at 87.

501. See Indo-Pacific Economic Framework For Prosperity Agreement Relating To Supply Chain Resilience, art. 1 “labor rights” (a)(iii) Nov. 14, 2023, <https://www.commerce.gov/sites/default/files/2023-09/2023-09-07-IPEF-Pillar-II-Final-Text-Public-Release.pdf> [https://perma.cc/PV2P-PYKC].

502. See Indo-Pacific Economic Framework For Prosperity Agreement Relating To Supply Chain Resilience, art. 1 “labor rights” (a)(iv) Nov. 14, 2023, <https://www.commerce.gov/sites/default/files/2023-09/2023-09-07-IPEF-Pillar-II-Final-Text-Public-Release.pdf> [https://perma.cc/6YNP-8NT3].

contested history in international economic law.⁵⁰³ In the era of new industrialism, its dominance, unlike in the era of the LIO, seems increasingly uncertain. Article 14.6 of the Korea-Singapore Digital Economy Agreement, for example, limits non-discrimination to National Treatment and does not cover MFN.⁵⁰⁴ The removal of the MFN was further clarified in an exchange between the Minister for Trade of the Republic of Korea and the Second Minister for Trade and Industry of the Republic of Singapore.⁵⁰⁵

C. Technological Principles

Traditional categories, theories, frameworks and principles of law may be insufficient to capture developments taking place in the digital sphere. National policymakers and international organizations,⁵⁰⁶ as well as the academy,⁵⁰⁷ envisage now a new social contract for digital technologies and the digital economy.⁵⁰⁸ In September 2024, 193 members of the United Nations finalized the Global Digital Compact, laying out principles for the governance of digital technologies.⁵⁰⁹ This section examines emerging legal and ethical principles for digital technologies that should be more deeply integrated into international economic agreements and, more broadly, shape the evolving digital economic order and new internationalism.⁵¹⁰ The foundational technological principle is the human-centric development of the digital economy. Other emerging principles include technological due process, publicness and interoperability of digital technologies.

503. Pinar Cebi & Rodney Ludema, *The Rise and Fall of the Most-Favored-Nation Clause*, (U.S. Int'l Trade Comm'n, Off. of Econ. Working Paper No. 2002-06-B 2002), <https://www.usitc.gov/publications/332/ec0206b.pdf> [<https://perma.cc/TANK-X9V8>].

504. Korea-Singapore Digital Economy Agreement, June 21, 2019, <https://www.mti.gov.sg/-/media/MTI/Resources/Trade-and-Industry/Free-Trade-Agreements/Agreements/Korea-Singapore-DEA/Korea-Singapore-DEA-Text.pdf> [<https://perma.cc/RHV6-4QQE>].

505. Dukgeun Ahn, Minister for Trade, Republic of Korea, Letter to Tan See Leng, Second Minister for Trade and Industry, Republic of Singapore (November 21, 2022). This letter is annexed to the agreement at 36.

506. Cornwall Consensus, *supra* note 29; WORLD BANK GROUP, *WORLD DEVELOPMENT REPORT 2021: DATA FOR BETTER LIVES* (2021) (calling for a "new social contract for data.").

507. MIT academics have also called for a "New, Digital Bretton Woods" in the sphere of digital finance. Alex Pentland, Alex Lipton & Thomas Hardjono, *Time for a New, Digital Bretton Woods*, BARRON'S (June 18, 2021).

508. There are efforts to regulate digital technologies at the international level too. *See, e.g.*, Ashley Deeks, *Introduction to the Symposium: How Will Artificial Intelligence Affect International Law?*, 114 *AJIL UNBOUND* 138, 138 (2020) (discussing negotiations to ban lethal autonomous weapons systems.); MATTHIJS M. MAAS & JOSÉ JAIME VILLALOBOS RUIZ, *LEGAL PRIORITIES PROJECT, INTERNATIONAL AI INSTITUTIONS: A LITERATURE REVIEW OF MODELS, EXAMPLES, AND PROPOSALS* (2023), <https://ssrn.com/abstract=4579773> [<https://perma.cc/3V3G-Z8XD>] (discussing pathways towards international centralization and institutionalization of AI).

509. United Nations, *Global Digital Compact (A/79/L.2)*, <https://www.un.org/digital-emerging-technologies/global-digital-compact> [<https://perma.cc/S3YH-PELP>] (last visited Feb. 16, 2025) [*hereinafter* Global Digital Compact].

510. *See also* Mira Burri, *Digital Transformation as a Reshaper of Global Trade Law*, in *LAW AND ECONOMICS OF DIGITAL TRANSFORMATION* 387 (Klaus Mathis & Avshalom Tor eds, 2023); Ho-cheol Kim, *Industrial Digital Transformation and A Proposal to Rebuild Digital Trade Agenda*, 58 *J. WORLD TRADE* 87 (2024).

1. Human-Centricity

“Technological singularity” is arguably approaching.⁵¹¹ Machines now possess the capability and capacity to surpass human intelligence, at least in the technical sense of the word. The realization that digitalization and new forms of intelligence could remove the human completely from many decision-making contexts is helping reshape a global understanding of whether and how to regulate them.⁵¹² There is a growing shift toward envisioning a more human-centric future society and international order.⁵¹³ The mother principle of a new legal framework for digital technologies is “human-centricity,”⁵¹⁴ or, as Frank Pasquale puts it, a “rule of persons.”⁵¹⁵

Human-centricity means that technology prioritizes humane values—broadly understood to cover all aspects of sustainable human development.⁵¹⁶ Human-centricity places an emphasis on understanding data and digital development from the perspective of individuals and societies. Human-centric regulation of digital technologies protects the interests of individuals and societies above all other interests of private or government organizations.⁵¹⁷ According to the definition of the WEF:

Human-centricity means focusing on something variously called (self-) sovereignty, self-determination, self-governance, autonomy, agency or the like, in terms of the people involved with the generation of data. These concepts derive from the internationally-recognized concepts of human rights. A human-centric approach is one that makes central the following: that people have the right to

511. Irving John Good, *Speculations Concerning the First Ultraintelligent Machine*, in 6 *ADVANCES IN COMPUTERS* 31 (Franz L. Alt & Morris Rubinfeld eds., 1966); MURRAY SHANAHAN, *THE TECHNOLOGICAL SINGULARITY* (2015).

512. See, e.g., MICHÈLE FINCK, *BLOCKCHAIN REGULATION AND GOVERNANCE IN EUROPE* 12 (2018) (explaining that the removal of the human or institutional third party is a “core value proposition” of blockchain). Blockchain seeks to substitute, according to Nick Szabo “[t]rust in the secret and arbitrarily mutable activities of a private computation” with “verifiable confidence in the behaviour of a generally immutable public computation”. Nick Szabo, *Money, Blockchains, and Social Scalability*, UNENUMERATED (Feb. 9, 2017), <http://unenumerated.blogspot.com/2017/02/money-blockchains-and-social-scalability.html> [<https://perma.cc/ZB7Q-2H2N>].

513. G20 Ministerial Statement on Trade and Digital Economy, G20 Ministerial Meeting (June 8–9, 2019), <https://www.mofa.go.jp/files/000486596.pdf> [<https://perma.cc/NR6E-45XV>], ¶¶ 7-14; G20 Digital Economy Working Group, Maceio Ministerial Declaration (Apr. 13, 2024), <https://g7g20-documents.org/database/document/2024-g20-brazil-sherpa-track-digital-economy-ministers-ministers-language-g20-dewg-maceio-ministerial-declaration> [<https://perma.cc/9MQJ-CVL6>], at ¶¶ 8, 19; Global Digital Contract, *supra* note 511, at ¶ 8(i).

514. WEF, *ON THE IMPORTANCE OF HUMAN-CENTRICITY AND DATA* (2021). [*hereinafter* WEF, *HUMAN-CENTRICITY AND DATA*]; WEF, *EMPOWERED DATA SOCIETIES: A HUMAN-CENTRIC APPROACH TO DATA RELATIONSHIPS* 3 (2021) (these papers from the WEF offer frameworks, insights, and best practices to help governments develop responsible and innovative data-driven systems, placing human-centricity at the forefront); see also Don Norman, *The Four Principles of Human-Centered Design*, JND.ORG (July 23, 2019), <https://jnd.org/the-four-fundamental-principles-of-human-centered-design-and-application/> [<https://perma.cc/3S6V-BQ7K>] (presenting four principles of a human-centered design of systems and organizations).

515. Frank Pasquale, *A Rule of Persons, Not Machines: The Limits of Legal Automation*, 87 *Geo. Wash. L. Rev.* 1 (2019).

516. WEF, *HUMAN-CENTRICITY AND DATA*, *supra* note 516, at 1.

517. *Id.*

determine, without any kind of coercion or compulsion, what happens to them. [...] Consequently, new “digital human rights” are emerging and the human-centric paradigm is predicated on these rights.⁵¹⁸

International organizations and intergovernmental networks have begun to develop soft law instruments for regulating digital technology. The UN—and separate agencies—such as UNESCO,⁵¹⁹ and the United Nations Development Programme (UNDP),⁵²⁰ the Council of Europe,⁵²¹ and the OECD⁵²² are only some of the international organizations developing soft law in the area of AI. The G20 has also been actively involved, amongst others by adopting some of the principles of other international organizations, such as the OECD.⁵²³ Countries led by the UK adopted the “Bletchley Declaration” at the AI Safety Summit.⁵²⁴

Human-centricity in the digital realm is the guiding principle behind much of the new soft law produced by international organizations and other international bodies. The OECD Recommendation on Artificial Intelligence, for example, sets out five complementary principles relevant to all AI stakeholders.⁵²⁵ The first principle is inclusive growth, sustainable development, and well-being. The second emphasizes the need to uphold the rule of law, human rights, and democratic values. This crucially also includes fairness and the right to privacy. The third highlights transparency and explainability in AI systems and algorithms. The fourth focuses on robustness, security, and safety. Finally, the fifth principle underscores accountability of all actors involved in

518. *Id.* See also Karen Yeung, Andrew Howes & Ganna Pogrebna, *AI Governance by Human Rights Centered-Design, Deliberation, and Oversight: An End to Ethics Washing*, in *THE OXFORD HANDBOOK OF ETHICS OF AI* 76 (Markus D. Dubber, Frank Pasquale & Sunit Das (ed., 2020)

519. Press Release, UNESCO, Artificial Intelligence: UNESCO Calls on All Governments to Implement Global Ethical Framework Without Delay (Apr. 20, 2023), <https://www.unesco.org/en/articles/artificial-intelligence-unesco-calls-all-governments-implement-global-ethical-framework-without> [https://perma.cc/M2C9-QWMN].

520. UNDP, *AI for Sustainable Development* <https://www.undp.org/digital/ai#:~:text=UNDP%20supports%20countries%20to%20strengthen%20local%20AI%20ecosystems%20on%20five%20key%20foundations.&text=Orchestrate%20data%20foundations%20for%20globally%20representative%20AI%20development.&text=Assess%20and%20enhance%20country%2Dlevel,implement%20locally%20relevant%20AI%20solutions> [https://perma.cc/66ZW-JMMP].

521. The Council of Europe’s Commissioner for Human Rights, for example, has issued 10 recommendations with a view to protecting individuals from AI-conditioned human rights violations (2019). COMMISSIONER FOR HUMAN RIGHTS, COUNCIL OF EUR., UNBOXING ARTIFICIAL INTELLIGENCE: 10 STEPS TO PROTECT HUMAN RIGHTS, RECOMMENDATION (2019), <https://rm.coe.int/unboxing-artificial-intelligence-10-steps-to-protect-human-rights-reco/1680946e64> [https://perma.cc/TZ92-NV7G].

522. The ‘OECD Recommendation on Artificial Intelligence’ is one of the first and most influential intergovernmental standards on AI. It was adopted by the OECD Council in 2019 on the proposal of the Committee on Digital Economy Policy (CDEP). OECD, *Recommendation of the Council on Artificial Intelligence*, OECD/LEGAL/0449 (May 22, 2019) [hereinafter OECD 2019].

523. G20 AI Principles, G20 Leaders’ Declaration: Osaka Summit, Annex 8 (June 28-29), https://www.mofa.go.jp/policy/economy/g20_summit/osaka19/pdf/documents/en/annex_08.pdf [https://perma.cc/S7C3-V6MQ].

524. THE BLETCHLEY DECLARATION BY COUNTRIES ATTENDING THE AI SAFETY SUMMIT 1-2 (2023).

525. OECD 2019, *supra* note 522 at IV.

the lifecycle of the development and deployment of the technology. All principles are derived from the overarching principle of human-centricity.⁵²⁶

The WEF has put forward five interrelated values to human-centric data regulation: establishing the human as the logical point of integration; empowering individuals and societies with data; developing an ecosystems approach that focuses on interoperability of digital systems; committing to pluralism and thus enabling cross-cultural and global applicability of human-centric approaches; finally, a commitment to proportionality and equity, whereby both rights and responsibilities are distributed equally and fairly to all involved actors.⁵²⁷

The initial agreements regulating the digital economy, influenced by the principles of the LIO, focused on liberalization and digital market-opening by prohibiting data localization and source code disclosure requirements, rather than addressing existing and emerging digital divides through infrastructure development or placing humans at the center of the emerging the digital economy. The transition to a more industrial law-based international law signifies a break with market-oriented approaches.⁵²⁸ The Cornwall Consensus recognizes bridging the digital divide and “promoting digital literacy worldwide” as one of the greatest challenges in the future for humanity.⁵²⁹ The same principles are reflected in the UN Global Digital Compact.⁵³⁰

The postulate of human-centricity has started impacting new agreements such as the DEPA. DEPA invites its signatories to spearhead “the adoption of ethical and governance frameworks that support the trusted, safe and responsible use of AI technologies” under Module 8.⁵³¹ These AI Governance Frameworks should respect a set of principles, foremost among them human-centered values, along with explainability, transparency, and fairness.⁵³²

Human-centricity covers a combination of more and less classic legal principles. There is a need for greater integration of the values of human-centricity into the process of negotiations and eventually in the text of international economic agreements. The Article now turns to some more technical principles that are aimed at operationalizing the principle of human-centricity in international economic agreements. An emerging technological due process principle emphasizes the need for transparency, public accessibility of digital technologies, and enhanced interoperability between the public and private sectors, as well as between the physical and digital realms, in the design of new international agreements.

526. *Id.*, at Preamble.

527. WEF, HUMAN-CENTRICITY AND DATA, *supra* note 516, at 2

528. *See supra* section IV.A.3.

529. Carbis Bay G7 Summit Communiqué, *supra* note 29, at ¶ 32; *see also* UNCTAD, WORLD INVESTMENT REPORT 2017: INVESTMENT AND THE DIGITAL ECONOMY (2017); Aaronson & Leblond, *supra* note 147 (on digital divides across states, with a focus on the US, the EU, and China, on the one side, and the rest of the international community, on the other).

530. Global Digital Compact, *supra* note 511.

531. Article 8.2(3) DEPA.

532. *Id.*

2. Technological Due Process

Human-centric solutions to the problems posed by digital technologies are largely procedural.⁵³³ A further principle that can be distilled from the principle of human-centricity is “technological due process.”⁵³⁴ For example, safeguards need to be in place to make sure that some form of human review will address concerns about accuracy as well as fairness in the AI context.⁵³⁵ AI systems – and the potential for arbitrary and inaccurate outcomes – must be subject to expert review during the whole life-cycle of AI: the design and implementation of the algorithm, as well as AI-based rule-making and adjudication—and finally, regulatory oversight.⁵³⁶

International soft law has already started emerging in this area too. Section 1.3. of the above-mentioned recommendations of the OECD, for example, focuses on the principles of transparency and explainability. AI actors should commit to transparency and responsible disclosure regarding AI systems. To this end, they should provide meaningful information which is appropriate to the context as well as consistent with the state of art with a view to enabling those affected by an AI system to understand the outcome; the OECD also highlights the importance of enabling those adversely affected by an AI system to challenge the outcome based on plain and easy-to-understand information on the factors and the logic that served as the basis for the prediction, recommendation or decision. Finally, section 1.4.c) highlights that all AI actors should—depending on their roles, the broader context, and their ability to act—continuously and systematically try to address risks, such as digital security, safety, and bias.

A key takeaway for new international economic treaties is the increasing need to ensure transparency. This was recently highlighted by Lucian Cernat, former Chief Trade Economist and current Head of Global Regulatory Cooperation and International Procurement Negotiations at the European Commission, who, in a discussion on new plurilateral and unilateral treaties, said the following:

This creates a new set of trade challenges for new non-tariff barriers if regulators around the world think in isolation. At the same time, these new developments clearly illustrate the need for transparency (Cernat, 2023) and stronger global regulatory cooperation, that is best framed by the kind of formal arrangements offered by mini-deals.⁵³⁷

533. Georgios Dimitropoulos, *Artificial Intelligence and International Adjudication*, in MAX PLANCK ENCYCLOPEDIA OF INTERNATIONAL PROCEDURAL LAW (2023).

534. Danielle Keats Citron, *Technological Due Process*, 85 WASH. U. L. REV. 1249 (2008).

535. Danielle Keats Citron & Frank Pasquale, *The Scored Society: Due Process for Automated Predictions*, 89 WASH. L. REV. 1, 7 (2014).

536. *Id.* at 18-27. The EU, through legislative instruments like the General Data Protection Regulation (GDPR) and Directive 2016/680, strictly limits automated decisions, especially in criminal matters. This legislation, along with the new AI Act, mandate human oversight to protect individual rights; see, e.g., Article 22 of the GDPR, which sets out a right of data subjects “not to be subject to a decision based solely on automated processing, including profiling, which produces legal effects concerning him or her or similarly significantly affects him or her.”

537. LUCIAN CERNAT, EUR. CTR. FOR INT’L. POL. ECON., THE ART OF THE MINI-DEALS: THE INVISIBLE PART OF EU TRADE POLICY 10 (2023) (citing Lucian Cernat, *How Valuable is WTO*

Multiple provisions of the DEPA reflect the principle of technological due process. Article 4.2 highlights the importance of strong data protection frameworks. Transparency is mentioned as one of the principles underpinning national data protection laws.⁵³⁸ Moreover, AI systems should be required to meet similar standards of transparency and accountability.⁵³⁹ This ensures that individuals impacted by decisions based on digital technologies in the digital economy are provided with clear and understandable information about the rationale behind those decisions, as outlined in the OECD guidelines on AI.

Another, often less emphasized aspect of technological due process is the public accessibility of digital technologies. It is frequently suggested that new technologies could eventually lead to the disappearance of the state.⁵⁴⁰ In reality, new technologies are often the result of state action⁵⁴¹ and do not necessarily aim to remove or bypass the state by design.⁵⁴² Historically, the state has been the locus of innovation through R&D budgets and regulatory intervention.⁵⁴³ Rather than the complete disappearance of the state, one of today's greatest challenges is the "privatization" of digital technologies—a trend already evident since the early days of the evolution of the internet.⁵⁴⁴ The same can be said about blockchain, for example. Bitcoin, along with other cryptocurrencies and cryptoassets, was created during the global financial crisis by a diverse group of individuals, including libertarians, anarchists, and other critics of the global financial system. The goal of the "anarcho-libertarian" individuals and groups in the first stages of development of the technology was to circumvent mainstream financial institutions—both commercial and central banks.⁵⁴⁵ These anarcho-libertarian origins of the technology gave rise to public permissionless blockchains.⁵⁴⁶ Public permissionless blockchains are not managed by any specific entity, and no approval or authorization is required to view or access the blockchain. They are accessible by anyone and can be used by any person anywhere in the world. Their software is completely open source

Transparency?, EUR. CTR. FOR INT'L POL. ECON. BLOG, <https://ecipe.org/blog/how-valuable-is-wto-transparency/> [<https://perma.cc/6CVL-6UGQ>] (June, 2023).

538. Article 4.2(3)(f) DEPA.

539. Article 8.2(4)(f) DEPA.

540. Edgerton, *supra* note 191, at 10-11.

541. See Mazzucato, *THE ENTREPRENEURIAL STATE*, *supra* note 186.

542. See Edgerton, *supra* note 191, at 13-14.

543. *Id.* at 1.

544. See Mike Masnick, *Protocols, Not Platforms: A Technological Approach to Free Speech*, KNIGHT FIRST AMEND. INST. 6 (Aug. 21, 2019).

545. Primavera De Filippi, *Bitcoin: A Regulatory Nightmare to a Libertarian Dream*, 3 INTERNET POL'Y REV. 2 (2014), <https://doi.org/10.14763/2014.2.286> [<https://perma.cc/P2MV-4WPC>]; Syed Omer Husain, (De)coding a Technopolity: Tethering the Civic Blockchain to Political Transformation (2020) (Ph.D. thesis, Wageningen University) (with further references) (Husain categorizes "blockchain imaginaries" into two primary groups: crypto-anarchists and crypto-institutionalists. Crypto-anarchists focus on projects and initiatives that view blockchain's disruptive potential as a way to reduce the power of governmental institutions and establish alternative governance systems. Crypto-institutionalists, on the other hand, seek to strengthen existing institutional structures and show interest in government-led blockchain projects.)

546. Molud Esmaili & Ken Christensen, *Performance Modeling of Public Permissionless Blockchains*, arXiv:2402.18049 [cs.CY] (2024), <https://arxiv.org/abs/2402.18049> [<https://perma.cc/T434-4QRY>].

and available for anyone to download, modify, and create their own version. Bitcoin and Ethereum, two of the most widely used blockchains, are public permissionless blockchains.

Blockchain was thus developed as a general-purpose technology;⁵⁴⁷ this allowed for its widespread use in many different environments and contexts, and to achieve many different types of goals. A privatization process is occurring in blockchain, with the original open, general-purpose technology now dominated by private users and applications. While traditional banks and other financial institutions were meant to be bypassed, the rise of blockchain technology has, to some extent, contributed to their strengthening.⁵⁴⁸ Mainstream institutions are now at the forefront of blockchain technology development.⁵⁴⁹ Moreover, there is a broad based “commercialization” of blockchain activities. Commercial data mining companies operate server farms, validating transactions on the blockchain and making huge corporate profits.⁵⁵⁰ Additionally, blockchain has now been put in use in international business transactions to streamline global supply chains that involve many and diverse public and private intermediaries over multiple jurisdictions.⁵⁵¹ These and other uses gave rise to a new type of blockchain: private, permissioned blockchains.⁵⁵² These are controlled and managed by a single entity, or a consortium of companies, that can impose restrictions on who can access and change the blocks, and use restricted access protocols to this effect.⁵⁵³

Overall, blockchain technology is becoming more privatized, shifting from public, permissionless blockchains to private, permissioned ones. The privatization of blockchain may potentially stifle innovation.⁵⁵⁴ Moreover, the major innovation of blockchain technology has been the provision of free access to all individuals willing to participate in the network. The more problematic feature of privatization is the shifting focus to private organizations rather than individuals and societies—hence the disregard for human-centricity. Moreover, private permissioned blockchains may create new dichotomies between those with access and those without access to the internet and the technology.⁵⁵⁵

547. See generally ELHANAN HELPMAN (ED.), *GENERAL PURPOSE TECHNOLOGIES AND ECONOMIC GROWTH* (MIT Press 2003).

548. See EMMANUELLE GANNE, WORLD TRADE ORG., *CAN BLOCKCHAIN REVOLUTIONIZE INTERNATIONAL TRADE?* 53–54 (2018) (calling this development an “irony”).

549. *Id.*, at 51–55.

550. *Bitcoin Mining Centralization: The Market is Fixing Itself*, 99 BITCOINS (June 19, 2018, 6:21 PM), <https://99bitcoins.com/bitcoin-mining-free-market/> [<https://perma.cc/XPP6-L2R3>].

551. Press Release, DHL, *The Future of Logistics Depends on Four Key Elements: Customer-Centricity, Sustainability, Technology, and People* (June 26, 2018), <https://group.dhl.com/content/dam/deutschepostdhl/en/media-relations/press-releases/2018/pr-dhl-logistics-trend-radar-20180626.pdf> [<https://perma.cc/D6A6-FM93>].

552. Karl Wüst & Arthur Gervais, *Do You Need a Blockchain?*, 2018 CRYPTO VALLEY CONFERENCE ON BLOCKCHAIN TECHNOLOGY 47 (2018).

553. There are also hybrid public-private blockchains, in which nodes with private access can see all the information in particular blockchains, while the others cannot—or the other way around.

554. Gregory Mandel, *Regulating Emerging Technologies I*, (Temple Legal Stud. Rsch. Paper Series, Paper No. 2009-18, 2009), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=1355674 [<https://perma.cc/CV33-3YR2>].

555. Dimitriopoulos, *supra* note 52, at 1169–1170.

New internationalism should resist the trend toward privatization and instead favor public open access and accessibility. Depending on the technology, this can take many forms.⁵⁵⁶ For example, in the case of blockchain, new international economic treaties should create opportunities for the use of public, permissionless blockchains.⁵⁵⁷ DEPA already recognizes a stronger right to regulate compared to past international treaties. The preamble acknowledges an “inherent right to regulate [...] to set legislative and regulatory priorities, safeguard public welfare, and protect legitimate public policy objectives.”⁵⁵⁸ It also recognizes the important role of open standards in promoting welfare and facilitating interoperability among digital systems.⁵⁵⁹ Moreover, DEPA Parties recognize the importance of a “rich and accessible public domain.”⁵⁶⁰

As highlighted above, harmonization of domestic legal frameworks is no longer the goal of new international agreements. Human-centricity and technological due process highlight instead a new emerging principle and value: interoperability. Interoperability is a multifaceted concept that can have different meanings depending on the context.⁵⁶¹ The concept originates from Information and Communication Technology (ICT), where it signifies the ability of two or more systems or devices to communicate and work together. In contemporary networked environments, devices do not operate in isolation;

556. See also *supra* section IV.B; PRIMAVERA DE FILIPPI & GREG McMULLEN, COALA & BLOCKCHAIN RESEARCH INSTITUTE GOVERNANCE OF BLOCKCHAIN SYSTEMS: GOVERNANCE OF AND BY THE INFRASTRUCTURE 10-11 (2018) (discussing net neutrality in blockchain governance). See generally FRISCHMANN, INFRASTRUCTURE, *supra* note 80, at 1-9, 91-114; K. Sabeel Rahman, *Infrastructural Regulation*, 35 YALE J. REG. 911, 929-31 (2018) (both discussing nondiscriminatory access in relation to commons management).

557. However, this does not mean that the use of public, permissionless blockchains is without issues. Some of blockchain’s most acclaimed features could potentially be detrimental to the individuals they are intended to protect, such as in the area of humanitarian protection; see Angela Walch, *Blockchain Applications to International Affairs: Reasons for Skepticism*, 19 GEO. J. INT’L AFFS. 27, 30 (2018) (“In many cases, they [refugees] abandon everything and it’s a big problem when they don’t have any way to prove who they are when they get to the refugee camp. So, there’s a lot of discussion about using blockchain technology to give someone a digital identity. The risk that you run into there is creating a very robust, hard-to-change record that collects everyone’s data. If you were a refugee, would you really want to become part of this system? Why would you trust this party and trust that they’re not going to go give it to your government? There remain many hard questions here.”).

558. Preamble of DEPA.

559. *Id.* According to the definition of the DEPA, an “open standard means a standard that is made available to the general public, developed or approved and maintained via a collaborative and consensus driven process, in order to facilitate interoperability and data exchange among different products or services and is intended for widespread adoption.” *Id.* at Article 2.1.

560. *Id.* at Article 9.3.

561. Metcalfe’s Law suggests that combining all networks into one network is more valuable than having multiple smaller networks. Christopher S. Yoo, *Moore’s Law, Metcalfe’s Law, and the Theory of Optimal Interoperability* 14 COLO. TECH. L. J. 87, 93 (2015). Interoperability of AI systems is posed to help address many contemporary issues. Interview by Martin Ford with Geoffrey Hinton, in MARTIN FORD, ARCHITECTS OF INTELLIGENCE 87-88 (2018) (“Just for pure computational reasons, making very advanced intelligence is going to involve making communities of intelligent systems because a community can see much more data than an individual system. If it’s all a question of seeing a lot of data, then we’re going to have to distribute that data across lots of different intelligent systems and have them communicate with one another so that between them, as a community, they can learn from a huge amount of data meaning that in the future, the community aspect of it is going to be essential”).

they interact with other programs and devices. Interoperability is crucial for the Internet of Things (IoT), Web 3.0, and Web 4.0 applications, which require software and device integration while collecting and exchanging high-quality data across physical and digital systems. The metaverse also relies on multiple layers of interoperability. The International Organization for Standardization (ISO) defines interoperability as “the capability to communicate, execute programs, or transfer data among various functional units in a manner that requires the user to have little or no knowledge of the unique characteristics of those units.”⁵⁶²

Interoperability is increasingly relevant beyond the strict domain of ICT.⁵⁶³ The term “legal interoperability” has developed alongside technical interoperability.⁵⁶⁴ Legal interoperability is defined as “the process of making legal rules cooperate across jurisdictions, on different subsidiary levels within a single state, or between two or more states.”⁵⁶⁵ It was developed to address the need to operate in complex, multilevel, and transnational environments. In a continuum that spans from complete fragmentation to harmonization through universal rules, legal interoperability presents a middle ground.⁵⁶⁶

The OECD recommendations suggest that governments should promote the development of multi-stakeholder, consensus-driven global technical standards for interoperable and trustworthy AI.⁵⁶⁷ The United Nations Centre for Trade Facilitation and Electronic Business (UN/CEFACT) has established standards for the interoperability of single-window systems;⁵⁶⁸ the Asia-Pacific

562. ISO/IEC 2382-01:1993, Information technology — Vocabulary — Part 1: Fundamental terms. See generally Kurt Kosanke, *ISO Standards for Interoperability: A Comparison*, in INTEROPERABILITY OF ENTERPRISE SOFTWARE AND APPLICATIONS 55 (D. Konstantas et al. eds., 2006) (discussing the work of ISO in ICT system interoperability). See also ISO/WD TS 23516.3: *Blockchain and Distributed Ledger Technology Interoperability Framework*, INT'L ORG. FOR STANDANDARDIZATION, <https://www.iso.org/standard/82098.html> [<https://perma.cc/PSU9-ZV27>] (last visited June 17, 2024) (on the work of ISO in the area of blockchain interoperability).

563. See, e.g., Urs Gasser & John G. Palfrey, *Breaking Down Digital Barriers: When and How ICT Interoperability Drives Innovation* 4 (Berkman Ctr. Publication Series, Publication No. 2007-8, 2007), <https://ssrn.com/abstract=1033226> [<https://perma.cc/BZP8-ZULG>]; JOHN PALFREY & URS GASSER, *INTEROP: THE PROMISE AND PERILS OF HIGHLY INTERCONNECTED SYSTEMS* (2012).

564. Rolf H. Weber, *Legal Interoperability as a Tool for Combatting Fragmentation* 6 (Glob. Comm'n on Internet Governance Paper Series: Paper No. 4, 2014); Amedeo Santosuosso & Alessandra Malerba, *Legal Interoperability as a Comprehensive Concept in Transnational Law*, 6 L. INNOVATION & TECH. 51 (2014); NADIA MARSAN & STEVEN HILL, NATO DEFENSE COLLEGE, *INTERNATIONAL LAW AND MILITARY APPLICATIONS OF ARTIFICIAL INTELLIGENCE* 56-58 (2019); Luca Belli & Danilo Doneda, *Data Protection in the BRICS Countries: Legal Interoperability through Innovative Practices and Convergence*, 13 INT'L DATA PRIV. L. 1 (2023) (presenting a project of international collaboration among BRICS countries that is based on legal interoperability). See also Georgios Dimitropoulos, *The Design of International Commercial Courts: From Organizational Hybridity to Functional Interoperability*, in INTERNATIONAL COMMERCIAL COURTS: THE FUTURE OF TRANSNATIONAL ADJUDICATION 251 (Stavros Brekoulakis & Georgios Dimitropoulos eds., 2022) (explaining how interoperability is emerging as a new feature of international governance).

565. Weber, *supra* note 564, at 6.

566. *Id.*

567. OECD 2019, *supra* note 522.

568. United Nations Ctr. for Trade Facilitation & Elec. Bus. (UN/CEFACT), *Single Window Interoperability, Recommendation No. 36*, ¶ 11 U.N. Doc. ECE/TRADE/431 (2017).

Economic Cooperation (APEC) has done so as well.⁵⁶⁹ The G7 highlighted the need for interoperability early on,⁵⁷⁰ and developed the G7 Roadmap for Cooperation on Data Free Flow with Trust (DFFT).⁵⁷¹ The focus of these standards is on establishing connections and interoperability across national systems rather than harmonizing them.⁵⁷²

Trade is a prime example that combines both technical and legal interoperability considerations. A typical cross-border transaction involves exchanging approximately 36 documents and 240 copies between private and public actors, with significant financial implications.⁵⁷³ To help address such issues, the WEF and the WTO published a joint report on the potential of “TradeTech”—a collection of technologies designed to make global trade more efficient, inclusive, and sustainable.⁵⁷⁴ The report identifies numerous untapped opportunities and introduces five building blocks for the interplay between digitalization and trade, known as the “5 Gs of TradeTech:” Global frameworks for data transmission and liability, global legal recognition of electronic transactions and documents, global digital identification of individuals and objects, global interoperability of data models for trade documents and platforms, and global trade regulations access and computational law.⁵⁷⁵ Hence, interoperability is at the forefront of the approach proposed by the WTO and the WEF.

Most current international agreements have yet to address areas of interoperability, such as electronic transferable records, automated contracts, digital tokens and other digital assets, interoperability of data models, and

569. LAURO VIVES, ASIA-PAC. ECON. COOP., *STUDY ON SINGLE WINDOW SYSTEMS’ INTERNATIONAL INTEROPERABILITY: KEY ISSUES FOR ITS IMPLEMENTATION* (2018).

570. *G7 Digital and Technology Track—Annex 1: Framework for G7 Collaboration on Digital Technical Standards* (Apr. 28, 2021), http://www.g8.utoronto.ca/ict/2021-annex_1-framework-standards.html [<https://perma.cc/M3R3-GRYP>]. DFFT was first proposed by Japan at the G20 Osaka Summit in 2019 (G20 Osaka Leaders’ Declaration ¶ 10–12 (2019), https://www.mofa.go.jp/policy/economy/g20_summit/osaka19/en/documents/final_g20-osaka_leaders_declaration.html [<https://perma.cc/2KC5-SUE8>]).

571. *G7 Digital and Technology Track - Annex 2: Roadmap for Cooperation on Data Free Flow with Trust*, (Apr. 28, 2021), https://assets.publishing.service.gov.uk/media/609cf5e18fa8f56a3c162a43/Annex_2_Roadmap_for_cooperation_on_Data_Free_Flow_with_Trust.pdf [<https://perma.cc/XR9R-LUJU>]. The G7 further advanced the DFFT initiative by endorsing the establishment of the Institutional Arrangement for Partnership (IAP) to operationalize DFFT; G7 Digital and Tech Ministers’ Meeting, Ministerial Declaration ¶ 9-13 (2023), https://www.digital.go.jp/assets/contents/node/information/field_ref_resources/efdaf817-4962-442d-8b5d-9fa1215cb56a/f65a20b6/20230430_news_g7_results_00.pdf [<https://perma.cc/B9JX-7U54>].

572. Fumiko Kudo, Ryosuke Sakaki & Jonathan Soble, *Every Country Has Its Own Digital Laws. How Can We Get Data Flowing Freely Between Them?*, WORLD ECON. F. (May 20, 2022), <https://www.weforum.org/agenda/2022/05/every-country-has-its-own-digital-laws-how-can-we-get-data-flowing-freely-between-them/> [<https://perma.cc/8RNC-ZRZF>]; WORLD ECON. F., *DATA FREE FLOW WITH TRUST (DEFT): PATHS TOWARDS FREE AND TRUSTED DATA FLOWS* (2020), <https://www.weforum.org/whitepapers/data-free-flow-with-trust-deft-paths-towards-free-and-trusted-data-flows> [<https://perma.cc/XR9R-LUJU>].

573. Laurence Fletcher, *Forget the Paper Trail: Blockchain Set to Shake Up Trade Finance*, FINANCIAL TIMES (Dec. 2, 2019), <https://www.ft.com/content/04a4fcde-dfb5-11e9-b8e0-026e07cbe5b4> [<https://perma.cc/CKU3-2XNV>].

574. WTO & WORLD ECON. F., *THE PROMISE OF TRADETECH: POLICY APPROACHES TO HARNESS TRADE DIGITALIZATION 3* (2022).

575. *Id.*

the digital identity of legal and physical entities or goods.⁵⁷⁶ DEPA is an exception, as it contains several provisions that aim at fostering legal and technical interoperability among its member countries. Legal and technical interoperability in the DEPA are spin-offs of a human-centric approach and technological due process. While encouraging cross border data flows,⁵⁷⁷ Article 4.2 of DEPA provides guidelines for ensuring personal data protection, balancing data exchange with privacy concerns, and enabling systems to align based on interoperability and compatibility rather than harmonization.⁵⁷⁸ Moreover, Article 2.5 of DEPA encourages the adoption of interoperable e-invoicing systems, simplifying business processes and reducing the cost of cross-border transactions. Crucially, for the purposes of human-centricity and technological due process, Article 7.1 outlines standards for the mutual recognition of digital identities, enabling secure and seamless cross-border digital interactions.

As discussed above, international law of the free market-layer suggests an overarching harmonization of domestic legal orders. For the reasons discussed in this Article, this model of legal integration has exhausted its limits. The value proposition of interoperability in the era of new industrialism and new internationalism lies in highlighting cooperation, reciprocity, and mutual recognition over harmonization. New international legal frameworks should ensure interoperability between different systems by bridging gaps and transcending differences without requiring harmonization. An interoperable approach also preserves legal flexibility for ongoing technological advancements.⁵⁷⁹ Interoperability needs thus to be read in conjunction with the principle of technological neutrality—a fundamental rule that transcends international economic agreements.⁵⁸⁰

Conclusion

New industrialism is reshaping domestic economic development policies and giving rise to a new internationalism. Both prioritize national economic and security goals over global markets, challenging the foundations of market-oriented international law. New industrial and trade policies focus on maintaining, advancing, and developing competitive advantages in the race for digital technology dominance. New industrialism and new internationalism place the 4IR at the forefront of economic development.

576. *Id.*, at 13.

577. DEPA Article 4.3.

578. DEPA Article 4.2(6) and (7).

579. Weber, *supra* note 564, at 12.

580. See Gabriele Gagliani, *Cybersecurity, Technological Neutrality, and International Trade Law*, 23 J. INT'L ECON. L. 723, 741 (2020); Sherzod Shadikhodjaev, *Technological Neutrality and Regulation of Digital Trade: How Far Can We Go?*, 32 EUR. J. INT'L L. 1221 (2021); Dongchul Kwak, *No More Strategic Neutrality on Technological Neutrality: Technological Neutrality as a Bridge Between the Analogue Trading Regime and Digital Trade*, 21 WORLD TRADE REV. 18 (2022) (discussing technological neutrality in international trade law).

These policy shifts are also leading to new types of international agreements beyond traditional market-opening treaties. The Cornwall Consensus, the EU-U.S. and the EU-India TTC, and the IMEC are prime examples, with the DEPA and the IPEF standing out as the most emblematic of this new generation of agreements.

The treaties of new internationalism are based on a new set of structural, economic, and technological principles and values. Building on the principles of new industrialism and new internationalism, new international economic treaties should provide for a more active role for governments in safeguarding human-centricity, technological due process, publicness, and interoperability in the evolving international economic and digital order.