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MASTER'S DISSERTATION

Geoeconomic Implications of New Industrial Policies in the Digital Era: Impacts
on Global Value Chains (GVCs)

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Declaration of Originality and Personal Responsibility

I hereby declare that the work submitted as part of my academic studies is the product of my own original research. I fully acknowledge and accept legal and administrative responsibility for any instances of plagiarism or academic misconduct that may arise in connection with this work.

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Introduction

On December 2, 2024, global headlines erupted with news of escalating tensions between the United States and China. The U.S. Bureau of Industry and Security (BIS) introduced a comprehensive set of export controls to constrain China's access to advanced semiconductor technologies.¹ These measures specifically targeted tools and components essential for producing next-generation semiconductors. In addition to technological restrictions, the BIS expanded its Entity List by adding 140 Chinese companies, including semiconductor fabs, tool manufacturers, and investment firms. These entities were identified as working to advance China's indigenous semiconductor capabilities, particularly in ways that could support military development.

The U.S. emphasized these actions as essential for national security and preventing China's military advancements, building on the interim final rule from October 2022 and the updates in October 2023 and April 2024.² In retaliation, just one day later, China imposed strict export bans on gallium and germanium, minerals indispensable for manufacturing semiconductors and advanced technologies.³ With China dominating global production of these materials, controlling 94% of gallium and 83% of germanium,⁴ this countermeasure was not just an economic statement; it was a direct blow to global supply chains. The immediate effects are expected to be palpable; price hikes, delays, and supply chain disruptions.⁵

The ripple effects of this economic standoff extend far beyond the two superpowers. Semiconductor shortages disrupt global production lines, from consumer electronics to automobile manufacturing, and reveal the fragility of global value chains (GVCs). For decades,

¹ Bureau of Industry and Security, 'Commerce Strengthens Export Controls to Restrict China's Capability to Produce Advanced Semiconductors for Military Applications' (2 December 2024).

² The BIS's October 2022 rule imposed restrictions on China's access to advanced semiconductors, manufacturing equipment, and AI-related technologies with military applications. Updates in October 2023 and April 2024 enhanced these controls, expanding the scope of regulated semiconductor tools, and extending jurisdiction to foreign-produced items incorporating U.S.-origin technology, Bureau of Industry and Security, *Implementation of Additional Export Controls: Certain Advanced Computing and Semiconductor Manufacturing Items* (Federal Register, 13 October 2022); Baker McKenzie, *BIS Revises Export Controls on Semiconductor Manufacturing and Advanced Computing Items* (Sanctions News, 18 October 2023).

³ *AP News*, 'China Bans Exports to US of Gallium, Germanium, Antimony in Response to Chip Sanctions' (3 December 2024).

⁴ *The Guardian*, 'US-China Tensions Escalate as China Imposes Export Bans on Gallium and Germanium' (4 December 2024).

⁵ Previous restrictions by China in July 2023 caused global prices of gallium and germanium to surge by over 30% within weeks, Scott Kennedy, 'China's Antimony Export Restrictions: Impact on US National Security' (CSIS, 9 May 2024).

these interconnected production systems had been celebrated as a major achievement of liberal globalization. By optimizing efficiency and reducing costs, GVCs enabled companies to source materials, components, and expertise from multiple countries, fostering an unprecedented level of economic interdependence. However, the same interdependence now served as a pressure point in an increasingly fractured world. This confrontation reflects deeper systemic changes. These disruptions marked a significant transition from multilateral cooperation toward industrial policies in a digitally driven and competitive geoeconomic system. Plurilateral agreements, such as the Indo-Pacific Economic Framework (IPEF), emerged as responses to these challenges. Unlike traditional multilateral agreements, these new initiatives focus on targeted economic goals, providing greater flexibility and adaptability in addressing the complexities of the modern global economy.

The December 2024 escalation is part of a broader trend where nations increasingly use economic tools to achieve political and security objectives. The U.S. CHIPS Act, enacted in 2022, sought to bolster domestic semiconductor production and reduce reliance on foreign suppliers. China's "Made in China 2025" strategy aimed to achieve technological self-reliance and dominance in critical industries. Meanwhile, the European Union advanced its Critical Raw Materials Act and European Chips Act, focusing on securing strategic resources and enhancing technological capacity. These industrial policies embrace active state intervention to address vulnerabilities and strengthen economic and digital sovereignty.

This dissertation examines these geoeconomic changes, analyzing the intersection of industrial policymaking, digital technology, and global trade. By focusing on the strategies of key actors, China, the United States, and the European Union, as well as the evolving role of plurilateral agreements, the study aims to provide a comprehensive understanding of how nations are adapting to the demands of the digital era.

The dissertation is structured into three chapters. Chapter 1 traces the historical evolution and eventual decline of the Liberal Internationalism. It begins by examining the rise of the Washington Consensus, which promoted market-driven reforms and trade liberalization, and analyzes its failure. This chapter explores how financial crises, geopolitical tensions, and digital globalization exposed the weaknesses of multilateral governance. References such as Chaisse

and Dimitropoulos (2022), Altay (2024) and Barnett (2021) provide essential perspectives on the decline of liberal internationalism and multilateralism as well as their implications on GVCs.

Chapter 2 focuses on the emergence of the Geoeconomic Digital Order and its influence on global production and trade. It investigates the governance models adopted by major players, including China's state-controlled model, the U.S.'s mission-oriented approach, and the European Union's emphasis on open strategic autonomy. Dimitropoulos (2024), Roberts et al. (2020) and Babic et al. (2022) offer valuable insights into the revival of industrial policies within the framework of the Cornwall Consensus. The chapter also examines the role of Digital Economy Agreements (DEAs) and new plurilateral agreements, like IPEF, in addressing digital and economic challenges.

Chapter 3 examines how third-generation digital plurilateral agreements contribute to the resilience of GVCs in an era of fragmentation. It evaluates the IPEF Agreement on Supply Chain Resilience designed to enhance supply chain security and promote regional collaboration. Drawing on Collins (2024), Hoekman and Mavroidis (2024) and Dimitropoulos (2022), the chapter highlights how plurilateralism balances national interests with international cooperation, offering pathways for addressing vulnerabilities in GVCs.

The dissertation employs a combination of conceptual, doctrinal, and empirical legal methodologies to bridge theoretical frameworks with practical relevance. By integrating perspectives from international economic law, trade policy, and digital governance, it provides a multi-dimensional analysis.

The transition from a liberal order to a geoeconomic digital order signals a significant moment in global economic governance. This dissertation contributes to understanding the role of industrial policies, digital technologies, and international legal frameworks in shaping this new reality. As nations recalibrate their approaches to address the vulnerabilities of GVCs, the insights drawn from this analysis will prove critical for policymakers, businesses, and scholars navigating the complexities of the digital age.

Chapter 1. The Rise and Decline of Liberal Internationalism and Multilateralism

Chapter 1 provides an in-depth exploration of the Liberal Internationalism, its origins, evolution, and the challenges it faces. Section 1.1 examines its origins and development. It begins with the post-WWII efforts to establish global stability through rules-based governance and economic liberalism. The chapter discusses the role of key institutions like the United Nations, Bretton Woods system, GATT, and, later, the WTO in fostering economic growth and trade liberalization. The chapter further underscores the globalization of supply chains, which evolved into complex GVCs by integrating multiple regions into production processes. The subsection on the Washington Consensus complements the evolution of the liberal internationalism explaining Consensus's market-oriented reforms through international financial institutions while addressing its limitations and decline.

Section 1.2 discusses the crisis of the liberal internationalism. It identifies key challenges, including financial crises, geopolitical tensions, and the rise of new global powers like China. The text analyses disruptions caused by economic nationalism, trade wars, and the growing influence of digital globalization. It highlights how monopolistic practices and data governance issues have reshaped global trade and increased regulatory pressures. The subsection on the insufficiency of multilateralism delves into the decline of this system. Traditional frameworks, such as the WTO, struggle to address modern trade complexities, including digital commerce and supply chain resilience. Efforts like the WTO Joint Statement Initiative on E-commerce demonstrate attempts to modernize, but their limited inclusivity and non-binding nature hinder progress. The chapter concludes by discussing the rise of domestication in international economic law. This shift marks a transition from multilateral frameworks to more state-driven approaches to global trade governance.

1.1 Origins and Evolution of the Liberal Internationalism

For over seventy years, the liberal internationalism maintained its dominance on the global stage. It emerged in the post-World War II era and it sought to establish stability through rules-based governance and economic liberalism.⁶ Spearheaded by the United States, this framework

⁶ Serdar Altay, *The Rise and Decline of the Liberal World Order and the Multilateral Trade System: A Critical-Constructivist Synthesis to International Regime Analysis* (2024) 21(82) *Uluslararası İlişkiler*, 97-115,

promoted the free trade and capital movement within the scope of the international rule of law and human rights.⁷ Trade liberalisation and institutional cooperation provided security and prosperity for industrialized nations creating a network of economic, political and security institutions where democracies could thrive and cooperate effectively. This system blended formal rules with shared values. It encouraged privatization, deregulation and reduced state intervention in markets.⁸ The Washington Consensus supported these goals by advocating economic reforms. In this context, international law often supplanted domestic law as the primary means of governing cross-border trade. Indeed, global production and trade were facilitated and supply chains expanded beyond borders evolving into interconnected networks across multiple countries. Conversely, during pre-globalisation, supply chains were local and vertically integrated.⁹ Companies handled most production stages themselves. Trade across borders mainly involved finished goods, with multinational firms exporting from centralised production.

By the 1990s, neoliberal policies spread widely through an universalist approach. In the post-war era, multilateral institutions, like the United Nations, the Bretton Woods system, the General Agreement on Tariffs and Trade (GATT), and the World Bank became the cornerstones of this order. As a matter of fact, the World Trade Organization (WTO) was created in 1995 and it formalized global trade governance and strengthened the international trade regime, building on GATT's principles of national treatment and most-favored nation. The WTO's dispute settlement mechanism (DSM) replaced GATT's political approach with a judicial system. Hence, the DSM's independent Appellate Body interpreted and applied WTO law, often creating new obligations.¹⁰ Therefore, as this system advanced, with the establishment of the GATT and, later, of the WTO,

102-108; Michael Barnett, *International Progress, International Order, and the Liberal International Order* (Chinese Journal of International Politics 14(1), 2021, 1-22), 9-16; Julien Chaisse and Georgios Dimitropoulos, *Domestic Investment Laws and International Economic Law in the Liberal International Order* (2022) 21(3) *World Trade Review* 401, 4-6.

⁷ GJ Ikenberry, *The End of Liberal International Order?* (2018) 94(1) *International Affairs* 7, 11-17; John J. Mearsheimer, 'Bound to Fail: The Rise and Fall of the Liberal International Order' (2019) 43(4) *International Security* 7, 21-26.

⁸ "Openness is manifest when states trade and exchange on the basis of mutual gain" in G John Ikenberry, *Liberal Leviathan: The Origins, Crisis, and Transformation of the American World Order* (Princeton University Press 2011) 18.

⁹ Gary Gereffi, 'The Organization of Buyer-Driven Global Commodity Chains' in Gary Gereffi and Miguel Korzeniewicz (eds), *Commodity Chains and Global Capitalism* (Praeger 1994) 97, 96-100.

¹⁰ It faced criticism, particularly from the US, for engaging in "judicial activism", R Rathore and N Bajpai, 'The WTO Appellate Body Crisis: The Current Debate on Judicial Overreach and Reform' (JURIST, 17 April 2020).

supply chains began to globalize even more as these institutions reduced trade barriers establishing rules for cross-border trade. Global tariff rates significantly declined from over 20% before GATT's establishment in 1947 to an average of 3-5% by the mid-1990s.¹¹ As companies began sourcing inputs from multiple regions, supply chains became transnational. Hence, they evolved from localised operations into complex networks that spanned countries fostering greater interdependence among economies and accelerating global trade flows. Overall, between 1950 and 1995, the volume of global trade expanded 14 times, far outpacing global GDP growth during the same period.¹² After the establishment of the WTO in 1995, trade continued to grow at an average annual rate of 5.4% until the 2008 financial crisis.¹³

By the mid-2000s with the rise of new global powers, especially China, an infrastructural turn in international law was marked, rendering sustainable infrastructure into an essential component in order to create a more inclusive and resilient global economic framework.¹⁴ China's Belt and Road Initiative (BRI) was not the sole catalyst. The holistic approach of the Sustainable Development Goals (SDGs) of the United Nations, and, especially SDG 9, which is dedicated to "Building Resilient Infrastructure, Promoting Sustainable Industrialization and Fostering Innovation" has cemented infrastructure's role in economic development as international law started moving beyond the traditional free market focus.¹⁵ As trade liberalization and technological advancements expanded, the networks of transnational supply chains evolved into GVCs. Above all, China's entry into the WTO in 2001 accelerated its integration into global trade systems. In GVCs, production processes became deeply interconnected and goods crossed borders multiple times, with each step adding value before reaching the final consumer. Asia's economic influence progressively grew, with China integrating into global value chains and challenging Western dominance. By 2015, China produced nearly 30% of the world's manufactured goods, becoming a central hub for intermediate products and global supply chains.¹⁶ Yet even so, the growing influence of non-Western powers and the uneven outcomes of globalizations began to expose cracks in the liberal internationalism. These challenges were also

¹¹ Richard Baldwin, *The Great Convergence: Information Technology and the New Globalization* (Harvard University Press 2016) 185- 188.

¹² WTO, *World Trade Report 2013: Factors Shaping the Future of World Trade* (WTO 2013), 24.

¹³ WTO (n. 12), 24.

¹⁴ Georgios Dimitropoulos, 'Industrial Policy and the New Internationalism: After The Liberal International Order' (forthcoming 2024) *Cornell International Law Journal*; 16-23.

¹⁵ UN, *Goal 9: Industry, Innovation and Infrastructure* (United Nations).

¹⁶ Richard Baldwin, (n. 11) 185–188.

mirrored in the rise and eventual decline of the Washington Consensus, which heralded economic liberalism.

1.1.1 The Washington Consensus

The Washington Consensus was closely tied to liberal internationalism, as it reflected the broader push for free markets, open trade, and economic liberalization championed by Western institutions. Arising in the late 1980s, it provided a structured approach to economic reform in developing countries.¹⁷ Given that during the 1980s economists increasingly viewed government intervention as a problem rather than a solution, John Williamson coined the term "Washington Consensus" to describe ten widely endorsed economic policies aimed at stabilizing and liberalizing economies.¹⁸ These included prudent fiscal policies, open trade, privatization, and deregulation. Export-driven supply chains became central to these reforms and countries were encouraged to shift from inward-looking industrial policies to outward-looking strategies.¹⁹ This meant reducing tariffs, eliminating import quotas, and opening markets to foreign goods and investments.

On the whole, the Consensus was driven by a coalition of U.S. institutions such as the Treasury, Congress, and international financial institutions (IFIs), like the IMF and World Bank. These organizations used conditional lending practices to encourage market-oriented reforms in countries facing economic crises. In exchange, borrowers were required to implement specific policy changes to secure financial assistance, including privatizing state enterprises, reducing trade barriers, and reforming tax systems.²⁰ Developing countries were pressured to reduce subsidies for domestic agriculture and this often led to increased reliance on global markets for agricultural imports.²¹ With significant influence over IFIs, the U.S. played a leading role in shaping these policies using its economic and political power to align the agenda of these

¹⁷ John Williamson, 'A Short History of the Washington Consensus' in Narcis Serra and Joseph E Stiglitz (eds), *The Washington Consensus Reconsidered: Towards a New Global Governance* (Oxford University Press 2008) 14-30.

¹⁸ John Williamson (ed), 'Introduction' in *Latin American Adjustment: How Much Has Happened?* (Institute for International Economics 1990) 1-3.

¹⁹ The NAFTA Agreement (1994) between Mexico, the U.S., and Canada eliminated most tariffs and trade barriers, United States Customs and Border Protection, 'North American Free Trade Agreement (NAFTA)' (CBP.gov).

²⁰ Sarah Babb, 'The Washington Consensus as Transnational Policy Paradigm: Its USMCA Auto Report Origins, Trajectory and Likely Successor' (2013) 20(2) *Review of International Political Economy* 268, 6-11.

²¹ Sub-Saharan Africa experienced a surge in food imports after removing tariffs, which destabilized local farmers' livelihoods, World Bank, *Global Economic Prospects 2001: Chapter 2* (World Bank, 2001), 2-3,7.

institutions with its interests.²² Thus, the IFIs operated not just as financial institutions but also as enforcers of economic reform. This strategy was particularly effective during the Third World debt crisis of the 1980s, as developing countries were under immense pressure to secure external financing.²³

Nevertheless, its influence began to erode in the late 1990s and early 2000s. Key reasons for the decline included criticisms of 'one-size-fits-all' solutions that ignored local circumstances. IFIs applied the same economic prescriptions universally, often leading to ineffective or harmful outcomes.²⁴ Evidence also mounted against the effectiveness of the Consensus. Many developing countries that adopted its policies experienced financial crises rather than sustained growth.²⁵ In a similar vein, Joseph Stiglitz criticized its "market fundamentalism," claiming it worsened conditions in vulnerable economies.²⁶ Supply chains became more fragile as over-dependence on global trade exposed nations to external shocks. The decline of the Washington Consensus also signaled broader cracks in the liberal internationalism. As nations contested the roles and rules of global institutions, the stability and effectiveness of this system have started facing growing challenges foreshadowing their decline.

1.2 Crisis of the Liberal Internationalism

The Liberal Internationalism began facing challenges in the mid-2000s, with cracks steadily widening over the years. While it facilitated the expansion of trade and interconnected production, it lacked mechanisms to manage the vulnerabilities of complex supply networks. Globally, the 2008-2009 financial crisis, and, later, the COVID-19 pandemic revealed flaws in

²² The U.S. held the largest voting share in key institutions such as the IMF and World Bank and the U.S. Congress frequently influenced IFI policies by leveraging its control over financial contributions, IMF, 'IMF Members' Quotas and Voting Power, and IMF Board of Governors' (IMF); World Bank, 'Voting Powers' (World Bank).

²³ Sarah Babb (n. 20), 6-11.

²⁴ Indonesia's financial crisis in 1997 disrupted its supply chains, particularly in manufacturing and natural resources, causing widespread economic hardship, Hadi Soesastro, 'The Economic Crisis in Indonesia: Causes, Consequences, and Lessons' (2010) *Modern Economy*.

²⁵ Argentina and regions like East Asia experienced severe economic turmoil after adopting Washington's recommendations, while nations that avoided these policies, such as China and Vietnam, showed strong growth, Joseph Stiglitz, 'Is There a Post-Washington Consensus Consensus?' in Narcis Serra and Joseph E Stiglitz (eds), *The Washington Consensus Reconsidered: Towards a New Global Governance* (Oxford University Press 2008) 41-56; Dani Rodrik, 'Goodbye Washington Consensus, Hello Washington Confusion?' (2006) 44 *Journal of Economic Literature* 973.

²⁶ Joseph E Stiglitz, *Globalization and Its Discontents* (WW Norton 2002).

liberal institutions and policies.²⁷ Markets became more autonomous, but this eroded state sovereignty and governance.

Apart from the disruptions caused by financial crises and natural disasters, political decisions and geopolitical tensions further weakened it, undermining its effectiveness. The Trump administration's unilateralism, including halting WTO Appellate Body appointments in 2019, further weakened multilateralism.²⁸ As the WTO faltered, regional trade agreements like the Trans Pacific Partnership (TPP) emerged but were disrupted by economic nationalism, U.S. withdrawal, and trade wars with China. For the most part, the faith in post-WWII liberalism and particularity in its economic institutions has been declining due to global power dynamics.²⁹ Efforts to integrate China into the global economy helped accelerate its rise as an economic and military powerhouse. Although, rather than becoming a liberal democracy, China emerged as a rival, undermining the unipolar system necessary for the liberal internationalism. Russia's resurgence further contributed to the transition to a multipolar world, with both powers resisting U.S.-led efforts to reshape their governance.³⁰ This opposition reflected nationalist and strategic concerns, including sovereignty and limiting Western influence.³¹ Economic and military competition between the U.S.-led and China-led blocs now define the global system. Alliances and institutions are included to strengthen internal cooperation while competing with rivals. Recently, the Russo-Ukrainian conflict disrupted the global energy and grain supply chain with Europe facing gas shortages and price hikes due to sanctions on Russia while Ukraine's blocked exports of wheat and sunflower oil caused global food shortages and inflation.³² Unlike the Cold War, economic interdependence persists, requiring international cooperation to manage fragmented GVCs, despite geopolitical tensions.

²⁷ Georgios Dimitropoulos, *Digital Plurilateralism: Towards Unilateral Multilateralism in International Economic Law?*, (Nov. 2022) (unpublished manuscript) 23-29; Serdar Altay (n.6), 110-111; Barry Eichengreen and Kevin H. O'Rourke, 'A Tale of Two Depressions' (2010) 24 *VoxEU*, 27-30.

²⁸ K Hopewell, 'Trump & Trade: The Crisis in the Multilateral Trading System' (2021) *New Political Economy*, 16-18.

²⁹ Robert Kuttner, *Can Democracy Survive Global Capitalism?* (New York: W.W. Norton, 2018), p. 74.

³⁰ John J. Mearsheimer, (n. 7), 33-34, 42.

³¹ GJ Ikenberry (n. 7), 17-21.

³² Reuters, 'Gas Price Shock Set to Add to Europe's Industrial Pain' (6 December 2024); Reuters, 'How the War in Ukraine Is Affecting the Global Food Crisis' (29 March 2022).

To make matters worse, recently, the rise of digital globalization marked a new phase in global interconnectedness.³³ Data became a key driver of economic activity, reshaping global trade and innovation.³⁴ The digital economy has been profoundly disrupted by the dominance of Big Tech companies like Amazon, Google, Apple, and Meta, which consolidated control over markets and stifled competition. Businesses monetized data at unprecedented scales, transforming traditional and digital industries alike.³⁵ These monopolistic practices limited innovation, as smaller competitors were acquired and key digital infrastructures like app stores and cloud services were monopolized.³⁶ As a response, governments introduced digital sovereignty policies to regulate data storage, cybersecurity, and infrastructure, aiming to protect national interests. These measures supported local industries but fragmented supply chains and increased compliance costs, especially for MSMEs. The inability of liberal internationalism to adapt its framework to manage these issues limited its capacity to create sustainable and inclusive global trade systems.

In the aggregate, liberalization has happened at the expense of addressing moral and social concerns, leaving global inequalities and shared humanity unaddressed.³⁷ Its emphasis on free trade often overlooked the need for policies to ensure resilience and equitable participation across nations.³⁸ Developing countries, in particular, faced barriers to fully integrating into GVCs due to limited infrastructure, tariff escalation, and subsidy practices by advanced economies.³⁹ This imbalance has fueled debates between "globalists" and "nationalists."⁴⁰ While the liberal international order managed to foster economic interdependence, its failure to adapt to modern challenges left critical gaps in governance. These gaps are particularly evident in the limitations of multilateral systems to address emerging complexities in global trade and cooperation.

³³ Georgios Dimitropoulos, (n.27), 23-29.

³⁴ The Economist, *The World's Most Valuable Resource is No Longer Oil, But Data* (London, 6 May 2017); European Parliamentary Research Service, 'Is data the new oil?' (2020) 1-2.

³⁵ James Manyika et al., *Digital Globalization: The New Era of Global Flows* (McKinsey & Company, 2016), 1-5; Michael Mandel, *Beyond Goods and Services: The Unmeasured Rise of the Data-Driven Economy* (Progressive Policy Institute, October 2012), 4-7, 11-13.

³⁶ BBC, 'Big Tech and Antitrust: Global Scrutiny on Amazon, Google, Apple, and Facebook' (BBC, 7 October 2020).

³⁷ Serdar Altay (n.6) 108-110; Michael Barnett (n.6), 16-20, Christian Kreuder-Sonnen and Berthold Rittberger, 'The LIO's Growing Democracy Gap: An Endogenous Source of Polity Contestation' (2023) 26 *Journal of International Relations and Development* 61, 72-73.

³⁸ Michael Barnett (n. 6), 16-20; Mzukisi Qobo, *The Liberal Internationalist Order and Its Discontents: The Political Economy of China-US Relations* (International Political Economy Series, Palgrave Macmillan 2022).

³⁹ World Bank, *World Development Report 2020: Trading for Development in the Age of Global Value Chains* (World Bank 2020), 89.

⁴⁰ Hans Kundnani, *What is the Liberal International Order?* (2017) Policy Essay, Liberal International Order Project, No.17, 8-9.

1.2.1 Gaps in Multilateralism

Although multilateralism was once a cornerstone of liberal internationalism, global cooperation has fallen short in tackling interconnected challenges. The limitations of multilateralism are deeply intertwined with the crisis of the liberal international order and the decline of the Washington Consensus. As global institutions struggle to address modern challenges, the disconnect between traditional frameworks and contemporary realities becomes increasingly evident. Solidified through the United Nations in 1945,⁴¹ multilateral systems aimed to replace conflict and unilateralism with collective action and the rule of law. These systems have achieved remarkable successes, such as disease eradication and conflict prevention.⁴² The current multilateral systems, however, face criticism for being outdated and unresponsive to the needs of diverse actors, who remain locked in geopolitical rivalries, preventing consensus on urgent issues.⁴³

Through the lens of multilateralism, international economic law, that was founded in the trade of physical goods and services, seems inadequate to govern the complexities of GVCs. Digital technologies and cross-border data flows are now central to GVCs, but existing frameworks lack comprehensive rules for these areas.⁴⁴ Besides, supply chains are increasingly vulnerable to disruptions from pandemics, geopolitical tensions, and natural disasters, yet current laws provide few solutions to improve resilience.⁴⁵ The traditional models of trade have revealed their irrelevance to explain anything that matters in contemporary international trade and their ineffectiveness to be adapted to the realities of the digital economy.⁴⁶ To govern the complexities

⁴¹ The Preamble and Chapter I, UN, *Charter of the United Nations* (UN 1945).

⁴² Multilateral systems have achieved a 99% reduction in polio cases through the Global Polio Eradication Initiative, and conflict prevention through UN peacekeeping missions in Namibia and El Salvador, Global Polio Eradication Initiative, *History of Polio* (GPEI); United Nations, *UNTAG – United Nations Transition Assistance Group* (UN Peacekeeping).

⁴³ Georgios Dimitropoulos, (n. 27), 14-16; Ngaire Woods, 'Multilateralism in the Twenty-First Century' (2023) *Global Perspectives*, 2-5; David A Chikvaidze, 'Multilateralism: Its Past, Present and Future' (2020) 4(2) *CADMUS* 127; Peter Romaniuk, Alynna Lyon, Alistair Edgar, Kendall Stiles and Kurt Mills, 'Multilateralism in a Time of Crisis: Editor's Introduction to a Special Issue of Global Governance' (2024) 30 *Global Governance* 179, 179-186.

⁴⁴ UNCTAD, *Digital Economy Report 2021: Cross-border Data Flows and Development – For Whom the Data Flow* (United Nations 2021); OECD, *Digital Trade and Global Value Chains: Policy Implications* (OECD Publishing 2020), 34-42.

⁴⁵ World Economic Forum, *The Resilience Compass: Navigating Global Disruption* (World Economic Forum 2021); United Nations Economic and Social Commission for Asia and the Pacific (UN ESCAP), *Post-COVID Global Value Chains: Building Resilience and Sustainability* (United Nations 2022).

⁴⁶ Thomas Farole, *Special Economic Zones in Africa: Comparing Performance and Learning from Global Experiences* (World Bank 2011), 45-47.

of GVCs, trade rules must evolve to account for these interconnected challenges. Developing countries face barriers such as weak infrastructure and imbalanced agreements, making it harder to participate equitably in GVCs, and environmental and social issues like carbon emissions and labor rights also remain largely unaddressed.⁴⁷

In greater detail, traditional frameworks like the WTO have encountered difficulties in aligning with the rapid pace of technological revolution. Unclear classifications of digital products, such as data and cryptoassets, blur the line between goods and services, complicating the scope of existing rules.⁴⁸ The WTO's Work Programme on Electronic Commerce was launched in 1998 to explore and tackle the implications of digital trade, and this initiative was created mainly to assess if the existing agreements, such as the GATS and the GATT, were sufficient to govern digital transactions.⁴⁹ In essence, this delivered limited results and it maintained a moratorium on custom duties in electronic transmissions. Apart from the lack of consensus among its members and the incremental and non-binding measures it includes, the program's evolution has been slow and full of challenges; it has not sufficiently addressed critical issues like cybersecurity.

In 2024, the WTO's Joint Statement Initiative (JSI) on E-commerce finalized a "stabilized text" for a comprehensive agreement on digital trade. This development reflects the collective commitment to establish unified rules governing electronic commerce, addressing challenges in GVCs such as digital taxation, and intellectual property rights in the digital realm.⁵⁰ In reality, though, this has faced broad criticism for its limited inclusivity, with many developing countries and key WTO members excluded, such as India and South Africa.⁵¹ Additionally, its non-binding nature and ambiguities in key areas such as data sovereignty and privacy protection raise doubts about its effectiveness in addressing digital trade challenges.⁵² In the aggregate, WTO's principle

⁴⁷ Serdar Altay (n.6), 108-110; Michael Barnett (n. 6), 16-20; Christian Kreuder-Sonnen and Berthold Rittberger, (n. 37), 72-73.

⁴⁸ WTO, *Blockchain and DLT in Trade: Where Do We Stand?* (WTO, 2022).

⁴⁹ WTO, *Work Programme on Electronic Commerce* (1998) WT/L/274, paras 1.1–1.4.; WTO, *Services - The Challenges Ahead - Work Programme on Electronic Commerce* (1998).

⁵⁰ WTO, *Joint Statement Initiative on Electronic Commerce: Stabilized Text Achieved* (26 July 2024) WT/INF/ECOM/87; European Commission, *Commission welcomes text of global E-Commerce Agreement negotiated at the WTO* (26 July 2024).

⁵¹ International Institute for Sustainable Development, *What Developing Countries Should Know About Negotiations for a New Global Agreement on E-commerce* (IISD, 2021).

⁵² Privacy International, *Global Statement to Safeguard Data Protection and Privacy in the WTO Joint Statement Initiative on E-commerce* (Privacy International, November 2020), 3–7.

based approach has not demonstrated sufficient flexibility to reconcile with the new regulatory challenges such as supply chain resilience and crisis management to avoid disruptions in GVCs.

On the whole, efforts to improve global governance face obstacles from conflicting state interests and regional differences. Major powers like the United States, China, and Russia pursue competing strategies that hinder cooperation. Developing nations, particularly in the Global South, push for fair representation and reforms to institutions, like the IMF and World Bank. Meanwhile, countries in the Asia-Pacific, led by China and India, seek to balance regional collaboration with national sovereignty. These differing priorities often result in stalemates, such as during the WTO's Doha Round, where agricultural subsidies and market access caused disputes between developed and developing countries.⁵³ Dissatisfaction with traditional multilateral systems has led to alternative coalitions like BRICS and regional agreements, like Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP) and African Continental Free Trade Area (AfCFTA), which bypass global frameworks but fragment governance.⁵⁴ Lastly, efforts to reform institutions, like the IMF, face resistance from powerful nations, perpetuating imbalances and undermining collective action.⁵⁵

These dynamics heavily impact global trade governance in the sense that competing interests fuel trade tensions eroding trust in institutions like the WTO and disrupting global value chains. As multilateral rules weaken, countries turn to unilateral or bilateral measures, reducing global cooperation. This fragmentation and economic nationalism further destabilize trade governance. In this context, domestication of international economic law involves creating domestic rules that either replace or operate alongside international economic law rules.⁵⁶ This leads to a shift from multilateral trade frameworks to domestic regulation.⁵⁷ Domestication does not equate to

⁵³ WTO, *World Trade Report 2009: Trade Policy Commitments and Contingency Measures* (WTO, 2009) 50-51.

⁵⁴ Comprehensive and Progressive Agreement for Trans-Pacific Partnership (signed 8 March 2018, entered into force 30 December 2018) Chapter 28; UN Economic Commission for Africa (UNECA), *Assessing Regional Integration in Africa IX* (UNECA, 2019).

⁵⁵ Advanced economies maintain disproportionate voting power in the IMF, despite the growing contributions of emerging markets to global GDP, IMF, *IMF Members' Quotas and Voting Power, and IMF Board of Governors* (IMF, 2023).

⁵⁶ Georgios Dimitropoulos, *Law and Digital Globalization* (44 U. Pa. J. Int'l L. 41, 2022) 9094; Julien Chaisse and Georgios Dimitropoulos, (n. 6), 2-3, 7-9; Henry S Gao, *Data Sovereignty and Trade Agreements: Three Digital Kingdoms* (Singapore Management University, 2024), 213-239.

⁵⁷ Jarrod Hepburn, *The Past, Present, and Future of Domestic Investment Laws and International Economic Law* (2022) 21(3) *World Trade Review* 421, 22-23; Georgios Dimitropoulos, *National Sovereignty and International Investment Law: Sovereignty Reassertion and Prospects of Reform* (21 Journal of World Investment & Trade, 2020) 71, 72-73, 95.

economic isolationism. It preserves the principles of international trade, such as the free movement of goods and capital, while challenging the multilateral frameworks that defined liberal internationalism. This evolution signals a broader transition in global governance toward more flexible, state-driven approaches to economic collaboration.

Chapter 2. The Geoeconomic Digital Order and New Industrialism

Chapter 2 analyses the emergence of the Geoeconomic Digital Order. It explores the interplay between national security, economic policy, and technological sovereignty. That's why it assesses, at a national level, the competing governance models of China, the U.S., and the EU, as well as at an international, frameworks like digital economy agreements and the IPEF. The fragmentation of the global economy leads to the revival of economic statecraft tools like industrial policies which are reshaping GVCs.

Section 2.1 examines the shift from Liberal Internationalism to a Geoeconomic Digital Order. Global crises have pushed nations to integrate security into economic policymaking. Trade liberalization has slowed, with countries adopting policies to achieve technological self-reliance. These changes have disrupted supply chains, increased trade barriers, and led to diverging technological standards.

Section 2.2 examines the governance strategies of major powers. The Subsections contrast these models and underscore their influence on GVCs. China's state-controlled model emphasizes centralized initiatives like Made in China 2025 and Digital Silk Road, aiming for technological sovereignty through data localisation and export restrictions but causing inefficiencies and global disruptions. The U.S. adopts a mission-oriented approach, reshoring critical industries, restricting cross-border data flows and implementing export controls, as seen in the CHIPS Act, but these policies fragment global value chains and raise costs. The EU's Open Strategic Autonomy combines economic resilience with international cooperation, with policies such as the Critical Raw Materials Act and EU Chips Act aiming to reduce dependencies while strategically controlling data flows.

Section 2.3 introduces economic statecraft and new industrial policies. The resurgence of industrial policies, driven by the need for resilience in critical sectors and transition to green and

digital economies, has made them essential tools of economic statecraft. Subsection 2.3.1 discusses the Cornwall Consensus and its emphasis on sustainable, inclusive industrial policies. Subsection 2.3.2 examines the role of third generation digital plurilateral agreements like DEPA, IPEF, APEP and IMEC in guiding new industrial policies in order to address challenges related to supply chain resilience. The conclusion stresses how economic statecraft tools like new industrial policies and third generation digital plurilateral agreements shape the Geoeconomic Digital Order and reshape GVCs by fostering regional collaboration and reducing dependencies.

2.1 The transition to a Geoeconomic Digital Order

After decades of reaping the benefits of globalization, Liberal Internationalism is giving way to a system shaped by geoeconomics. Trade tensions, such as the U.S.-China conflict, and crises, like the financial crash in 2008 and the COVID-19 pandemic, have accelerated this change. Nations are increasingly prioritizing national security in economic policies aiming to secure production, protect industries and reduce dependencies. These changes mark a transition to a Geoeconomic Digital Order which reflects an increasing “securisation of economic policy and economisation of strategic policy.”⁵⁸

As discussed above, global value chains expanded under the Liberal Internationalism through trade liberalization and multilateral frameworks like GATT and the WTO. Yet, the transition to geoeconomics has led to their restructuring. Since the global financial crisis, globalization has slowed,⁵⁹ with trade and capital flows expanding at a reduced pace; banks cut back on cross-border lending to strengthen capital buffers,⁶⁰ and, correspondingly, trade slowed due to lower demand as China began producing more intermediate goods domestically.⁶¹ World merchandise trade grew by an average of 2.7% annually between 2008 and 2018, compared to

⁵⁸ Anthea Roberts and Henrique Choer Moraes and Victor Ferguson, *Towards A Geoeconomic Order in International Trade and Investment* (Journal of International Economic Law, Volume 22, Issue 4, December 2019) citing Michael Wesley, *Australia and the Rise of Geoeconomics* (29 Centre of Gravity 1, 2016), 4.

⁵⁹ Georgios Dimitropoulos, (n.27), 57.

⁶⁰ UNCTAD, *World Investment Report 2020: International Production Beyond the Pandemic* (UNCTAD, 2020).

⁶¹ Cristina Constantinescu et al, *The Global Trade Slowdown: Cyclical or Structural?* (2020) 34(1) *The World Bank Economic Review*, 121–142.

7% annually from 1987 to 2007.⁶² In contrast, services trade grew by 6% annually between 2005 and 2019, driven by digital advancements.⁶³

At odds with digital globalization that transformed trade and innovation creating monopolistic practices, digital sovereignty became a component of the world order driving nations to develop domestic strategies to control data flows, protect critical technology and secure digital infrastructure while moving away from global agreements.⁶⁴ Differing from the open markets and global trade networks, industrial policies, like the European “Chips Act” and China’s “Made in China 2025,” exemplify this transition. In addition, the rivalries escalate through high-tech decoupling between the US and China, with countries striving for self-sufficiency in critical sectors like semiconductors. Nations with strong manufacturing sectors like Vietnam and Mexico attract companies seeking alternatives to Chinese production,⁶⁵ emerging markets face pressure to choose between US and Chinese technology ecosystems,⁶⁶ and regional blocs, like the EU, work to strengthen their technological independence on chip production and green technologies.

Therefore, contrary to the trade liberalization, the global economy has gradually shown signs of geoeconomic fragmentation dividing global governance into competing blocs driven by security concerns, economic rivalries and domestic policy goals.⁶⁷ Not only does fragmentation disrupt regional supply chains by increasing tariffs, export controls, and domestic production policies but it also raises costs, causes delays, and weakens integration. This process disrupts traditional flows of goods, capital, and technology as well as trade becomes more restricted as countries impose barriers like tariffs, subsidies, and export controls to protect key industries. This fragmented environment also accelerates the divergence of technological standards and governance models, setting the stage for competing frameworks in the Geoeconomic Digital Order.

⁶² WTO, *World Trade Report 2019: The Future of Services Trade* (WTO 2019).

⁶³ UNCTAD, *Exploring New Industrial Policies for Sustainable Development* (2018); UNCTAD, *Digital Economy Report 2021: Cross-Border Data Flows and Development* (UNCTAD, 2021).

⁶⁴ Anu Bradford, *Digital Empires: The Global Battle to Regulate Technology* (Oxford University Press 2023).

⁶⁵ Aranca, *Manufacturing on the Move: Reshoring Trends in Mexico and Vietnam*; UploadVR (7 December 2024).

⁶⁶ Anu Bradford, (n. 64).

⁶⁷ Shekhar Aiyar et al., *Geo-economic Fragmentation and the Future of Multilateralism* (International Monetary Fund 2023) 6-11.

2.2 Competing Governance Models in the Digital Era

With the onset of the Geoeconomic Digital Order, states, companies, and social groups are repositioning themselves strategically. Countries take different approaches to strengthen economic security and their strategies vary due to unique political, economic, and external challenges. Hence, each nation tailors its policies to address specific needs, showing that no single solution fits all situations. Understanding the governance models of China, the US and the EU is essential in order to assess how they shape the Geoeconomic Digital Order. These superpowers drive global trade, investment flows, and industrial policies and their strategies directly impact the functioning of global value chains.⁶⁸ As a matter of fact, China's governance decisions challenge established frameworks and introduce alternative approaches to global trade and production whereas the U.S. influences international systems through economic and political decisions that often reshape alliances. The EU aligns its policies with both economic and geopolitical interests, creating frameworks that influence cross-border cooperation.

As the geoeconomic competition is changing international alliances, the global order is transitioning into a more conflict-driven period, marked by tensions between established powers and emerging challengers. Examining the governance models of China, the U.S. and the EU reveals how their strategies define global economic and political interactions.

2.2.1 China's State-Controlled Model

During the Liberal Internationalism, China embraced trade liberalization and became a manufacturing hub integrating into global markets under multilateral rules. By joining the WTO, it expanded its role in global value chains (GVCs).⁶⁹ By 2010, China accounted for nearly 20% of global manufacturing output, assembling over 50% of the world's mobile phones and 90% of its laptops, solidifying its reputation as the "factory of the world."⁷⁰ Today, China is a tech-enabled autocracy that drives state-led initiatives to control supply chains, secure

⁶⁸ Anu Bradford, (n. 64).

⁶⁹ China joined the WTO in December 2001 and agreed to reduce its average tariff rate from 15% in 2001 to 9.4% in 2005. Between 2001 and 2010, China's share of global exports rose from 4% to 10%, WTO, *WTO Accession of China* accessed 25 November 2024; World Trade Organization, 'China and the WTO' (WTO, December 2024).

⁷⁰ UNIDO, *Statistical Indicators of World Manufacturing Output* (UNIDO, 2011); OECD, *Measuring Trade in Value Added: An OECD-WTO Joint Initiative* (OECD Publishing, 2013).

technological self-reliance, and extend influence through projects like Made in China 2025 and the Belt and Road Initiative (BRI). This marks a change in its engagement with global markets.

China first established itself as a digital powerhouse through state-led investments.⁷¹ In spite of the fact that in the 1990s it embraced trade liberalization measures to join the WTO, under President Xi Jinping, it adopted a "top-level design" approach emphasizing centralized control.⁷² Operating under its state capitalism model, State-Owned Enterprises (SOEs) and Sovereign Wealth Funds (SWFs) channel resources into critical sectors, such as semiconductors and renewable energy,⁷³ albeit they operate inefficiently, lacking the innovation and agility to compete globally.⁷⁴ The 2020 Foreign Investment Law is part of China's Foreign Direct Investment (FDI) framework, which promotes FDI in targeted sectors while the National Security Review and the Negative Market Access List restrict access to areas critical to national security, such as infrastructure, energy, and key technologies.⁷⁵ These protective measures limit foreign competition, in stark contrast to the free-market liberalism of minimal government interference. In this context, China's approach contrasts with the U.S.'s CHIPS Act, which focuses on incentivizing private sector investments in semiconductor manufacturing. The Communist Party oversees economic and technological strategies through commissions, like the Central Commission on Financial and Economic Affairs.⁷⁶

China's quest for technological self-reliance is epitomized by the Made in China 2025 initiative, launched in 2015.⁷⁷ The plan seeks to transition China from a low-cost manufacturing hub to a

⁷¹ Alex He, *China's Techno-Industrial Development: A Case Study of the Semiconductor Industry* (CIGI Papers No. 252, Centre for International Governance Innovation 2021), 26-29.

⁷² Alex He, (n. 71), 5-7.

⁷³ Mechanisms like "golden shares" grant the government influence over corporate decisions, ensuring alignment with national interests, Curtis J Milhaupt and Wentong Zheng, *Beyond Ownership: State Capitalism and the Chinese Firm* (2015) 103 *Georgetown Law Journal* 665.

⁷⁴ SOEs in China are, on average, 20-30% less productive than private firms due to bureaucratic inefficiencies and lack of competitive pressure, World Bank, *China 2030: Building a Modern, Harmonious, and Creative Society* (World Bank, 2020).

⁷⁵ Sergio Mariotti, "Open Strategic Autonomy" as an Industrial Policy Compass for the EU Competitiveness and Growth: The Good, the Bad, or the Ugly? (2024) *Journal of Industrial and Business Economics*, 12-14.

⁷⁶ Milan Babic et al, *The Political Economy of Geoeconomics: Europe in a Changing World* (International Political Economy Series, Springer 2023), 9-10.

⁷⁷ Liberal International, *China's Normative Challenge to the Global Governance System* (2024) 9-10; State Council of China, *Decision on Accelerating the Cultivation and Development of Strategic Emerging Industries* (2010); *Made in China 2025: Transforming China's Manufacturing Industry* (CSIS, 2015; European Union Chamber of Commerce in China, *China Manufacturing 2025: Putting Industrial Policy Ahead of Market Forces* (2017); Mercator Institute for China Studies (MERICS), *Made in China 2025* (2016).

global leader in advanced sectors like semiconductors and robotics.⁷⁸ By 2025, it aims for 70% self-sufficiency in key electronic components and materials.⁷⁹ While this is mainly based on government policies, including subsidies and investments, such as the China's Integrated Circuit Industry Investment Fund,⁸⁰ it also seeks to attract private sector participation in digital technologies, encouraging companies to develop innovations in artificial intelligence, smart manufacturing and advanced electronics.⁸¹ This dual approach has drawn criticism from countries like the EU, Japan, and the United States for distorting global competition. With the aim of addressing trade imbalances, the EU introduced the Anti-Subsidy Regulation to counteract the advantages these subsidies provide to Chinese firms,⁸² while the United States imposed tariffs on Chinese goods to protect domestic industries and challenge China's approach.⁸³

In response to these external pressures, China introduced the Dual Circulation Strategy in 2020 in order to boost domestic industries while selectively engaging in global trade.⁸⁴ In fact, automakers in China now produce more components locally, reducing dependency on international suppliers.⁸⁵ The strategy, however, raises questions about long-term sustainability.⁸⁶

In recent years, China has selectively opened parts of its economy while retaining control over strategic sectors. It has relaxed foreign investment restrictions in industries such as finance and automotive manufacturing, enabling international firms, like Tesla, to operate more freely and

⁷⁸ Mercator Institute for China Studies, *Made in China 2025: The Making of a High-Tech Superpower and the Consequences for Industrial Countries* (MERICS, 2020) 6.

⁷⁹ China is localizing semiconductor production and building independent ecosystems but due to systemic inefficiencies such as bureaucratic control, weak academia-industry links, and talent shortages the progress is still limited. Alex He, (n. 71), 10-13.

⁸⁰ *The Diplomat*, 'China's Big Fund 3.0: Xi's Boldest Gamble Yet for Chip Supremacy' (6 June 2024).

⁸¹ Major tech firms like Baidu, Tencent, and Alibaba have invested in AI innovations. In the semiconductor sector, firms such as SMIC and HiSilicon have developed advanced chips. Startups like SenseTime and Megvii have flourished in AI fields, boosted by increased venture capital, Mercator Institute for China Studies, 'New MERICS Study: Made in China 2025' (MERICS, 5 December 2018).

⁸² European Commission, 'Anti-Subsidy Measures' (European Commission, 2024).

⁸³ USTR, *Findings of the Investigation into China's Acts, Policies, and Practices Related to Technology Transfer, Intellectual Property, and Innovation under Section 301 of the Trade Act of 1974* (USTR, 2018).

⁸⁴ Alex He, (n. 71), 26-29.

⁸⁵ Automobility, *The Path to Globalization of China's Automotive Industry 2024* (Automobility, 2024).

⁸⁶ The emphasis on domestic innovation requires substantial reforms in education, intellectual property rights, and market dynamics- complex and time-consuming processes. Environmental sustainability further complicates the strategy, as China's reliance on coal and other non-renewable resources conflicts with its industrial growth objectives, CSIS, *China's Dual Circulation Economic Strategy* (CSIS, 2021) accessed 10 December 2024; American Chamber of Commerce Shanghai, *What is China's Dual Circulation Strategy?* (AmCham Shanghai, 2023).

drive domestic competition.⁸⁷ Participation in multilateral trade agreements, including the Regional Comprehensive Economic Partnership (RCEP), reflects its interest in global economic collaboration.⁸⁸ These measures balance China's focus on state-led initiatives with efforts to remain globally competitive.

By weaponizing trade dependencies, China exerts economic pressure on other nations. Recent restrictions on critical materials like gallium and germanium, which are vital for semiconductors, renewable energy, and advanced technologies, reveal a calculated strategy to gain an edge in global industries, even though these are framed as “protecting national security”.⁸⁹ These strategies disrupt GVCs by causing supply shortages and price volatility in countries reliant on these inputs.⁹⁰ Subsequent to the imposed tariffs on approximately \$360 billion worth of Chinese goods between 2018 and 2020, by the US, in retaliation, China levied tariffs on \$110 billion worth of U.S. imports.⁹¹ On a broader scale, China’s control over materials critical to renewable energy, such as lithium and cobalt, complicates the global shift to sustainable energy systems, potentially slowing progress in decarbonization. Controlling these resources gives China leverage in negotiations and strengthens its position in the global technology race. For this reason, nations are building trade alliances, like the U.S.-led IPEF Agreement on Supply Chain Resilience, to limit China’s influence. On the whole, this U.S.- China trade war exemplifies that China, instead of fostering mutual growth, seeks greater control over key sectors and resources.

Lastly, China enforces technological sovereignty bolstering domestic firms and restricting foreign platforms through policies like the Cybersecurity Law (2017), the Data Security Law

⁸⁷ In the automotive sector, it phased out foreign ownership limits by 2022, allowing companies, like Tesla, to establish the Shanghai Gigafactory as a wholly-owned subsidiary. Similarly, in finance, China lifted foreign ownership caps in securities, fund management, and life insurance in 2020. Global firms, like JPMorgan, Goldman Sachs, and BlackRock expanded operations, Reuters, 'Tesla Gets Green Light for \$5 Billion Gigafactory in China' (10 July 2018); 'China to Remove Foreign Investment Limit on Passenger Car Manufacturing' (CNBC, 27 December 2021); 'Goldman Sachs Shifts to Full Ownership of China Securities Joint Venture' (CNBC, 8 December 2020); 'BlackRock Wins Approval to Start Mutual Funds Business in China' (International Finance, 30 August 2021).

⁸⁸ 'How Has the RCEP Benefited China? Findings from the Initial Months of Operation' (China Briefing, 17 June 2022).

⁸⁹ Reuters, *China Bans Exports of Gallium and Germanium in Response to U.S. Restrictions* (Reuters, 3 December 2024).

⁹⁰ *ibid.*

⁹¹ Office of the United States Trade Representative (USTR), *Economic and Trade Agreement Between the United States of America and the People's Republic of China: Phase One Agreement* (USTR, 2020).

(2021), and the Personal Information Protection Law (2021).⁹² By prioritising state-controlled technologies over global interoperability standards, China disrupts efforts to build a unified global digital community.⁹³ This creates regional dependencies and reduces global cooperation. China's pursuit of digital sovereignty mirrors trends in the EU, where initiatives, like the General Data Protection Regulation (GDPR), seek to establish control over data flows, though with a focus on privacy rather than state dominance.⁹⁴ China's online protectionism aligns with the broader Digital Silk Road (DSR) initiative under the BRI.⁹⁵ Still, debt from Belt and Road Initiative projects has risen sharply with several participating countries struggling to repay loans.⁹⁶

2.2.2 U.S.'s Mission-Oriented Model

After World War II, the U.S. advanced a liberal order promoting free markets and minimal state intervention.⁹⁷ Nonetheless, by 2017, the U.S.-China trade war marked a departure from this laissez-faire approach as economic security returned as a major policy concern.⁹⁸ The U.S. has shifted from its traditional market-driven liberalism to adopt a mission-oriented approach,

⁹² Also, there are initiatives like the "International Strategy of Cooperation on Cyberspace" and the "Global Data Security Initiative" and the "Great Firewall," which filters content and restricts data at key chokepoints, Matthew S Erie and Thomas Streinz, 'The Beijing Effect: China's Digital Silk Road as Transnational Data Governance' (2021) 54(1) *NYU Journal of International Law and Politics* 1, 25-35, 41-42; Fredrik Erixon and Hosuk Lee-Makiyama, *Digital Authoritarianism: Human Rights, Geopolitics and Commerce* (ECIPE Occasional Paper No. 5/2011, European Centre for International Political Economy, Brussels 2011), 14-15.

⁹³ *The Belt and Road Initiative* (Eng.yidaiyilu.gov.cn); European Bank for Reconstruction and Development, *Belt and Road Initiative: Overview*; International Institute for Strategic Studies, *China's Evolving Belt and Road Initiative in Southeast Asia* (July 2024); International Institute for Strategic Studies, *Digital Silk Road: Introduction* (December 2022).

⁹⁴ Unlike the EU's GDPR, which sets global standards through corporate adoption, China shapes data governance by promoting "data sovereignty" in international forums. Matthew S Erie et al, (n. 92), 14-24.

⁹⁵ Under the DSR, Huawei has built data centres in Kenya and Pakistan, raising concerns over data security and the potential for digital surveillance, Matthew S Erie et al (n. 92); Xiangming Chen et al, 'China and Europe: Reconnecting Across a New Silk Road' (2015) 34(3) *Eurasian Geography and Economics* 235; Richard Ghiasy et al, *The 21st Century Maritime Silk Road: Security Implications and Ways Forward for the EU* (Stockholm International Peace Research Institute 2018) 12.

⁹⁶ Pakistan's engagement with the BRI resulted in substantial debt due to high-cost energy projects, leading to economic strain and unaffordable electricity prices. Wall Street Journal, *Pakistan's Reliance on Chinese-Built Power Plants Is Strangling Its Economy* (Wall Street Journal, 3 December 2024).

⁹⁷ Anthea Roberts et al., (n. 58), 7-11.

⁹⁸ US Department of State, *The Administration's Approach to the People's Republic of China* (2022); Xinquan Tu et al, *US-China Trade War: Is Winter Coming for Global Trade?* (2020) *Journal of Chinese Political Science* 25, 199-240, 215-220; Anthea Roberts et al. (n. 58), 11-14.

strategically intervening to safeguard domestic industries and reinforce national autonomy.⁹⁹ This shift reflects growing concerns over the competitive and geopolitical challenges posed by China. Unlike the laissez-faire model that relies on minimal state involvement, the mission-oriented approach emphasizes targeted government action to achieve specific economic, technological, and security objectives. This includes directing investments, fostering innovation, and creating demand for solutions that address critical challenges, such as climate change, technological leadership, and supply chain resilience.¹⁰⁰ This approach reflects a strategic effort to secure critical industries and reduce vulnerability to external economic and geopolitical threats. With this aim, the Committee on Foreign Investment in the United States (CFIUS), which was established in 1975, has evolved into a key tool for reviewing and blocking foreign investments that could compromise national security.

The U.S.-China trade war exemplifies the mission-oriented model, using tariffs and export controls to protect key industries and limit reliance on foreign adversaries. In order to reduce reliance on foreign supply chains, the Trump administration introduced tariffs, tightened export controls, and limited China's access to U.S. technologies.¹⁰¹ The Biden administration continued these efforts, viewing China as a strategic competitor.¹⁰² Such policies encouraged reshoring advanced manufacturing and strengthening domestic semiconductor production.¹⁰³ Investments from companies like Samsung and Intel increased, supported by tax incentives and government funding.¹⁰⁴ Under both the Trump and Biden administrations, the scope of CFIUS's activities expanded, with particular attention given to investments linked to China and policies were

⁹⁹ M Mazzucato et al, 'Mission-oriented industrial strategy: global insights' (2024), 20-22; M Mazzucato, 'Mission-oriented innovation policies: challenges and opportunities' (2018) 27(5) *Industrial and Corporate Change* 803, 804-810.

¹⁰⁰ M Mazzucato et al, (n. 99), 14-19.

¹⁰¹ The Trump administration imposed tariffs on over \$360 billion worth of Chinese imports and it expanded export controls, Politico, 'Trump Administration Restricts Tech Exports to China Amid Huawei Blacklisting' (23 May 2019); Heritage Foundation, 'Bring Back Trump's China Policy'.

¹⁰² The administration's 2022 National Defense Strategy identified China as the "most consequential strategic competitor," World Scientific, 'The Quadrilateral Security Dialogue (Quad) and Its Role in Countering China's Assertiveness' (2021).

¹⁰³ Reuters, 'Biden Policies Attract \$1 Trillion in US Economic Investments, White House Says' (Reuters, 25 November 2024).

¹⁰⁴ Under CHIPS and Science Act of 2022, Samsung Electronics was set to receive up to \$6.4 billion in direct funding to expand its semiconductor manufacturing facilities in Texas, with plans to invest more than \$40 billion in the region, creating over 20,000 jobs. Similarly, Intel Corporation has been awarded up to \$7.865 billion, Department of Commerce, 'Biden-Harris Administration Announces Preliminary Terms for Samsung Semiconductor Expansion in Texas' (April 2024); U.S. Department of Commerce, 'Biden-Harris Administration Announces CHIPS Incentives Award for Intel's U.S. Manufacturing Facilities' (November 2024).

introduced to ensure that foreign entities could not exploit FDI to gain access to sensitive technologies or infrastructure.¹⁰⁵ The shift away from traditional free trade agreements has reshaped global value chains (GVCs), emphasizing on localized production and reduced dependence on China.

In the border realm of the Geoeconomic Digital Order, the U.S. is embracing a goal-focused approach on plurilateral trade agreements and industrial revitalization to protect and strengthen its industrial base from China's competitive influence. In that sense, National Security Advisor Jake Sullivan emphasized the integration of economic and national security goals.¹⁰⁶ Despite the evident benefits of this neo-mercantilist approach, this endangers global trade efficiency by increasing costs as well as it risks escalating tensions, discouraging investment given that supply chains are becoming more regional.¹⁰⁷

The U.S. policies address vulnerabilities in critical areas such as semiconductors, manufacturing, and advanced technologies enhancing resilience by reshoring production, diversifying suppliers, and investing in local industries.¹⁰⁸ In 2022, the National Security Strategy (NSS) integrated industrial policy with public investment, targeting critical technologies.¹⁰⁹ It framed China as a strategic competitor and promoted measures such as stricter trade and intellectual property rules, enhanced export controls, and partnerships on data governance with allies. In terms of critical technologies, the National Strategy for Advanced Manufacturing (NSAM) outlined a plan to boost U.S. manufacturing through reshoring, leveraging subsidies, and fostering a skilled workforce through 37 programs over four years. This strategy aims to boost manufacturing's

¹⁰⁵ The Trump administration signed the FIRRMA in 2018, which significantly broadened CFIUS's authority including critical technologies, infrastructure, and data-related sectors that could pose a national security risk, particularly from China. Under the Biden administration, in 2021, CFIUS launched a formal investigation into Huawei's investments in U.S. telecommunications infrastructure, and also intervened in several Chinese investments in the U.S. tech sector to protect critical infrastructure and intellectual property, (FIRRMA, Pub. L. No. 115-232, 132 Stat. 2208).

¹⁰⁶ Jake Sullivan, 'Remarks by National Security Advisor Jake Sullivan on Renewing American Economic Leadership at the Brookings Institution' (27 April 2023); Jake Sullivan, 'Remarks by National Security Advisor Jake Sullivan at the Special Competitive Studies Project Global Emerging Technologies Summit' (16 September 2022).

¹⁰⁷ While the U.S. Act emphasizes reshoring and reducing dependency on China., the EU Act promotes collaboration among member states.

¹⁰⁸ US leads in semiconductor design and equipment, it has been hitherto trailing Korea and Taiwan in advanced production capacity, Jaichul Heo, *Geopolitical Risk in the Era of U.S.-China Strategic Competition and Economic Security* (KIEP, 2022), 2-3.

¹⁰⁹ Biden-Harris Administration, *National Security Strategy* (White House, October 2022), 6, 10-12.

GDP contribution, which is currently at 11%, and address a \$197 billion trade deficit in advanced technology products.¹¹⁰ Through the National Security Strategy and the National Strategy for Advanced Manufacturing, the U.S. government has integrated industrial policy and public investment to target specific objectives, including the development of advanced technologies and the bolstering of domestic manufacturing. These strategies embody the mission-oriented approach by focusing on measurable outcomes, such as closing the trade deficit in advanced technology products.¹¹¹

To a greater extent, NSAM strategy may result in legislation akin to the CHIPS and Science Act of 2022, which allocated \$50.3 billion to increase U.S. semiconductor production, aiming to grow its global share from 2% to 10%.¹¹² A related initiative, the Chip 4 Alliance, uniting the U.S., Japan, South Korea, and Taiwan, strengthened chip production while excluding Europe.¹¹³ Despite the efficiency, these policies are based on export controls, tariffs, and regional alliances that fragment global supply chains. Thus, companies face higher costs as they restructure operations to meet new requirements. Above all, they are driving a clear bifurcation, with nations aligning either with the U.S. and its allies or with China, creating distinct regional blocs. This divide disrupts the flow of goods, increases production costs, and limits collaboration in innovation.¹¹⁴

Since 2022, the U.S. has been leveraging export controls, restrictions on cross-border data flows and sanctions to limit China's technological progress,¹¹⁵ and it is working with allies to restrict China's role in critical infrastructure. Laws like the Foreign Investment Risk Review

¹¹⁰ National Science and Technology Council, Committee on Technology, Subcommittee on Advanced Manufacturing, *National Strategy for Advanced Manufacturing* (October 2022).

¹¹¹ The U.S. Census Bureau and the Bureau of Economic Analysis reported that the goods and services trade deficit reached \$70.4 billion in August 2024, U.S. Census Bureau and U.S. Bureau of Economic Analysis, "U.S. International Trade in Goods and Services, August 2024".

¹¹² *CHIPS and Science Act of 2022*, Pub L No 117-167, 136 Stat 1366; White House, *FACT SHEET: CHIPS and Science Act Will Lower Costs, Create Jobs, Strengthen Supply Chains, and Counter China* (9 August 2022); MA Peters, *Semiconductors, Geopolitics and Technological Rivalry: The US CHIPS & Science Act, 2022* (2022) *Educational Philosophy and Theory*.

¹¹³ Andrew Johnston and Robert Huggins, *Europe's Semiconductor Industry at a Crossroads: Industrial Policy and Regional Clusters* (2023) *European Urban and Regional Studies*.

¹¹⁴ Diverging regulatory frameworks, particularly around data, create distinct "data realms" that can fragment international trade and cooperation, Aaronson SA and Leblond P, 'Another Digital Divide: The Rise of Data Realms and Its Implications for the WTO' (2018) 21 *Journal of International Economic Law* 245.

¹¹⁵ US Department of Commerce, *Commerce Department Further Restricts Huawei Access to U.S. Technology and Software Through Entity List* (17 August 2020); Norton Rose Fulbright, *US Expands Existing Restrictions on Exports to Huawei and Broadens Entity List Scope* (20 August 2020).

Modernization Act (FIRRMA) and the Export Control Reform Act (ECRA) have expanded oversight of foreign investments and restricted exports in critical sectors like AI, semiconductors, and 5G. Cross-border data flows, once a hallmark of global economic integration, are now being increasingly restricted due to concerns over national security and technological sovereignty.¹¹⁶ The U.S. has implemented tighter controls on data transfers, particularly with regard to China, citing risks associated with intellectual property theft, espionage, and the misuse of advanced technologies.¹¹⁷ Measures, such as the Clean Network initiative, and export controls on sensitive technologies have limited China's access to critical data and infrastructure.¹¹⁸ While these empower the U.S. technological supremacy, they risk escalating tensions with China and creating inefficiencies in global technology supply chains. Indeed, in December 2024, the U.S.-China trade war escalated further. The Biden administration imposed stricter controls on AI chip exports to China, targeting its access to advanced technologies critical for economic and military development. In retaliation, as discussed above, China included restricted exports of key minerals like gallium, germanium, and antimony,¹¹⁹ while pressuring multinational firms operating in the region.¹²⁰

The intensifying technological rivalry between the U.S. and China is transforming global trade, as countries diversify supply chains to protect their economic and security interests. The U.S. approach under President-elect Trump is set to remain mission-driven with a clear focus on protecting U.S. industries. He continues to criticize multilateral institutions like the EU and NATO, which he has previously dismissed as “obsolete.”¹²¹ With control over both chambers of

¹¹⁶ Governments at various levels impose restrictions on cross-border data transfers, which may include outright bans or conditional allowances, often justified by concerns such as national security, cybersecurity, data protection, privacy, or to advance 'digital protectionism.' Susan Aaronson, 'What Are We Talking About Digital Protectionism?' (2019) 18(4) *World Trade Review* 541.

¹¹⁷ Since 2018, CLOUD Act and recent executive orders limiting bulk data sales, reflect growing concerns about foreign access to sensitive data, US Department of Commerce, 'Commerce Adds China's SMIC to Entity List, Restricting Access to Key Enabling US Technology' (US Department of Commerce, 18 December 2020); Theodore Christakis, 'Data Free Flow with Trust: Current Landscape, Challenges and Opportunities' (2024) *Journal of Cyber Policy*.

¹¹⁸ Office of the United States Trade Representative, 'USTR Statement on WTO E-Commerce Negotiations' (October 2023); US Department of State, 'Announcing the Expansion of the Clean Network to Safeguard America's Assets' (US Department of State, 5 August 2020); US Department of State, *The Clean Network* (2020).

¹¹⁹ Reuters, 'China Bans Exports of Gallium, Germanium, and Antimony to U.S.' (Reuters, 3 December 2024).

¹²⁰ Reuters, 'China Investigates Nvidia Over Suspected Violation of Antimonopoly Law' (Reuters, 9 December 2024).

¹²¹ Trump later revised this stance, stating in 2017 that NATO was "no longer obsolete,". Regarding the EU, Trump labeled it a "foe" in 2018, citing trade practices he viewed as unfair to the United States, BBC News, 'Donald Trump

Congress, and a conservative majority in the Supreme Court, President Trump possesses the political capital necessary to advance his agenda.¹²² As this is his final term, it is anticipated that Trump's policies will become more assertive, fulfilling his campaign promises.¹²³ Trump has already announced plans to impose a 10% tariff on Chinese imports and this declaration signals an escalation in the trade war, further straining economic relations and deepening global divides.¹²⁴

2.2.3 EU's Model of Open Strategic Autonomy

In global debates about the US-China disputes and the so-called new Cold War, Europe often receives little attention as a major player despite being the world's largest unified economic bloc. This perception stems from its historical role as a promoter of normative values in foreign policies within the Liberal International Order.¹²⁵ Led by the United States, the Liberal Internationalism depended on support from European partners for its survival because of the EU's shared institutions and multilateralism. While multilateralism and global cooperation still remain key, the EU has transitioned from a human-rights-centered model to a geoeconomic system of open strategic autonomy (OSA).¹²⁶ The EU's external action has become more inward-looking and strategically driven, interlacing economic interests with security strategies.¹²⁷

Historically, in the 1980s and 1990s, political figures in the EU, such as Margaret Thatcher, embraced liberalization, reducing government intervention.¹²⁸ It was during that era that the

Says NATO Is Obsolete but Still "Very Important" (16 January 2017); BBC News, 'Donald Trump: NATO "No Longer Obsolete"' (13 April 2017); Politico, 'Donald Trump: EU Is a "Foe" on Trade' (15 July 2018).

¹²² This consolidation of power, often referred to as a "governing trifecta," enables the president's party to implement its policies with minimal opposition; BBC News, 'Trump and a Governing Trifecta: What This Means for Policy'.

¹²³ Wall Street Journal, 'Donald Trump's Second-Term Plans: A More Assertive Approach to Policy'.

¹²⁴ The Australian, 'Trump Drops Tariff Bombshell on China, Canada, and Mexico' (The Australian, 7 December 2024).

¹²⁵ The EU wields global normative power by exporting digital regulations that shape the digital economy, with many countries adopting these standards for their extraterritorial impact and ethical alignment, Anu Bradford, (n. 64).

¹²⁶ The concept of strategic autonomy first appeared in an official EU document in the December 2013 Council Conclusions, European Council, *Council Conclusions* (19–20 December 2013); European Commission, *Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions: Trade Policy Review – An Open, Sustainable and Assertive Trade Policy* COM (2021) 66 final, 18 February 2021; European Commission, *2023 Strategic Foresight Report: Sustainability and Wellbeing at the Heart of Europe's Open Strategic Autonomy* (Press Release, Brussels, 6 July 2023), Wolfgang Weiß and Cornelia Furculita, *Open Strategic Autonomy in EU Trade Policy* (CUP 2024) 36-47.

¹²⁷ Tobias Gehrke, 'EU Open Strategic Autonomy and the Trappings of Geoeconomics' (2022) 27 EFAR SI 61, 75-78.

¹²⁸ BBC News, 'Big Bang 30 Years On: How a Revolution Transformed the City of London' (BBC, 27 October 2016).

internal market of the EU was established. For a long time, the EU policies supported values, like human rights and environmental sustainability, but avoided protecting key industries, fearing it would harm competition.¹²⁹

By the 2010s, the vulnerability of the liberal international order was revealed and it prompted several responses within the EU. According to Vlaskamp, the Europeanist response emphasized EU-led solutions to reduce dependence on external powers.¹³⁰ It integrated the concept of OSA, which builds on the concept of traditional strategic autonomy by integrating economic openness with self-reliance in critical areas.¹³¹

Digital sovereignty is a core element of OSA as it ensures the EU can control its digital infrastructure, protect data, and reduce dependency on foreign technologies. The European Union uses GVC policies to advance digital sovereignty through regulations like the DMA and DSA.¹³² Besides, initiatives, like the GDPR, established Europe as a leader in safeguarding personal data, setting global standards.¹³³ However, the focus has expanded beyond privacy to encompass the economic and strategic implications of data. Ensuring control over data flows, reducing reliance on foreign cloud services, and supporting European digital infrastructure are now seen as essential to protecting critical industries and fostering technological resilience.¹³⁴ This is also evidenced by key CJEU rulings.¹³⁵

¹²⁹ G8 Summit, *Growth and Responsibility in the World Economy: Summit Declaration* (Heiligendamm, 7 June 2007); Martijn C. Vlaskamp, 'Looking for Resource Sovereignty in a Fragmenting Global Order: The EU's Response to Critical Raw Materials Challenges' in Oriol Costa, Eduard Soler i Lecha and José Ignacio Torreblanca (eds), *EU Foreign Policy in a Fragmenting International Order* (Springer 2025), 155; Tobias Gehrke, (n. 127) 64-65.

¹³⁰ Martijn C. Vlaskamp, (n.129).

¹³¹ The phrase "*as open as possible, as close as necessary*" captures the EU's approach to OSA. Supporters advocate for strategic state intervention to balance openness and autonomy, seeing these as complementary in the long term. Critics warn that OSA risks creating an "autonomy trap." Pursuing self-sufficiency could lead to economic decoupling, weakening EU influence and partnerships with allies. Skeptics question the coherence of combining openness and autonomy. De-risking strategies are seen as selective decoupling, allowing varied policies without clear long-term direction, Sergio Mariotti, (n. 75), 3-4; European Commission. (2020). A renewed trade policy for a stronger Europe. Consultation Note, 16.

¹³² Formally known as Regulation (EU) 2022/2065, the DSA, Regulation (EU) 2022/1925, the DMA, European Commission, *Digital Services Act Package*; European Commission, *Digital Markets Act*.

¹³³ Theodore Christakis, (n. 117).

¹³⁴ European Commission, *Shaping Europe's Digital Future*.

¹³⁵ Case C-311/18 *Data Protection Commissioner v Facebook Ireland Ltd and Maximillian Schrems* [2020] ECLI:EU:C:2020:559; Case C-498/16 *Maximillian Schrems v Facebook Ireland Ltd* [2018] ECLI:EU:C:2018:37.

While strategic autonomy emphasized independence in defense and security, OSA expands this approach to include economic, technological, and industrial resilience. In 2008, given that the global financial crisis revived interest in reindustrialization, the European Commission launched the Raw Materials Initiative to reduce EU dependency by promoting global cooperation, and dialogue with resource-rich countries like China and Russia.¹³⁶ A key outcome was the creation of a critical raw materials list in 2011, which has grown from 14 materials to 36 in 2023, reflecting the EU's expanding resource needs.

The COVID-19 pandemic, in 2020, and Russia's invasion of Ukraine in 2022 intensified existing geopolitical challenges indicating EU's vulnerabilities in supply chains for energy, technology, and raw materials and driving efforts to build resilience.¹³⁷ Hence, measures, like the 2020 Action Plan on Critical Raw Materials, underscore the EU's commitment to resilient and secure supply chains for its green and digital transitions.¹³⁸ By promoting sustainability, local production, and strategic partnerships, open strategic autonomy enhances the EU's ability to withstand external disruptions and ensure the stability of its GVCs. After decades of decline due to inefficiency and anti-competitive effects, industrial policy has regained attention.¹³⁹

In terms of the economic security strategy, another key aspect is the EU's FDI screening mechanism, introduced in 2020 allowing Member States and the European Commission to review foreign investments in sensitive sectors such as critical infrastructure, emerging technologies, and raw materials.¹⁴⁰ By managing risks linked to FDI, the EU strengthens its

¹³⁶ European Commission, *The Raw Materials Initiative – Meeting Our Critical Needs for Growth and Jobs in Europe* (Communication) COM(2008) 699 final, 4 November 2008; Martijn C. Vlaskamp, (n. 129), 155; Ana E. Juncos and Sophie Vanhoonacker, *The Ideational Power of Strategic Autonomy in EU Security and External Economic Policies* (2024) 62(4) *Journal of Common Market Studies* 955–972, 958–959; Tobias Gehrke, (n.127), 61–63.

¹³⁷ Pol Bargués, Jonathan Joseph and Ana E Juncos, 'Rescuing the Liberal International Order: Crisis, Resilience and EU Security Policy' (2023) 99(6) *International Affairs* 2281; Timothy Jacobs et al, *The Hegemonic Politics of "Strategic Autonomy and "Resilience": COVID-19 and the Dislocation of EU Trade Policy* (2023) 61(3) *Journal of Common Market Studies*, 6–12; European Commission, *Coordinated Economic Response to the COVID-19 Outbreak* COM (2020) 112 final (13 March 2020, Brussels); Wolfgang Weiß and Cornelia Furculita, *Open Strategic Autonomy in EU Trade Policy* (CUP 2024) 48–59.

¹³⁸ It linked raw material demand to green and digital transitions, advocating diversification, sustainability, and partnerships with resource-rich countries, European Commission, 'Critical Raw Materials Resilience: Charting a Path towards Greater Security and Sustainability' (Communication) COM(2020) 474 final, 3 September 2020.

¹³⁹ the «rebirth of industrial policy», Aiginger K and Ketels C, 'Industrial Policy Reloaded' (2024) 24(1) *Journal of Industry, Competition and Trade*, 8; Martijn C. Vlaskamp, (n. 129), 162–167.

¹⁴⁰ European Commission, *Regulation (EU) 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* [2019] OJ L79/1.

ability to protect strategic assets and mitigate economic coercion while maintaining cooperative economic relationships. This framework has been refined in 2023. The European Commission's 2023 Work Program proposes the introduction of controls on strategic outward FDI, inspired by measures already proposed in the US.¹⁴¹ These additional measures aim to ensure that European companies' investments abroad do not inadvertently weaken the EU's technological or economic resilience.

While the U.S.-China rivalry has prompted debates on safeguarding EU economic interests, the EU avoids viewing China as an enemy,¹⁴² focusing instead on Russia as its main external threat.¹⁴³ Therefore, amidst the growing US-China rivalry, the EU seeks to address critical dependencies while maintaining a balance between cooperation and competition with China.¹⁴⁴

The 2023 Critical Raw Materials Act stands as a cornerstone of the EU's strategy. It sets ambitious targets for domestic mining (10%), processing (40%), and recycling (25%) of strategic raw materials while capping reliance on any single country at 65%.¹⁴⁵ Still, the EU faces challenges implementing the Critical Raw Materials Act.¹⁴⁶ Instead, diversifying sourcing across countries reduces reliance on single suppliers, strengthening supply chain resilience during disruptions.

While the Act primarily focuses on securing access to critical raw materials needed for key technologies, it recognizes semiconductors as a critical area due to their reliance on certain essential raw materials, such as silicon and rare earth elements. Thereby the semiconductors industry supply chains illustrate the EU's broader geoeconomic ambitions generating \$55 billion annually.¹⁴⁷ By boosting domestic production and strengthening partnerships, the EU seeks

¹⁴¹ European Commission, *2023 Work Programme: A Union Standing Firm and United* (European Commission, 2023); European Commission, *European Economic Security Strategy* (European Commission, June 2023); European Parliament, *Legislative Train: Outbound Investment Screening* (European Parliament, 2023).

¹⁴² The EU- China Strategic Outlook 2019 defines China as a “systemic rival but also a partner”. Also, the EU engages China through the EU-China Comprehensive Agreement on Investment talks and collaboration on green energy projects, European Parliament, *EU-China Investment Agreement*; European Commission, *Joint Press Release Following the Fourth EU-China High-Level Environment and Climate Dialogue*.

¹⁴³ European Commission, *REPowerEU Plan* (COM(2022) 230 final, 2022); Tobias Gehrke, (n.127), 67-69.

¹⁴⁴ Martijn C. Vlaskamp, (n. 129), 158-162.

¹⁴⁵ European Commission, *European Critical Raw Materials Act Targets* (2023).

¹⁴⁶ This is due to slow mine development, high energy costs, and weak recycling, European Environment Agency, *Environmental Impacts of Resource Extraction*.

¹⁴⁷ It leads in R&D intensity compared to Asia but lags behind the U.S., where firms invest 18% of revenue in R&D, *European Union R&D Intensity Compared to Global Regions* (Academic.oup.com); European Semiconductor

greater control over essential technologies. In 2022, the EU introduced the European Chips Act and invested €43 billion on on-shoring more manufacturing in the EU through substantial subsidies and through cooperation with allies in research, trade and industry.¹⁴⁸ The EU Chips Act and U.S. Chips and Science Act mirror China's semiconductor investments, but differ in focus as the U.S. leads in chip design, while Europe excels in lithography and some R&D. Because of the challenges in sustaining innovation, attracting private investment and reducing external dependencies, critics question the EU Chips Act's long-term impact.¹⁴⁹ After all, despite the Act's ambitions, calls have been made for a "Chips Act 2.0" as Europe remains reliant on external suppliers for specific semiconductor technologies.¹⁵⁰

2.3 Economic Statecraft

Free trade has long been viewed as a strategy to promote shared prosperity in the sense that it encouraged countries to specialize in their strengths and trade for what they lacked, maximizing economic efficiency and delivering mutual benefits.¹⁵¹ Free trade was seen as a win-win scenario, fostering cooperation and reducing conflict. This system dismantled protectionist barriers and established rules to prevent discrimination in international trade.

Nevertheless, as technological advancements and rising geopolitical tensions are reshaping this outlook, the Economic Statecraft became a tool for states to use economic tools to achieve geopolitical objectives.¹⁵² These include offering aid and granting trade incentives as well as imposing sanctions, and enforcing trade restrictions.¹⁵³

Industry Association, *European Semiconductor Market Performance* (2022) accessed 28 November 2024. European Semiconductor Industry Association, *European Semiconductor Market Performance* (2022); Statista, *Semiconductors in Europe: Market Overview*; Andrew Johnston et al, (n. 113), 2-4.

¹⁴⁸ The semiconductor industry is highly cyclical and capital-intensive, making continuous innovation and investment difficult. Infineon's cost-driven relocations, delays in Wolfspeed's €2 billion plant in Germany, Le Monde, 'Germany's Postponed Microchip Plant Projects Cast Doubt on the Merits of Subsidies' (7 September 2024); European Commission, *European Chips Act: Strengthening Europe's Semiconductor Ecosystem*, 4.

¹⁴⁹ Andrew Johnston et al. (n. 113), 4-5.

¹⁵⁰ Reuters, 'European Semiconductor Industry Group ESIA Calls for Chips Act 2.0' (2 September 2024).

¹⁵¹ David Ricardo, *On principles of Political Economy and Taxation* (John Murray, London, 1817).

¹⁵² Helen Mitchell, *A Modern Economic Statecraft Framework* (Working Paper, Australian National University, 22 August 2023), 45-46; Shaun Breslin and Helen E S Nesadurai, 'Economic Statecraft, Geoeconomics and Regional Political Economies' (2023) 36(5) *The Pacific Review* 927-948, 930-933.

¹⁵³ Shaun Breslin et al, (n. 152), 928.

As outlined previously through the analysis of the competing models of governance, nations weaponize global interdependencies across areas like energy, trade, and media for coercion.¹⁵⁴ The US has imposed export controls on semiconductors to curb China's technological advancements while safeguarding its own supply chain security.¹⁵⁵ The EU has introduced carbon border adjustment mechanisms, incentivizing green production standards globally while protecting domestic industries during the green transition.¹⁵⁶ Trade incentives, such as Japan's subsidies to encourage reshoring of critical manufacturing, reduce dependencies on potentially adversarial nations.¹⁵⁷ Sanctions, including those placed on Russia's energy exports, disrupt revenue streams that fund geopolitical adversaries.¹⁵⁸ Aid programs, such as China's Belt and Road Initiative, expand influence in developing regions by creating economic dependencies. Each action ties economic strategy to geopolitical goals, reshaping GVCs to secure resources, ensure economic dominance, and promote technological leadership.

The effectiveness and boundaries of economic statecraft have been a topic of ongoing debate among experts. While Blackwill and Harris define economic statecraft as the use of economic tools to protect national interests and achieve strategic goals,¹⁵⁹ Kapstein argues that states rarely disrupt knowledge networks due to competitiveness risks.¹⁶⁰ Yet, recent U.S. semiconductor policies challenge this view.¹⁶¹

Therefore, economic interdependence is now being re-evaluated through the lens of security and domestic control, prompting governments to assert control over critical industries to reduce

¹⁵⁴ Carnegie Endowment for International Peace, *U.S. Strategy and Economic Statecraft: Understanding the Tradeoffs* (28 April 2022) accessed 20 November 2024; Atlantic Council, *The US, EU, and UK need a shared approach to economic statecraft* (2022).

¹⁵⁵ U.S. Department of Commerce, 'Commerce Strengthens Export Controls to Restrict China's Capability to Produce Advanced Computing and Semiconductor Manufacturing Items' (BIS, October 2022); U.S. Department of Commerce, 'Commerce Expands Semiconductor Export Controls to Restrict China's Military and AI Capabilities' (BIS, October 2023).

¹⁵⁶ European Commission, 'Carbon Border Adjustment Mechanism' (Taxation and Customs Union, 2024).

¹⁵⁷ Japan's 2020 initiative, allocating ¥220 billion to encourage domestic manufacturing in critical sectors, such as medical equipment and semiconductors, Asia Society Policy Institute, 'Supply Chains Shifting in the Indo-Pacific: Japan' (Asia Society, 2020).

¹⁵⁸ Centre for Research on Energy and Clean Air, 'One Year of Sanctions: Russia's Oil Export Revenues Cut by €34 Billion' (CREA, 2024).

¹⁵⁹ RD Blackwill and JM Harris, *The Lost Art of Economic Statecraft* (Foreign Affairs, 16 February 2016).

¹⁶⁰ E Kapstein and DA Baldwin, *Economic Statecraft: New Edition* (Princeton University Press 2020).

¹⁶¹ US Government, *Implementation of Additional Export Controls: Certain Advanced Computing and Semiconductor Manufacturing Items; Supercomputer and Semiconductor End Use; Entity List Modification* (Federal Register, Vol 87, No 197, 13 October 2022).

vulnerabilities and protect domestic innovation. Alliances and multilateral efforts also play an essential role in advancing economic statecraft on the grounds that groups, such as the European Union, enable countries to coordinate policies, pool resources, and enhance their collective leverage in global markets. This emerging model, known as the “confrontational state” is increasingly prevalent in international relations, with varying expressions across different countries.¹⁶²

The profound global changes and the rise of economic security in geoeconomic and geopolitical confrontations have driven the resurgence of industrial policy. This revival is closely tied to the green and digital transitions, which require large investments, new infrastructure, and resilient access to global value chains.¹⁶³ These challenges demand substantial state intervention to address uncertainties and disruptions. As a result, industrial policy has become a core strategy for states, shaping their economic and political approaches. Relevant data supports the above comeback as industrial policy interventions have grown exponentially, from 34 in 2010 to nearly 1,600 by 2021.¹⁶⁴

Even with this in mind, new industrial policies face practical challenges that can undermine their effectiveness. Skeptics question whether protectionism can stifle competition and limit market access, leading to inefficiencies and higher costs for consumers, whether overuse of subsidies risks creates dependency, distorting markets, and wasting public funds and whether techno-nationalism can strain international collaboration, creating tensions that hinder shared innovation and global standards.¹⁶⁵ Policymakers should balance domestic objectives with cooperative agreements, ensure subsidies target sustainable growth, and maintain fair trade practices to avoid isolating industries or alienating partners.

This dramatic rise illustrates how economic statecraft is becoming central to shaping both economic and geopolitical strategies. Understanding this rise sets the stage for analyzing the strategies and tools that define modern industrialism in the digital era.

¹⁶² 'The World Is Realigning' *The Atlantic* (1 July 2024).

¹⁶³ Helen Mitchell, (n.152), 22-26.

¹⁶⁴ Juhász, R., Lane, N. J., & Rodrik, D., 'The New Economics of Industrial Policy' (2023) NBER Working Paper No. w31538.

¹⁶⁵ CICC Global Institute, *The Reshaping of China's Industry Chains* (Springer 2024), 121-122, 124-126; European Bank for Reconstruction and Development (EBRD), 'Global Resurgence of Protective Industrial Policies' (Reuters, 26 November 2024); World Economic Forum, *The New Era of Industrial Strategies* (World Economic Forum 2024).

2.3.1 The Cornwall Consensus and New Industrialism

In the 19th century, strategies for industrial development relied either on laissez-faire capitalism, where markets operated with minimal government interference or on significant government involvement, with the state actively steering and supporting economic growth through policies and regulation. Later, by the late 20th century, discussions on industrial policy became unpopular.¹⁶⁶ Nonetheless, today, seeing that global trade has been declining for over a decade¹⁶⁷ - a reduction often called slowbalization or de-globalization-¹⁶⁸ the global system is undergoing a major renegotiation and new models of international cooperation are emerging, described as “strategic reglobalization”.¹⁶⁹

The fallout from the 2008 financial crisis, the COVID-19 pandemic as well as the geopolitical tensions and the technological advancement have heightened national security concerns, prompting states to impose trade barriers, investment screening laws, and economic sanctions to protect critical infrastructure. In this context, governments are implementing industrial policies to advance technological capabilities and strengthen digital infrastructure, including state subsidies for tech companies, R&D investments, and regulatory measures to stimulate domestic innovation. Alongside these efforts, countries are imposing barriers to cross-border digital trade, such as data localization requirements restricting data transferred abroad. Economic unilateralism has driven this revival of industrial policies as governments seek greater control over technology, innovation and supply chains through targeted trade measures and domestic regulation.¹⁷⁰ This realignment in international trade underscores the need for economic law to adapt to the evolving balance between security and openness.¹⁷¹

¹⁶⁶ Fabio Bulfone, *Industrial Policy and Comparative Political Economy: A Literature Review and Research Agenda* (2023) 27(1) *Competition & Change* 22–43, 24-34.

¹⁶⁷ OECD, *The Changing Nature of International Production: Insights from Trade in Value Added and Related Indicators, TiVA Indicators* (2018).

¹⁶⁸ Martin Wolf, *The Big Mistakes of the Anti-Globalizers* *Financial Times* (21 June 2022).

¹⁶⁹ Strategic reglobalization is a targeted approach to rebuilding global trade and cooperation, focusing on resilient supply chains, technological innovation, and balanced economic sovereignty, Dan Ikenson, *Strategic Competition and the Transformation of Global Trade Rules* in *US-China Trade Relations and the New Geopolitics* (Springer 2023), 53-58; Marianne Schneider-Petsinger, *A New Era of Reglobalization: Global Trade in 2023* (Chatham House, January 2023).

¹⁷⁰ Georgios Dimitropoulos, (n. 27), 13-14.

¹⁷¹ Mona Pinchis-Paulsen, *Let's Agree to Disagree: A Strategy for Trade-Security* (2022) 25(4) *Journal of International Economic Law* 527, 532; European Parliament, *Key New Factors Likely to Shape the EU's Trade Agenda in the Next Five-Year Term* (2024) 5–8.

As pointed out earlier, the increasing use of national security to justify trade and investment barriers challenges the traditional separation between economics and security in international law and led states to seek coordinated responses through political fora like the G7.¹⁷² In 2021, the Cornwall Consensus was formulated balancing economic cooperation and national interests in a complex global economy.¹⁷³ The main objective of the Cornwall Consensus is to “restore public trust in a rules-based free, fair and open economic system”.¹⁷⁴ Different from the Washington Consensus, it represents a new framework that incorporates both new industrial policies and flexible, targeted plurilateral collaboration to address these security-driven economic challenges.¹⁷⁵

The Cornwall Consensus, initiating with a call to 'build back the State,' acknowledging the pivotal role of domestic law and, consequently, industrial policies.¹⁷⁶ New industrial policies share some common features. Firstly, there is a strong emphasis on building and advancing domestic digital industries, addressing both domestic needs and international opportunities. On the one hand, new industrial policies emphasize export orientation, and, on the other hand, they rely on export controls. Comparing it with other contemporary models, the Cornwall Consensus offers a cooperative and inclusive approach to industrial policy. Unlike China's Made in China 2025, which relies on protectionist policies and subsidies to achieve technological dominance and self-sufficiency, it advocates for international collaboration and shared technological progress. By fostering resilience through open yet safeguarded economic systems, the Cornwall Consensus seeks to balance national interests with global cooperation.

Secondly, contrary to earlier industrial policies that focused on protecting entire industries, modern policies target specific areas across multiple sectors and the emphasis has shifted to particular segments within industries rather than entire fields. For the first time, Cornwall

¹⁷² J Heath, 'Goeconomics and the Law: The Case for a Legal Framework to Address Economic Coercion' (2020) 45(2) *International Law Journal* 123-157; Georgios Dimitropoulos (n. 14), 59-60.

¹⁷³ G7, *The Cornwall Consensus Build Forward Better* (2021) accessed 3 November 2024; G7 Panel on Economic Resilience, *Global Economic Resilience: Building Forward Better* (Bruegel); Georgios Dimitropoulos, (n.56), 103-104.

¹⁷⁴ G7, *The Cornwall Consensus Build Forward Better* (2021).

¹⁷⁵ Georgios Dimitropoulos, (n.56), 71-73, 104; Meredith Kolsky Lewis, 'Plurilateralism and Free Trade Agreements' (forthcoming in *Journal of World Investment & Trade*, 2024), 8; UNIDO, *Industrial Development Report 2022: The Future of Industrialization in a Post-Pandemic World* (UNIDO 2021); EPC, *Updating the European Industrial Strategy for the Post-Pandemic World* (EPC 2021); Roosevelt Institute, *Global Economic Resilience: Building Forward Better* (Roosevelt Institute, 2021) 9, 16.

¹⁷⁶ Georgios Dimitropoulos, (n. 56), 104-105.

provides strategic direction for the areas to be developed; alongside health, trade and climate, the digital sphere has been elevated as one of the four key pillars essential for economic resilience.¹⁷⁷ Apart from the investments in 5G, AI, and quantum computing that boost innovation and strengthen domestic industries, data governance supports cross-border collaboration.¹⁷⁸ In a similar vein, policies promote technological independence through export controls. Export controls on advanced technologies, such as U.S. restrictions on semiconductor exports to China, are addressed by the EU-U.S. Trade and Technology Council.¹⁷⁹

And thirdly, given that they aim for more than just economic growth, the target of new industrial policies is social and environmental development through policies on consumer welfare, sustainable development, fairness and long term progress.¹⁸⁰ Recent policy actions and initiatives include the European Green Deal, the EU's Digital Decade Initiative which aims to provide all European households with gigabit connectivity and 5G coverage by 2030, the Global Infrastructure Facility which is platform supporting the preparation and structuring of complex infrastructure projects, promoting sustainable urban development and mobilizing private sector capital for eco-friendly infrastructure, as well as the EU's Corporate Sustainability Due Diligence Directive (CS3D) mandates large companies to identify, mitigate, and account for human rights and environmental risks across their operations.¹⁸¹ However, while they are effective in advanced economies, developing countries, including the Least Developed Countries (LDCs), struggle to achieve these ambitious goals due to limited regulatory capacity and knowledge.¹⁸²

¹⁷⁷ New industrial policies strike a fair balance between techno-nationalism and techno-globalism, influencing both their motivations and economic outcomes, Swedish Entrepreneurship Forum, *Entrepreneurship and Small Business – Economic Perspectives and Policy Challenges* (2021), 157-161.

¹⁷⁸ European Commission, *Digital Decade Policy Programme 2030* (2022); National Conference of State Legislatures, *Broadband in the Infrastructure Investment and Jobs Act* (2021); US Congress, *National AI Initiative Act of 2020* (2020); European Commission, *Proposal for a Regulation Laying Down Harmonised Rules on Artificial Intelligence* COM (2021) 206 final; European Commission, *Quantum Flagship Initiative* (2018); National Quantum Initiative Act 2018, H.R.6227 (115th Congress); European Parliament, *Regulation (EU) 2022/868 of the European Parliament and of the Council on European Data Governance (Data Governance Act)* [2022] OJ L152/1; US Department of Commerce, *EU-U.S. Data Privacy Framework* (2023).

¹⁷⁹ White House, *US-EU Trade and Technology Council Outcomes* (2023).

¹⁸⁰ Swedish Entrepreneurship Forum (n. 177), 55-58.

¹⁸¹ European Union, 'Renewable Energy Financing Mechanism' (European Commission, 2023); European Commission, 'Europe's Digital Decade: Digital Targets for 2030' (European Commission 2023); World Bank, 'The Global Infrastructure Facility: Scaling Infrastructure Investment' (World Bank Blogs, 2023); European Commission, 'Corporate Sustainability Due Diligence' (European Commission, 2024).

¹⁸² Karl Aiginger and Christian Ketels, *Industrial Policy Reloaded* (2024) 24 *Journal of Industry, Competition and Trade* 7, 4; McKinsey & Company, *What's Next for Bangladesh's Garment Industry After a Decade of Growth?* (McKinsey & Company); The Trade Adviser, *Textile and Apparel Manufacturing in Ethiopia* (The Trade Adviser).

In the light of an integrated political economy, new industrial policies do not represent a move away from the frameworks of international law. Free trade and multilateralism, both multilateral agreements and multilateral dispute settlement, remain important in the world envisaged by Cornwall.¹⁸³ The process of domestication and the implementation of industrial policies encompasses core values and principles of international law, such as the free movement of goods and capital across borders.¹⁸⁴ The traditional industrial policy consensus relied on global institutions and rules to sustain cooperative economic stability, benefiting all participants over time. However, this cooperation has weakened, as some economies, particularly China, have not adhered to its spirit. Therefore, alongside the new industrial policies, there is a need for a new international architecture to stabilise domestic law within the global economy. Plurilateral agreements are emerging as flexible tools to rebuild trust and cooperation, moving beyond traditional tariff reductions to protect local industries promoting environmental sustainability and workers' rights.

2.3.1.1 International Agreements Regulating Industrial Policymaking

New industrial policies integrate national sovereignty with international cooperation. Following the discussion on national-level geoeconomic strategies in China, the US, and the EU, attention now turns to international agreements influencing industrial policymaking. These connect domestic objectives with international collaboration through mechanisms, like Digital Economic Agreements, such as DEPA, and new plurilateral frameworks, such as the APEP, IPEF and IMEC, offering new approaches to addressing disruptions on GVCs. Unlike traditional trade agreements that concentrate on reducing tariffs and improving market access, these frameworks emphasize collaboration and innovation. They are political declarations addressing pressing issues like the security of supply chains.

With the onset of the 4IR and the accelerated pace of digitalization due to the COVID-19 pandemic, agreements like the Digital Economy Partnership Agreement (DEPA) represent a new kind of trade agreement shaping the future of trade by addressing the growing importance of digital transactions and innovation. Digital Economy Agreements (DEAs) establish rules for electronic trade, data storage as well as classification, and they reduce barriers to digital trade

¹⁸³ Karl Aiginger et al, (n.182), 8.

¹⁸⁴ *ibid.*

facilitating market access.¹⁸⁵ They represent the early stages of a broader shift toward regional cooperation to tackle challenges of international economic law. While DEAs aim to boost digital trade, they also address sustainability, inclusivity, and climate-related concerns.¹⁸⁶ Concerning the GVCs, standardized digital practices in these agreements help companies adapt swiftly to changes, minimizing disruptions and enhancing stable, efficient supply chain operations amidst uncertainty.

The DEPA signed in June 2020 by Chile, New Zealand, and Singapore is the first agreement dedicated to digital trade. This digital-only agreement aims to establish a cross-border digital trade policy based on free data flows, non-discrimination of digital products, and non-forced location of computing facilities.¹⁸⁷ At the same time, it acknowledges an ‘inherent right to regulate’ in cross-border digital trade.¹⁸⁸ A core element of DEPA is the facilitation of cross-border data flows and GVCs resilience as it establishes rules that balance the free flow of information with data privacy and cybersecurity regulations.¹⁸⁹ Discouraging unnecessary data localization, it fosters digital trade addressing supply chain vulnerabilities while including national security exceptions.¹⁹⁰ In this way, it strengthens GVCs by simplifying cross-border data flows, enabling SMEs to access international markets and enhance their competitiveness.¹⁹¹ Apart from that, the agreement promotes supply chain diversification and government-business collaboration through blockchain for supply chain transparency¹⁹².

¹⁸⁵ European Commission, 'Digital Trade Agreements' (2024) accessed 12 December 2024; Infocomm Media Development Authority (IMDA), *Digital Economy Agreements* (2020).

¹⁸⁶ Singapore Ministry of Trade and Industry, 'Digital Economy Partnership Agreement (DEPA)' (Singapore Ministry of Trade and Industry, 2020); Australian Government Department of Foreign Affairs and Trade, 'Australia-Singapore Digital Economy Agreement' (Department of Foreign Affairs and Trade, 2020); UK Government Department for International Trade, 'UK-Singapore Digital Economy Agreement' (Department for International Trade, 2022).

¹⁸⁷ Chapter 3 on Data Issues, Chapter 8 on Non-Discriminatory Treatment of Digital Products, Chapter 4 on Business and Trade Facilitation, 'The Digital Economy Partnership Agreement' (2024).

¹⁸⁸ Chapter 3 (Data Issues) and Chapter 4 (Business and Trade Facilitation), Ministry of Trade and Industry Singapore, 'The Digital Economy Partnership Agreement' (2024).

¹⁸⁹ Taiwan Semiconductor Manufacturing Company (TSMC) uses these provisions, Taiwan Semiconductor Manufacturing Company (TSMC), *Annual Report 2022*.

¹⁹⁰ Kommerskollegium, *The Digital-Only Trade Agreements – What is New?* (2022).

¹⁹¹ A unique feature of DEPA is the Digital SME Dialogue, Digital Economy Partnership Agreement Centre, *Digital SME Dialogue and Global Supply Chain Integration*.

¹⁹² Companies like Intel are using blockchain to enhance transparency in their supply chains, "Intel Uses Blockchain to Enhance Semiconductor Supply Chain Transparency," *TechCrunch* (2022); MDPI, 'Blockchain Adoption in Agricultural Supply Chains' (2023).

It has been characterized as a “living agreement” allowing parties to add or revise modules as technology and digital trade practices evolve.¹⁹³ Thus, it is structured under several modules, where progress can be made in a stand-alone way.¹⁹⁴ Contrary to the IPEF, DEPA offers clear rules on digital trade, providing regulatory clarity on free data flows, the prohibition of data localization requirements, and consumer protection measures.¹⁹⁵

For the most part, DEAs, like DEPA, set a strong foundation for addressing modern digital trade challenges. By advancing digital trade and fostering interoperability, DEPA enables seamless data flows supply chains and connectivity across borders, ensuring smoother coordination of GVCs, especially for high-tech and digital industries. New plurilateral agreements extend these efforts to address emerging issues in digital trade fostering collaboration on advanced technologies, strengthening regional economic ties, and promoting sustainable growth.

In May 2022, the Indo-Pacific Economic Framework for Prosperity (IPEF) was launched.¹⁹⁶ For the Biden administration, this economic initiative represents an opportunity to correct the military-driven approach of the US to the region by regulating standards of labor, digital trade and technology.¹⁹⁷ According to the Fact Sheet of the White House, the United States, India, Japan, South Korea, Australia, New Zealand, Brunei, Indonesia, Malaysia, Philippines, Singapore, Thailand, Vietnam and Fiji are the fourteen initial members.¹⁹⁸

¹⁹³ New Zealand highlights its adaptive nature, ensuring relevance in the rapidly changing digital landscape, Ministry of Foreign Affairs and Trade New Zealand, 'Digital Economy Partnership Agreement (DEPA) Overview' (2024).

¹⁹⁴ While this design offers flexibility, it can lead to uneven implementation among members, potentially undermining the agreement's overall effectiveness, *Kommerskollegium*, (n. 190), 4-6.

¹⁹⁵ IPEF includes digital economy standards within its pillars but lacks enforceable trade commitments, The White House, *Indo-Pacific Strategy of the United States* (February 2022).

¹⁹⁶ The White House, *FACT SHEET: In Asia, President Biden and a Dozen IndoPacific Partners Launch the Indo-Pacific Economic Framework for Prosperity* (May 2023).

¹⁹⁷ The U.S. has historically focused on military strategies in the Indo-Pacific. The White House, 'Fact Sheet: Quad Leaders' Summit' (The White House, 24 September 2021); The White House, 'Fact Sheet: AUKUS Partnership' (The White House, 15 September 2021); US Department of Defense, 'Freedom of Navigation Program' (US Department of Defense, 2021); Congressional Research Service, 'China's Maritime Disputes: US Policy and Legal Framework' (Congressional Research Service, 2022); US Department of State, 'Security Assistance and Arms Transfers' (US Department of State, 2022); Francis Mark A Quimba et al, *Exploring Regional Integration with Indo-Pacific Economies: A Background Analysis for IPEF Strategies* (2023) PIDS Discussion Paper Series No 2023-37.

¹⁹⁸ The IPEF membership is overlapped with that of RCEP, but excluded China as part of Washington's efforts to counter China, White House, *Leaders' Statement on Indo-Pacific Economic Framework for Prosperity* (16 November 2023); Juan Liu et al, *A Comparative Analysis of RCEP and IPEF from the China-U.S. Competition* (2024) 3(4) *Modern Economics and Management Forum* accessed 30 November 2024, 282-283.

This new framework is not a traditional free trade agreement as it lacks binding commitments, like tariff reductions or market access provisions.¹⁹⁹ Instead it brings together the members-allies to negotiate on rules for the digital economy, industrial chains, clean energy and taxation and anti-corruption.²⁰⁰ Hence, it serves as a legal framework for future negotiations.²⁰¹ It should be noted that IPEF's lack of traditional market access or tariff reductions has raised concerns that its new standards may act as trade barriers, fostering protectionism.²⁰² The IPEF is a platform designed to shape global economic frameworks through issue-specific progress. Thus, it focuses on four key pillars which are Connected Economy addressing trade and digital trade, Resilient Economy enhancing supply chain resilience, Clean Economy promoting clean energy, infrastructure and decarbonisation efforts and, lastly, Fair Economy tackling mainly corruption.²⁰³ Due to numerous geopolitical tensions between the US and China and several global market events and challenges, many economies felt the need to look after their own interests and balance onshoring and reshoring with friend-shoring to secure supply chains.²⁰⁴ With these in mind, the Biden administration designed a system that allows members to join any of the four pillars.²⁰⁵ In detail, in terms of digital trade and digital governance, the IPEF initiative takes the lead to ensure duty-free electronic transmission while safeguarding that there will not be a loss in tariff revenue.²⁰⁶ Furthermore, it recognizes the importance of data in the digital economy and includes provisions to facilitate cross-border data flows, but this does not underestimate the need for data security and privacy legislation.²⁰⁷

¹⁹⁹ However, IPEF's lack of binding commitments weakens enforcement, Ambassador Katherine Tai, *Remarks at the Roosevelt Institute's Progressive Industrial Policy Conference* (Office of the United States Trade Representative, October 2022); Georgios Dimitropoulos (n.14).

²⁰⁰ Francis Mark A Quimba et al, (n. 197), 18-40.

²⁰¹ It is considered an "initiative" or "administrative arrangement."and it did not require congressional approval to participate, Congressional Research Service, 'The Indo-Pacific Economic Framework for Prosperity (IPEF): What to Know' (CRS, 2022); Georgios Dimitropoulos (n. 14), 63- 68.

²⁰² Global Issues, 'Critics Claim IPEF Promotes Protectionism and Lacks Real Trade Benefits' (Global Issues, 15 November 2023); Springer, 'The Indo-Pacific Economic Framework: Challenges in Balancing Regional Integration and Domestic Manufacturing' (Springer, 2024); Matthew P. Goodman and William Reinsch, *Filling in the Indo-Pacific Economic Framework* (Center for Strategic and International Studies (CSIS), 2022).

²⁰³ Aidan Arasasingham et al, *Unpacking the Indo-Pacific Economic Framework Launch* (Center for Strategic and International Studies (CSIS), 2022).

²⁰⁴ Research Institute for Global Value Chains et al, *Global Value Chain Development Report 2023: Resilient and Sustainable GVCs in Turbulent Times* (2023) 72-75; Jeremy Shapiro, *Why the West's China Challenge Got a Lot Harder?* (Politico, 2022), 19-21; Georgios Dimitropoulos (n. 14), 63- 68.

²⁰⁵ India opts out of the trade pillar due to concerns about labor and environmental rights, *India Signs IPEF Bloc's Clean Fair Economy Agreements to Boost Cooperation Business Standard* (22 September 2024).

²⁰⁶ The Global Industry, *Global Industry Statement on the WTO Moratorium in Customs Duties in Electronic Transmissions* (WTO, 2022).

²⁰⁷ Matthew P. Goodman et al (n. 202).

The historical perspective provides some valuable insights of the conception, preparation and negotiation of this economic initiative. Its strategic and political drivers are obvious. Given that the Indian Ocean is becoming a key trade route, offering an alternative to the Atlantic corridor,²⁰⁸ IPEF reflects an effort to counter China's growing influence.²⁰⁹ After the US withdrawal from the Trans-Pacific Partnership (TPP) in 2017,²¹⁰ and nonmembership in the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP), this strategy, led by the US, seeks to limit China's role and elevate India's position in the region.²¹¹ In opposition, China has rejected the Indo-Pacific framework and promotes the Regional Comprehensive Economic Partnership (RCEP)²¹² as a model for regional cooperation without U.S. leadership.²¹³

As part of the IPEF, the Supply Chain Agreement was signed in November 2023 and entered-into-force on 24 February 2024, following ratification by Japan, the US, Singapore, Fiji and India strengthening industrial policy and collaboration among participants.²¹⁴ Since then, It creates a multinational framework aimed at enhancing the resilience and connectivity of supply chains through both collective and individual efforts. Member industries have already enhanced their integration into global value chains by diversifying sourcing and strengthening

²⁰⁸ Francis Mark A Quimba et al, (n. 197), 13; US Department of State, 'Partnership for Global Infrastructure and Investment: Lobito Corridor Supporting Transcontinental Connectivity' (US Department of State).

²⁰⁹ U.S. Department of Defense, 'Annual Report to Congress: Military and Security Developments Involving the People's Republic of China' (U.S. Department of Defense, 2023).

²¹⁰ The White House, 'Presidential Memorandum Regarding Withdrawal of the United States from the Trans-Pacific Partnership Negotiations and Agreement' (The White House, 23 January 2017).

²¹¹ International Institute for Strategic Studies, *The Political Significance of the New Indo-Pacific Economic Framework for Prosperity* (May 2022).

²¹² In the first three quarters of 2024, China's trade with other RCEP members reached 9.63 trillion yuan (\$1.33 trillion), marking a 4.5% year-on-year increase, Global Times, 'China Leads RCEP Implementation as Trade with Members Reaches 9.63 Trillion Yuan' (Global Times, November 2024).

²¹³ Chinese Foreign Minister Wang Yi described the IPEF as a strategy that "creates divisions and incites confrontation," asserting that such initiatives are "doomed to fail." Juan Liu et al, (n. 198), 281-283; South China Morning Post, 'China Says Washington's "Divisive" Indo-Pacific Strategy Is Doomed to Fail' (SCMP, 23 May 2022).

²¹⁴ US Department of Commerce, *US Department of Commerce Announces Upcoming Entry into Force of IPEF Supply Chain Agreement* (January 2024); Georgios Dimitropoulos (n. 14) 63- 66-77.

collaborations.²¹⁵ Clean Economy Agreement and Fair Economy Agreement have also been finalized, advancing energy transition and anti-corruption efforts.²¹⁶

Through its comprehensive approach, the Supply Chain Agreement supports economic growth, ensures the steady flow of essential goods, and strengthens the Indo-Pacific region's role in global trade. As the agreement acknowledges challenges exposed during the pandemic, such as overreliance on single-source suppliers and fragile networks, it targets these issues through actionable measures. Key strategies include establishing early warning systems for disruptions, diversifying sourcing options, and investing in critical infrastructure.²¹⁷ These steps are designed to minimize risks and ensure the steady flow of essential goods, particularly in critical industries like semiconductors, pharmaceuticals, and rare earth elements. Given that regional collaboration is a central feature of the agreement, shared protocols and standards for supply chain management are promoted, enabling member nations to pool resources, expertise, and technologies.²¹⁸ Not only does this collaborative approach help integrate SMEs into regional and global supply chains, but it also highlights the need to strengthen domestic production capacities and establish regional hubs to reduce dependency on external suppliers. By reducing reliance on external suppliers, member countries can better safeguard economic and national security.

To support its objectives, the agreement introduces three dedicated supply chain bodies. Firstly, the Supply Chain Council aligns policies and initiatives to build competitive and diversified supply chains. Secondly, the Crisis Response Network facilitates communication during disruptions organizing stress tests, simulations, and exercises to identify and mitigate vulnerabilities. Thirdly, the Labor Rights Advisory Board ensures that workers are represented alongside employers and governments.²¹⁹ These bodies foster collaboration through business

²¹⁵ METI, *Japan Revitalizes Semiconductor Industry: Strategic Collaboration with Global Partners* (METI, 2024); Department of Pharmaceuticals, Government of India, *Strengthening India's Pharmaceutical Supply Chain under IPEF* (DoP, 2024); Austrade, *Rare Earth Export Agreements under IPEF: Enhancing Global Value Chains* (Austrade, 2024); Ministry of Industry and Trade of Vietnam, *Collaborations in Electronics Manufacturing: Vietnam's Role in IPEF* (MOIT, 2024); United States Department of Energy, *Building Resilient Renewable Energy Supply Chains under IPEF* (DOE, 2024).

²¹⁶ Jake Werner, *IPEF Starts to Demonstrate Results* (Center for American Progress, 6 October 2023).

²¹⁷ Center for Strategic and International Studies (CSIS), *Assessing IPEF's New Supply Chains Agreement* accessed 30 November 2024; Ministry of Foreign Affairs of Japan, *Indo-Pacific Economic Framework for Prosperity (IPEF): Supply Chain Agreement* (2023).

²¹⁸ Green Worldwide Shipping, *IPEF Supply Chain Agreement: Strengthening Global Trade*; Ministry of Foreign Affairs of Japan, *Indo-Pacific Economic Framework for Prosperity (IPEF): Supply Chain Agreement* (2023).

²¹⁹ US Department of Commerce, *Indo-Pacific Economic Framework: Pillar II*; Center for Strategic and International Studies (CSIS), (n. 217).

matchmaking, regulatory alignment, investment promotion, and sharing best practices. They also issue public advisories and facilitate the exchange of information among partners.²²⁰

Following IPEF, Americas Partnership for Economic Prosperity (APEP) was introduced during the Summit of the Americas, in June 2022, with the aim of fostering closer trading between Western Hemisphere nations,²²¹ aiming at addressing China's efforts to acquire influence in Latin America through BRI development projects.²²² Both frameworks share a similar legal nature and address overlapping areas, including the digital economy and the development of digital infrastructure. Unlike traditional trade agreements, this regional initiative struggles to address economic inequalities, promote sustainable development, and foster digital and physical connectivity among its member states.²²³ For its part, China sought it as an attempt "to contain China by driving wedges between China and its partners."²²⁴ Given that the Americas Partnership framework offers an "open architecture" where partners select their areas of involvement,²²⁵ it does not require congressional approval and it does not establish binding obligations on its participants.²²⁶ Since its announcement, the United States has worked closely with partner governments, organizations, and private stakeholders to shape APEP's ambitious agenda. In 2023, U.S. Trade Representative Katherine Tai underscored that much of the partnership's focus will be on building resilient supply chains.²²⁷ In July 2024, Joint Statement on the Americas Partnership for Economic Prosperity committed member countries to strengthen supply chain resilience by reducing dependency on single suppliers, expanding regional production, investing

²²⁰ International Economic Law and Policy Blog, *The IPEF Supply Chain Agreement* (September 2023).

²²¹ The 12 participating countries represent 90% of the Western Hemisphere's GDP and two-thirds of its population, The White House, 'Fact Sheet: President Biden Announces the Americas Partnership for Economic Prosperity (APEP)' (The White House, 2022).

²²² The White House, 'Fact Sheet: Vice President Harris Launches Initiatives to Expand Economic Opportunity in the Western Hemisphere' (The White House, June 2022).

²²³ US Department of State, *Launch of Americas Partnership for Economic Prosperity's Semiconductor Workforce Symposium: Building Technical Capacity for a Skilled 21st Century Workforce*.

²²⁴ *Americas Partnership More Pie in the Sky: China Daily Editorial* China Daily (9 June 2022).

²²⁵ White House, *Fact Sheet: President Biden Announces the Americas Partnership for Economic Prosperity* (Press Release, 8 June 2022).

²²⁶ White House, *On-the-Record Press Call on the Launch of the Indo-Pacific Economic Framework* (Press Release, 23 May 2022).

²²⁷ Intel announced plans to build a semiconductor manufacturing facility in Mexico, with the intention to diversify its supply chain in North America, "Intel to Build Semiconductor Facility in Mexico to Strengthen Supply Chain," *Reuters* (2023); Ambassador Katherine Tai, *Remarks at the National Press Club on Supply Chain Resilience* (United States Trade Representative, June 2023).

in infrastructure, and using digital tools to enhance efficiency and secure access to critical goods.²²⁸

In September 2023, a similar framework to IPEF was established, the India-Middle East-Europe Economic Corridor (IMEC). This historic trade route was announced at the New Delhi G20 Summit in 2023 aiming to become a major medium of economic integration between India, West Asia and Europe and it has the US, India, Saudi Arabia, UAE, the European Union, France, Italy and Germany, as partners.²²⁹ These are some of the most powerful nations in the world,²³⁰ and, according to the signed Memorandum of Understanding, they intend to cooperate to secure supply chains and facilitate international trade.²³¹ Not only does IMEC mark major change in US and EU efforts to enhance international trade in the Middle East but it also reflects a wider alliance of both regional and global participants. Each partner contributes differently to this cooperation.²³²

The IMEC spans two main corridors.²³³ It integrates rail, road, and maritime systems and it incorporates renewable energy and advanced technologies, such as hydrogen pipelines, railway lines, and ship-to-rail systems. Its multimodal approach streamlines supply chains, reduces barriers, and enhances connectivity across Asia, the Middle East, and Europe.

²²⁸ As of December 2024, the APEP has advanced its supply chain resilience goals outlined in the July 2024 Joint Statement, U.S. Department of State,; The White House, ‘Fact Sheet: The Biden-Harris Administration Marks the Anniversary of the Americas Partnership for Economic Prosperity Leaders Summit’ (The White House, 4 November 2024); US Department of State, ‘Joint Statement on Delivering on the Promise of the Americas Partnership by Unlocking Competitiveness for Inclusive Prosperity’ (US Department of State, 2024).

²²⁹ The White House, ‘Fact Sheet: The India-Middle East-Europe Economic Corridor’ (The White House, 9 September 2023).

²³⁰ IMF, ‘World Economic Outlook Database’ (IMF, October 2024); Global Firepower, ‘2024 Military Strength Ranking’ (Global Firepower, 2024); United Nations, ‘Security Council Members’; United Nations; International Energy Agency, ‘Key World Energy Statistics’ (IEA, 2024); World Intellectual Property Organization, ‘Global Innovation Index 2024’ (WIPO, 2024).

²³¹ The White House, ‘Fact Sheet: The India-Middle East-Europe Economic Corridor’ (The White House, 9 September 2023).

²³² Reuters, ‘Israel’s Tower Semiconductor Ties Up with Adani Group for \$10 Billion Chip Project in India’ (Reuters, 6 September 2024); *US, India, Saudi, EU Unveil Rail and Ports Deal on G20 Sidelines - White House Official Reuters* (9 September 2023); The White House, ‘Fact Sheet: President Biden and G7 Leaders Formally Launch the Partnership for Global Infrastructure and Investment’ (The White House, 26 June 2022); European Investment Bank, ‘Financing Global Gateway Projects: Driving Sustainable and Digital Infrastructure Development’ (EIB, 2023); European Commission, ‘Digital Partnerships in the Global Gateway: Advancing Connectivity Through AI and 5G’ (European Commission, 2023).

²³³ Next IAS, ‘India-Middle East-Europe Economic Corridor (IMEC)’ (Next IAS, 20 October 2024); Physics Wallah, ‘IMEC Corridor Route, Countries, Map, Ports, Launched, UPSC’ (Physics Wallah, 15 November 2024); *US, India, Saudi, EU Unveil Rail and Ports Deal on G20 Sidelines - White House Official Reuters* (9 September 2023).

Strategically, the IMEC connects a part of what is called in foreign policy “trusted geographies”²³⁴ which are regions that strengthen global value chains through secure and stable partnerships. It enhances economic interdependence by linking critical trade routes, facilitating faster and more reliable goods movement, and supporting long-term geoeconomic stability. These geographies include nations like India, the Middle East, Europe, and the U.S. These nations work together to diversify supply chains, reduce risks of disruptions, and invest in critical infrastructure. Thus, this collaboration enhances the resilience of global value chains by ensuring dependable trade routes and partnerships built on trust and shared goals. According to the European Commission President Ursula von der Leyen, the IMEC project constitutes a green digital bridge across continents expecting to make trade between India and Europe 40% faster than through the Suez Canal and reduce costs by 30%.²³⁵

Beyond that, it boosts manufacturing and raw materials flows by connecting India’s production hubs, Middle Eastern resources, and Europe’s advanced industries. It reduces transport times and costs through integrated rail, road, and maritime networks, bypassing congested routes like the Suez Canal. Thus, manufacturers gain reliable access to critical inputs such as metals and energy resources, ensuring timely production and small and medium-sized enterprises benefit from streamlined supply chains, enabling efficient resource movement and market access.

The IMEC has its roots in the 2020 Abraham Accords and the I2U2 grouping.²³⁶ Optimism about the corridor was tied to recent improvements in West Asia’s geopolitical environment, such as restored ties between Saudi Arabia and Iran, the UAE’s growing relations with Israel, and reconciliation among Arab states.²³⁷ This progress has been disrupted by the October 2023 attacks and subsequent conflict, leading to tensions between Israel and Arab states²³⁸ and raising

²³⁴ This term refers to regions or countries deemed reliable and secure for economic, technological, and strategic partnerships. This concept is integral to strategies like “friendshoring,” which involves relocating supply chains to politically stable and allied nations to enhance resilience and reduce dependence on less reliable partners, Deloitte Insights, ‘Flying to Friendly Shores: Rethinking Ad Supply Chains’ Forbes (20 June 2022).

²³⁵ European Commission, *The Launch of the India-Middle East-Europe Economic Corridor* (Press Release, 9 September 2023); US, India, Saudi, EU Unveil Rail and Ports Deal on G20 Sidelines - White House Official Reuters (9 September 2023).

²³⁶ The White House, ‘Fact Sheet: Abraham Accords and Expanding Regional Cooperation’ (The White House, 15 September 2020).

²³⁷ Al Jazeera, ‘Iran and Saudi Arabia Agree to Restore Relations After China-Brokered Talks’ (Al Jazeera, 10 March 2023); Al Jazeera, ‘UAE and Israel Agree to Establish Full Diplomatic Ties’ (Al Jazeera, 13 August 2020); Al Jazeera, ‘Gulf Leaders Sign Declaration to Ease Qatar Crisis at GCC Summit’ (Al Jazeera, 5 January 2021).

²³⁸ Financial Times, ‘Houthi Attacks on Ships Heighten Tensions Amid Israel-Gaza Conflict’ (Financial Times, 25 November 2023).

concerns about prolonged instability. Meanwhile, Houthi attacks on ships near the Bab al-Mandab Strait have caused global supply chain disruptions, forcing shipping companies to reroute through the Cape of Good Hope, increasing costs and delays. This impacts India, whose exports to Europe and the US largely pass through this channel.²³⁹

As India strengthens its infrastructure and boosts manufacturing, promoting IMEC as an alternative corridor could ensure more resilient trade routes. However, geopolitical challenges persist, with Egypt opposing the corridor due to competition with the Suez Canal,²⁴⁰ and Türkiye proposing a rail link through Iraq as a more viable option.²⁴¹ As a result, the IMEC project constitutes a risky trade venture, politically and financially.²⁴²

The IMEC distinguishes itself from China's BRI by emphasizing collaborative efforts among participating states and actively involving the private sector in infrastructure development.²⁴³ The project encourages public-private partnerships (PPPs) to mobilize capital for sectors like logistics, renewable energy, and digital infrastructure. Private companies are expected to bring technological expertise in digital connectivity, green energy, and supply chain optimization while benefiting from job creation and economic growth along the corridor.

On the whole, IMEC is expected to significantly enhance global value chains (GVCs) by reducing transport times by up to 40%, lowering logistical costs, and improving supply chain efficiency.²⁴⁴ Its infrastructure will enable smoother trade flows between Asia, the Middle East, and Europe, strengthening economic interdependence across these regions. However, challenges such as technical complexities, financial requirements, and political hurdles must be addressed for the corridor to fully realize its potential to transform GVCs.

²³⁹ Clyde & Co, 'Navigating Perilous Waters: Houthi Attacks and Global Supply Chain Disruptions' (Clyde & Co, February 2024); BBC, 'Red Sea Crisis: How Global Shipping Is Being Rerouted Out of Danger' (BBC, 19 January 2024).

²⁴⁰ Egyptian Streets, 'Explainer: Will the New India-Europe Corridor Affect Egypt's Suez Canal?' (Egyptian Streets, 22 September 2023).

²⁴¹ Railway Technology, 'Turkey Proposes Alternative to India-Middle East-Europe Corridor' (Railway Technology, 15 October 2023).

²⁴² Regional conflicts, such as the Israel-Hamas war, have stalled progress on IMEC, Modern Diplomacy, 'IMEC: US-Led Plan Aimed to Link India-Europe Is in Doubt' (Modern Diplomacy, 31 January 2024).

²⁴³ Firms like Adani Group and DP World have shown interest, while financial institutions such as the European Investment Bank (EIB) and U.S. International Development Finance Corporation (DFC) are set to support private investments, Reuters, 'Adani Ports Withdraws DFC Funding Request for Colombo Port Project' (Reuters, 10 December 2024); *The IMEC vs BRI: Taking the Cue Modern Diplomacy* (29 September 2023); Emirates Policy Center, *IMEC and BRI: Beyond Complementary Competition*.

²⁴⁴ Next IAS, 'India-Middle East-Europe Economic Corridor (IMEC)' (Next IAS, 20 October 2024).

All the aforementioned agreements are third-generation digital plurilateral agreements. Third-generation digital plurilateral agreements represent the latest evolution in international trade agreements, focusing on digital economy issues and addressing complex, interconnected challenges.²⁴⁵ They are focused on targeted cooperation and facilitate sector-specific (plurilateral) agreements within a smaller cohort of countries. These agreements build on previous models, incorporating more advanced provisions for digital trade, emerging technologies, sustainability, and inclusivity. Such a shift indicates a broader trend in the regulation of the digital economy, a topic the dissertation explores in further detail in Chapter 3. Table 2.1 highlights the key features, strengths, and limitations of each agreement.

Table 2.1: Comparison of Key Agreements and Their Impacts on Supply Chain Resilience			
Agreement	Key Features	Strengths	Limitations
DEPA	Rules for digital trade, cross-border data sharing, and blockchain for tracking supply chains. Modular structure.	Enforceable trade commitments. Fosters diversification, helps MSMEs participate in global trade, simplifies data sharing while protecting privacy and security, encourages transparent supply chains with blockchain.	Applies only to digital trade, voluntary participation, uneven accountability, potential conflicts with national data policies, no dispute settlement mechanism included.
IPEF	Focuses on digital trade, supply chain resilience, clean energy, and anti-corruption. Includes the IPEF Supply Chain Agreement.	Supports diversification, data sharing and collaboration using tools like blockchain and AI. The IPEF Supply Chain Agreement establishes an early warning system and supports investments in critical infrastructures, the creation of digital protocols and standards, inclusion of MSMEs in GVCs.	No binding commitments. Concerns on fostering protectionism. Member countries choose specific areas to engage in, which weakens uniformity and enforcement.

²⁴⁵ Georgios Dimitropoulos, ‘Digital Plurilateralism: Towards Unilateral Multilateralism in International Economic Law?’ (November 2022) (unpublished manuscript).

APEP	Encourages cooperation on digital infrastructure, and supply chain efficiency among nations in the Americas. Similar legal nature and scope to IPEF.	Supports diversification of and promotes local production. Supports digital tools for better supply chain coordination.	No binding obligations, voluntary participation, limited enforcement and uneven accountability.
IMEC	A trade corridor linking India, the Middle East, and Europe. Includes integrated transport systems, renewable energy projects, and digital tools like blockchain.	Improves connections between regions with better infrastructure and digital tools. Reduces delays and costs in supply chains.	No binding commitments, limited enforcement. Political instability and competition from existing trade routes.

Chapter 3. GVC Resilience through Plurilateralism

Chapter 3 examines how Global Value Chains (GVCs) adapt to disruptions caused by geopolitical tensions, health crises, and digital shifts. It explores strategies for strengthening resilience through targeted policies, such as those under IPEF, and highlights the role of third-generation digital plurilateral agreements in addressing specific trade challenges.

Section 3.1 examines the evolution and vulnerabilities of GVCs. It explains how GVCs emerged as interconnected production systems to optimize costs and expand global production networks. The onset of the digital economy and recent disruptions, such as the COVID-19 pandemic and geopolitical tensions, exposed vulnerabilities in these chains. Strategies like reshoring, nearshoring, and friendshoring have gained traction to reduce risks and strengthen supply chain security. The section concludes that GVCs face increasing vulnerabilities, emphasizing the importance of implementing international frameworks to ensure their stability and adaptability in a rapidly changing global environment.

Section 3.2 analyzes the IPEF Supply Chain Agreement and its role in addressing vulnerabilities in critical industries. It encompasses provisions on diversifying sourcing options, investing in critical infrastructure, supply chain mapping, and data sharing and common digital standards, early warning mechanisms for disruptions as well as sustainability of GVCs. The section emphasizes that IPEF focuses on transparency, collaboration, and sustainability. It concludes that

IPEF provides actionable measures to manage risks, improve resilience, and strengthen economic security in GVCs.

Section 3.3 explores plurilateralism as an effective tool for addressing global trade challenges, especially where multilateral consensus is difficult to achieve. It highlights how third-generation digital plurilateral agreements enable faster decision-making among like-minded nations to tackle specific issues such as digital trade, supply chain resilience, and sustainability. The IPEF Agreement on Supply Chain Resilience serves as a key example, showcasing how sector-specific initiatives can enhance supply chain security. These agreements are voluntary, flexible, and adaptable to varying economic and political conditions. While plurilateralism complements multilateralism by addressing gaps in traditional systems like the WTO, it also emphasizes efficiency and inclusivity. The section concludes that third-generation digital plurilateral agreements, exemplified by IPEF, are critical for advancing global value chain resilience in an increasingly fragmented economic environment.

3.1 Global Value Chains (GVCs)

A value chain consists of economic activities that create value by turning raw or intermediate materials into finished products.²⁴⁶ As discussed in Chapter 1, since the late 1990s, supply chains expanded globally and more intermediate goods were traded across borders.²⁴⁷ This development gave rise to the concept of GVCs, which refer to the interconnected production processes spread across multiple countries, where each stage of production adds value to the final product. Yet, their momentum has slowed in recent years, due to geoeconomic and technological-related challenges discussed in Chapter 2.²⁴⁸ Geopolitical crises, health emergencies, trade disputes, and technological advancement have exposed vulnerabilities in GVCs. And, an interplay between resilience, sovereignty and efficiency continues to shape national policies and international trade

²⁴⁶ In manufacturing, raw materials like steel become vehicles through staged processes; in agriculture, raw produce is processed and packaged for consumers; and in electronics, rare earth metals are transformed into components for devices. The concept of a value chain, introduced by Michael Porter in 1985, Michael E Porter, *Competitive Advantage: Creating and Sustaining Superior Performance* (Free Press 1985).

²⁴⁷ According to the World Bank and IMF data, global trade as a percentage of GDP rose from approximately 39% in 1990 to over 60% by the mid-2000s, World Bank, 'Trade (% of GDP)' (World Bank Data).

²⁴⁸ James Manyika et al, *Digital Globalization: The New Era of Global Flows* (McKinsey & Company, 2016) 28-41; Research Institute for Global Value Chains et al, (n. 204), 1-11; OECD, *The Changing Nature of International Production: Insights from Trade in Value Added and Related Indicators, TiVA Indicators* (2018); OECD, *Trade in Value Added: China, Country Note* (December 2018).

dynamics,²⁴⁹ prompting a reevaluation of traditional strategies. A noticeable pattern has emerged: the relocation of production, particularly through reshoring and nearshoring.²⁵⁰

Historically, GVCs aimed to reduce labour costs through outsourcing and offshoring, driving the expansion of global production networks. However, sectors like semiconductor manufacturing, which rely on advanced processes, highlighted the fragility of human-dependent supply chains, particularly during crises like the COVID-19 pandemic.²⁵¹ Since then, companies are increasingly investing in automation and digital tools to replicate production processes across multiple locations, reducing reliance on labour-intensive operations.²⁵² While efficient, these digital tools can jeopardise supply chain resilience as they are vulnerable to technical failures, cyberattacks, or export restrictions.

Apart from that, the global nature of GVCs has provided immense value, but recent events, such as China's border closures during the pandemic, exposed the risks of over-reliance on distant suppliers.²⁵³ Firms are increasingly adopting strategies like reshoring, nearshoring, and friendshoring to localize production and reduce vulnerability.²⁵⁴ Reshoring brings production back to home countries, as seen in the U.S. CHIPS Act, which supports domestic semiconductor manufacturing to strengthen supply chain security. Nearshoring relocates production to nearby countries with lower labour costs and access to key markets, while friendshoring focuses on aligning production with politically trusted partners. These strategies aim to preempt global disruptions while ensuring reliable access to critical components. By combining global networks with localized production, firms strike a balance between efficiency and risk mitigation.

While reshoring and nearshoring increase production costs in the short term due to higher wages and setup expenses,²⁵⁵ they can reduce long-term risks by ensuring supply chain stability. These strategies enhance innovation by fostering closer collaboration between production teams and

²⁴⁹ Research Institute for Global Value Chains et al, (n. 204), 50-56.

²⁵⁰ Research Institute for Global Value Chains et al, (n. 204), 30-38.

²⁵¹ Ian King et al, 'How a Chip Shortage Snarled Everything From Phones to Cars' (Bloomberg, 2021).

²⁵² Pfizer, 'How Pfizer Used the Latest Digital Technology to Support Its COVID-19 Vaccine Efforts' (Pfizer, 2021); Pfizer, 'Using Augmented Reality to Maintain Operations During COVID-19' (Pfizer, 2021).

²⁵³ BBC News, 'Ningbo Port Closure: How One Covid Case is Still Shaking Global Trade' (BBC, 13 August 2021).

²⁵⁴ Electrek, 'Ford and LG Set to Move EV Battery Production from Poland to Michigan' (Electrek, 26 October 2024); Statista, 'Number of Suppliers of H&M Group by Region' (Statista, 2023); Volkswagen Group, 'Volkswagen Group Steps up Activities in North America: Canada Chosen as Location for First Overseas Gigafactory of Its Battery Company PowerCo SE' (Volkswagen Group Press Release, 13 March 2023).

²⁵⁵ Rick Burke et al, 'Reshoring or Localization on Your Mind?' (Deloitte, 2023).

R&D, accelerating product development.²⁵⁶ Furthermore, by reducing reliance on distant suppliers, companies gain greater control over quality and adaptability, which strengthens their global competitiveness.²⁵⁷ However, these changes may limit access to low-cost inputs and specialised expertise from global markets, requiring firms to balance efficiency with resilience to remain competitive.

In a similar vein, the observation that products are increasingly “Made in the World” creates interdependencies between countries.²⁵⁸ The latter has two aspects as domestic production depends on foreign inputs, while foreign demand drives intermediate goods, making both vulnerable to supply disruptions and demand shocks. The internationalization of supply chains has revealed vulnerabilities in critical sectors like technology. Thus, risk management in GVCs has shifted from operational fixes to long-term, strategic approaches. The pandemic revealed that GVCs lacked resilience to large-scale disruptions, particularly in sectors dependent on complex supply chains. Diversification of supply networks has emerged as a critical strategy, spreading production across multiple regions and suppliers to reduce exposure to risks like geopolitical tensions, natural disasters, or input shortages.²⁵⁹ Strategic risk management also requires aligning business strategies with government policies in order to address both economic and security concerns.²⁶⁰ Diversification reduces dependency on any single supplier or region, ensuring that firms can sustain operations despite global disruptions.

Indeed, GVC policies often serve as tools for economic security and geopolitical influence. The EU uses GVC policies to advance digital sovereignty through regulations like the DMA and the DSA. These laws strengthen control over data, reduce dependence on foreign tech providers, and encourage local innovation.²⁶¹ In contrast, as mentioned above, the US-China trade conflict highlights economic leverage strategies. The U.S. restricts exports of critical technologies, such

²⁵⁶ Thomas Insights, 'Apple's Reshoring Efforts: Driving Innovation and Reducing Supply Chain Complexities'.

²⁵⁷ European Commission, *Supply Chain Resilience in Europe: Lessons from the COVID-19 Pandemic* (2022).

²⁵⁸ Pascal Lamy's address to the Symposium *Globalization of Industrial Productive Chains and Measurement of International Trade in Value Added* (Conference, Senate Finance Commission and WTO Secretariat, Paris, 15 October 2010).

²⁵⁹ Vestas, 'Szczecin Factory Visit' (Vestas, 2023).

²⁶⁰ Volkswagen Group, 'Way to Zero: Volkswagen Presents Roadmap for Climate-Neutral Mobility' (Volkswagen Newsroom, 2021); The Times of India, 'Explained: How Apple Is Moving iPhone Production from China to India and Other Countries' (The Times of India, 30 November 2022).

²⁶¹ European Commission, *The Digital Markets Act: Ensuring Fair and Open Digital Markets*; European Commission, *The Digital Services Act: Ensuring a Safe and Accountable Online Environment*.

as semiconductors, to limit China's technological advancements.²⁶² China invests in domestic production and alternative supply chains to reduce reliance on U.S. suppliers. Meanwhile, geopolitical alliances, like BRICS+, are fostering regional supply chain systems to reduce reliance on traditional hubs, offering alternatives to Western-dominated production networks and addressing vulnerabilities exposed by trade disputes and sanctions.²⁶³

In response to geopolitical crises, health emergencies, trade disputes, and digital shifts, these interconnected strategies collectively redefine how GVCs operate.²⁶⁴ Such disruptions have highlighted the need for effective regulatory agreements to strengthen supply chain resilience. The IPEF Agreement on Supply Chain Resilience addresses these challenges by fostering cooperation among member states to ensure the stability and adaptability of supply chains. Its emphasis on collaboration, transparency, and diversification provides a structured approach for managing supply chain risks while enhancing economic security in the region.

3.2 The Indo-Pacific Economic Framework (IPEF) Agreement on Supply Chain Resilience of GVCs

The Indo-Pacific Economic Framework (IPEF) Agreement on Supply Chain Resilience is an innovative policy initiative. By focusing on actionable measures the agreement directly addresses vulnerabilities that disrupt global trade flows. It also serves as a guide for collaboration among its signatories rather than a traditional trade agreement dictating competition. Its adaptability ensures that GVCs can withstand shocks while maintaining availability of critical goods like semiconductors and pharmaceuticals. According to the Preamble “supply chain disruptions may be due to, among other causes, pandemics and regional epidemics, weather events, disasters declared or recognized by a central, regional, or local government, cyber incidents, logistical interruptions, insufficient supply of raw materials or components, bottlenecks, or armed conflict” Thus, it acknowledges how geoeconomic factors can impact the resilience of GVCs.

²⁶² Alison J Stafford Powell et al, 'US Department of Commerce Significantly Expands Controls Targeting Indigenous Production of Advanced Semiconductors in China' (Sanctions & Export Controls Update, Baker McKenzie, 6 December 2024).

²⁶³ World Reporter, 'BRICS Nations Reshaping Global Trade Patterns' (2024).

²⁶⁴ Aiyar et al, (n. 67), 6-7; Asian Development Bank, *Global Value Chain Development Report 2023: Greening Global Value Chains for Sustainable Development* (Asian Development Bank, 2023) 4, 3-5.

With this in mind, Article 10(2) provides criteria for identifying critical sectors and goods, such as the potential impact of shortages, the dependency on limited suppliers, and the geographic constraints. This process is mainly a response to China's dominance in global semiconductor production. It involves supply chain mapping under Article 3(8), which aims to enhance transparency by tracking materials from raw inputs to final products. Transparency through mapping allows businesses to identify and address bottlenecks before they lead to widespread disruptions.²⁶⁵

Accordingly, with the aim of proactively mitigating any risks, Article 11 proposes an evidence-based and data-driven approach to monitor supply chain capabilities, import dependencies and trade volumes of critical sectors or key goods. Together with Article 2(10), these provisions encourage the adoption of AI and automated tools that enable real-time data exchange and predictive analytics. The US, Japan and South Korea have already announced the use of predictive analytics in logistics in order to reduce supply chain disruptions.²⁶⁶ Developing data-sharing networks and adopting common digital protocols and standards can prevent delays and inefficiencies in GVCs. India has expressed concerns over technological and financial resources required to implement advanced digital infrastructure under the IPEF provisions.²⁶⁷ However, sharing information is essential as countries often know their imports and exports but lack insight into the components and materials their partners use to produce goods for their market. Thereby, Parties are committed to collaborate and identify vulnerabilities and bottlenecks through data comparison, information exchange, and joint planning. While data sharing among Parties is promoted, Article 2(6) and Article 13 protect sensitive information. Confidential business information and other proprietary data shall be safeguarded against unauthorized disclosure.

Furthermore, the Agreement draws lessons from the COVID-19 crisis to establish coordinated policies for addressing supply chain shortages. Article 2 endorses diversification enabling Parties to develop alternative supply courses instead of relying on Chinese suppliers. Vietnam's increased production of electronics, driven by incentives for foreign direct investment, serves as

²⁶⁵ Notably, article 10(3) requires Parties to identify critical sectors or goods using internationally recognised standards, ensuring consistency with WTO trade classification.

²⁶⁶ 'US, Japan, Korea Announce Early Warning System for Critical Minerals at Camp David Summit' (Supply Chain Dive, 18 August 2023).

²⁶⁷ Rohan Seth, 'IPEF and India's Digital Trade Dilemma' (ORF, 8 August 2023).

an example of diversification efforts in supply chains beyond China.²⁶⁸ Apart from that, it underscores the importance of domestic production capacities. By way of example, the US CHIPS and Science Act incentivizes domestic semiconductor manufacturing.²⁶⁹ Additionally, by investing in critical infrastructure, including upgrading transportation, digital logistics systems, and multimodal networks it aims to strengthen connectivity and efficiency. Alongside these measures, the Agreement aims to support MSMEs through risk assessments, economic development programs and technical assistance so as to strengthen their operations and their competitive participation in the digital economy. In Indonesia, as MSMEs comprise 99% of all businesses, the inclusion of MSMEs in the supply chain is important to the economy.²⁷⁰

In the event of a disruption, Article 12(3) establishes an early warning system that enables rapid communication and preparedness. For instance, it encourages collaboration between Parties through joint procurement mechanisms so as to reduce reliance on Chinese exports. As a matter of fact, in 2020, Australia and Japan used joint procurement agreements to secure medical supplies within two weeks of a supply chain disruption caused by COVID-19.²⁷¹ As a rule, according to Article 3 (1-2), minimizing sanctions and barriers and facilitating FDI in the markets of the Parties are primary commitments of the Parties, whereas according to Article 15 nations are enabled to secure critical interests, ensuring supply chains remain functional during geopolitical disruptions. Thereby, Parties are committed to implement or maintain processes to swiftly handle the export of goods in impacted sectors as well as abstain from efforts to sell goods or services at excessive prices during a supply chain disruption. The establishment of the IPEF Supply Chain Council, under Article 6, further strengthens regional cooperation among the Parties, coordinating annual reviews, developing sector-specific action plans and investment missions to address the vulnerabilities.

Besides, the Agreement includes a rapid-response mechanism. Under Article 12 (1-2), it stipulates emergency meetings within 15 days of a disruption request allowing parties to take

²⁶⁸ ‘Strong FDI Flow into Vietnam's Electronics Industry to Boost Exports’ (VietnamPlus, 11 December 2023).

²⁶⁹ U.S. Congress, "CHIPS and Science Act of 2022," Pub. L. No. 117-167, 136 Stat. 1366 (2022).

²⁷⁰ They contribute around 61% to the nation's GDP and provide employment for about 97% of the Indonesian workforce. ‘How Digitalization is Driving Growth for Indonesia's MSMEs’ (World Economic Forum, 17 May 2022).

²⁷¹ ‘Australia-Japan Joint Ministerial Statement in Response to the COVID-19 Pandemic’ (Department of Foreign Affairs and Trade, Australia, 2020).

swift actions, preventing minor disruptions from escalating into systemic failures. This practical mechanism enables governments to share critical information, such as the causes and expected impacts of disruptions, and facilitates a collective response to minimize disruptions on GVCs. Additionally, according to Article 7, the Supply Chain Crisis Response Network serves as an emergency communication channel during supply chain disruptions, allowing the Indo-Pacific nations to share information about disruptions and potential responses. It conducts stress tests and tabletop exercises to simulate crises so as to help Parties prepare effectively.

Lastly, the Agreement seeks to safeguard the sustainable function of GVCs. That's why Articles 2(9) and 3(4) set provisions on promoting efficient production, use, and recycling of resources. By reducing dependence on limited raw materials, it enhances the sustainability of goods and it reduces exposure to supply chain shortages.

The success of the IPEF Agreement on Supply Chain Resilience depends on its implementation, not just its signing or entry into force. Discussions on implementation have already begun, with the United States announcing support through initiatives like the IPEF STEM Exchange Program.²⁷² Meanwhile, Australia has pledged financial support for supply chain diversification,²⁷³ and South Korea hosted a symposium on monitoring efforts.²⁷⁴ With a three-year withdrawal restriction and mandatory five-year reviews,²⁷⁵ the agreement allows time to demonstrate its impact and adapt to evolving needs.

On December 12 2024, members of the IPEF convened virtually to explore enhanced collaboration in global supply chains. Action teams for critical minerals, semiconductors, and healthcare shared updates on collaborative efforts to address supply chain challenges.²⁷⁶ The meeting reviewed the progress of supply chain cooperation, which is now active in 11 of the 14 participating countries, and evaluated implementation plans for 2025.²⁷⁷

²⁷² U.S. Department of Commerce, 'Substantial Conclusion of Negotiations for Landmark IPEF Supply Chain Agreement' (Commerce, 27 May 2023).

²⁷³ Australian Minister for Trade and Tourism, 'IPEF Supply Chains Agreement: More Resilient Supply Chains in Uncertain Times' (Department of Foreign Affairs and Trade, 27 May 2023).

²⁷⁴ 'Korea to Host Seminar on IPEF Supply Chain Deal in Busan' *Inside Trade* (27 November 2023).

²⁷⁵ Article 23 (1) of the IPEF Agreement on Supply Chain Resilience.

²⁷⁶ 'Press Release: India's Participation in the IPEF Supply Chain Agreement' *Press Information Bureau* (India, 9 November 2024).

²⁷⁷ 'IPEF Members Discuss Supply Chain Cooperation in Chemicals, Chips' *The Assam Tribune* (Guwahati, 12 December 2024).

Given that the Preamble of the Agreement acknowledges the importance of fair markets and competitive markets, it emphasizes commitment to the rules-based multilateral trading system. Apart from this, Article 18, clearly states that the agreement does not permit actions inconsistent with WTO commitments. These provisions ensure that the IPEF agreement operates within the boundaries of WTO principles. Therefore, this plurilateral agreement complements the multilateral system, offering a practical means to address vulnerabilities in global value chains (GVCs).

3.3 Third-Generation Digital Plurilateral Agreements

As discussed in Chapter 1, after World War II, economic cooperation primarily relied on multilateralism, supported by institutions like GATT and the WTO.²⁷⁸ Over time, Regional or Preferential Trade Agreements (PTAs) emerged as complementary mechanisms, shaping cross-border economic activity. While these agreements were sometimes seen as alternatives to multilateralism, they often worked in tandem with it.²⁷⁹ PTAs can enhance trade by directing resources to more efficient regional producers, but they may also lead to trade diversion, favouring less efficient regional producers over more competitive external ones.²⁸⁰

In an era of increasing geopolitical fragmentation and rapid technological advancements, plurilateralism has emerged as a pragmatic approach to address global challenges without the bottlenecks of traditional multilateralism. The G7 meeting in Cornwall in 2021 identified the digital economy as a key area for governance and highlighted the importance of plurilateral agreements for managing the global economy.²⁸¹ These agreements enable smaller groups of countries to adopt specific trade commitments, often with the intention of expanding participation over time. Plurilateral agreements are not a new concept, but notable precedents emerged during the Tokyo Round (1973–1979) under the General Agreement on Tariffs and

²⁷⁸ Multilateral frameworks encouraged trade liberalization and harmonization of rules and this development reached its peak with the Marrakesh Agreement, leading to the creation of the WTO, Meredith Kolsky Lewis, *The Origins of Plurilateralism in International Trade Law* (2019) forthcoming *Journal of World Investment & Trade* 20(5), 1-16; M Dupuy, *Plurilateralism: The Key to Saving the World Trade Organization and Boosting Global Trade Liberalization* (2015) *Journal of International Organizations Studies*, 46-48.

²⁷⁹ The WTO explicitly allows RTAs under Article XXIV of the GATT, provided they do not increase barriers for non-members, ensuring their alignment with the multilateral system, General Agreement on Tariffs and Trade 1994 (adopted 30 October 1947, entered into force 1 January 1948), art XXIV.

²⁸⁰ Georgios Dimitropoulos, (n. 27), 16.

²⁸¹ Georgios Dimitropoulos (n. 14), 59-60, 69-73.

Trade (GATT). During that period, several agreements, or "codes," were negotiated primarily among OECD countries to address specific trade issues. Examples include the Agreement on Technical Barriers to Trade, which promoted transparency and international standards, and the Agreement on Government Procurement, which opened procurement markets to foreign suppliers. Other codes, such as those on Customs Valuation and Anti-Dumping, standardized procedures to reduce trade distortions and address unfair practices.²⁸²

As part of the evolving Geoeconomic Digital Order, third-generation digital plurilateral agreements highlight a new phase in international economic law. These are prominent in sectors such as digital trade and technology. The DEPA demonstrates this, creating practical rules for data sharing, e-commerce, and digital services among Singapore, New Zealand, and Chile. These rules simplify cross-border transactions and ensure businesses can operate smoothly in the digital economy. Unlike PTAs, these new plurilateral initiatives are typically more open to new participants and carry unique geopolitical implications.²⁸³

As discussed in Chapter 2, tensions between major powers like the US and China, alongside conflicts such as the Russia-Ukraine war, have disrupted global trade systems. Thus, GVCs are increasingly organized along political lines, moving away from the fully interconnected global economy of recent decades. Countries now impose trade barriers and screen foreign investments in critical sectors, often citing national security concerns.²⁸⁴ They are increasingly bypassing multilateral systems in favor of alternative approaches. These changes reflect a broader erosion of trust in open global markets and traditional multilateral institutions like the WTO. The US has withdrawn support for the WTO Appellate Body and justified tariffs on commodities like steel as matters of national security.²⁸⁵ China's state-driven industrial policies and India's resistance to consensus on agricultural subsidies further illustrate this departure from the multilateral model. Russia's actions in Ukraine have also disrupted supply chains and undermined the principle of territorial sovereignty. In this context, plurilateralism complements rather than replaces the

²⁸² Meredith Kolsky Lewis, (n.278), 1-16.

²⁸³ D Cohen, 'Law and Geography in International Economic Law: Geopolitical Considerations and Legal Norms' (2019) 15(3) *International Economic Law Review* 345, 372; D Collins, *Plurilateralism and the New Geoeconomics of International Law* (2024) *Journal of World Investment and Trade* (forthcoming), 3-6.

²⁸⁴ 'Biden Plans to Block Nippon Steel Purchase of US Steel, Bloomberg News Reports' *Reuters* (11 December 2024).

²⁸⁵ Office of the United States Trade Representative, 'Section 232 National Security Investigations of Steel and Aluminum Imports'.

multilateral framework. Geopolitical considerations drive the adoption of plurilateralism addressing gaps that multilateral institutions have struggled to fill.

During the Uruguay Round, as the WTO's establishment became certain, the Quad parties sought to eliminate the selective participation allowed under the GATT system. Membership in the WTO was made conditional on accepting all agreements, leaving no room for selective commitments. This shift transformed the previously multilateral approach into a comprehensive "omnilateral" system.²⁸⁶ Contrary to this, on the one hand, plurilateral agreements provide a practical alternative to the WTO, enabling like-minded countries to address specific issues like digital trade and data governance more efficiently by avoiding the need for universal consensus.²⁸⁷ Agreements on cross-border data flows, cybersecurity, and e-commerce facilitate smoother global transactions, directly impacting GVCs. The DEPA demonstrates how plurilateral agreements can quickly establish frameworks for interoperability in digital trade, in contrast to protracted WTO negotiations.²⁸⁸ In this sense, Michael Froman, a former U.S. Trade Representative, supported that when multilateral agreements lack consensus, plurilateral approaches provide a viable path for advancing key trade matters.²⁸⁹ On the other hand, plurilateral negotiations have been recognized as a way to advance specific issues within the WTO when universal consensus is hindered by a few dissenting members. This approach demonstrates how plurilateralism can address unilateralist tendencies while supporting the broader objectives of a multilateral regime for the digital economy.²⁹⁰

In terms of the negative aspects, plurilateral agreements may contribute to further fragmentation of international economic law and amplify power imbalances. Despite the scrutiny over effectiveness of the IPEF Framework,²⁹¹ proponents see it as a means to address fragmentation in

²⁸⁶ Meredith Kolsky Lewis, (n. 278), 5.

²⁸⁷ Bernard M. Hoekman and Petros C. Mavroidis, *Plurilateral Agreements in the Global Trading System* (RSC Working Paper, European University Institute, April 2024).

²⁸⁸ Hoekman, B. M., & Mavroidis, P. C. (2015). WTO "a la carte" or "menu du jour"? *European Journal of International Law*, 26(2), 319–343.

²⁸⁹ Michael Froman, 'Pragmatic Multilateralism: Remarks by USTR Michael Froman at the Graduate Institute in Geneva' (2016); Ferid Belhaj, *Policy Brief: Advancing Economic Cooperation in a Fragmented World* (Policy Center for the New South, May 2024), 3.

²⁹⁰ For this approach the paradoxical term "unilateral multilateralism" is used, Georgios Dimitropoulos, (n.27), 21.

²⁹¹ Lovely questions its exclusion of China, while Reinsch and Goodman argue that the absence of enforceable provisions weakens its impact. Lester highlights the need for mechanisms to address non-compliance, which remain undefined. Goodman suggests integrating IPEF into APEC to address these challenges. From a broader perspective, incorporating IPEF-like initiatives into the WTO could enhance participation, transparency, and institutional support, Claude Barfield, 'The Twilight of US Trade Leadership' (AEI, 2024; Mary E. Lovely, 'US Re-Engagement:

international law by allowing states to cooperate on shared goals without requiring uniformity. The IPEF Agreement on Supply Chain Resilience is an open and sector-specific agreement and it contemplates four ‘pillars’: trade, supply chains, clean energy/decarbonization and tax/anti-corruption. Partners are not required to join all four pillars. The voluntary and open nature of third-generation digital plurilateral agreements encourages participation without imposing rigid commitments, allowing countries to join later and making them adaptable to diverse economic and political conditions.²⁹² To illustrate, India chose not to join IPEF Pillar I (Trade) but it is a signatory of the IPEF Agreement on Supply Chain Resilience.²⁹³ This selective engagement, however, may benefit larger members like India more than smaller states. Even though it is argued that plurilateral agreements risk marginalizing less-connected states,²⁹⁴ Special & Differential Treatment (SDT) provisions support developing and least developed countries (LDCs), offering longer timeframes for implementing commitments, exemptions from certain obligations and technical assistance to build trade capacity.²⁹⁵

On the whole, plurilateralism enables targeted international trade cooperation without requiring uniform frameworks. Cooperative clusters of like-minded nations can drive effective policymaking and integration. As Okonjo-Iweala observes, factors such as emerging competitors, growing inequality within nations, the global financial crisis, the pandemic, and the war in Ukraine have led many to view global trade and multilateralism, the core principles of the WTO, as more of a risk than a benefit.²⁹⁶ Instead, plurilateralism gives prominence to the role of states in international governance, showing how public international law coexists with other normative systems.²⁹⁷ It highlights the dynamic nature of law, which evolves through interaction rather than following a fixed hierarchical plan. Thus, while multilateralism remains relevant, third-generation digital plurilateral agreements provide a practical way to address specific

Is a Framework That Builds Out China Realistic?’ (PIIE, 31 March 2022); Matthew P. Goodman and William Alan Reinsch, *Filling In the Indo-Pacific Economic Framework* (CSIS, 26 January 2022); Simon Lester, ‘Questions About IPEF Enforceability’ (International Economic Law and Policy Blog, 2023).

²⁹² DEPA, IPEF, APEP and IMEC are open plurilateral agreements. D Collins, (n. 283), 24-25.

²⁹³ ‘Press Release: India’s Participation in the IPEF Supply Chain Agreement’ *Press Information Bureau* (India, 9 November 2024).

²⁹⁴ Bernard M. Hoekman and Petros C. Mavroidis, (n. 287).

²⁹⁵ Georgios Dimitropoulos, (n.27), 22.

²⁹⁶ World Trade Organization, *Director-General Ngozi Okonjo-Iweala’s Speech at the Launch of the WTO World Trade Report 2023*.

²⁹⁷ The U.S. CHIPS Act complements IPEF’s focus on semiconductor resilience, showing how such agreements dynamically shape domestic regulations to meet collective objectives.

challenges, particularly in digital trade, supply chains, and technology, focusing less on tariffs and traditional market access.²⁹⁸

Plurilateralism is not a straightforward solution to complex international challenges, as creating legally binding agreements on economic activities remains a difficult task, particularly when political tensions are involved. As discussed above, through the IPEF's Supply Chain Agreement, member states are committed to work together. The effectiveness of the latter ultimately depends on how it is implemented and its ability to address the challenges of the current geoeconomic context. Plurilateralism can complement multilateralism by addressing specific challenges efficiently while multilateral institutions incorporate these initiatives to expand participation.

²⁹⁸ Georgios Dimitropoulos, (n.27), 27-28.

Conclusion

This dissertation has examined the role of new industrial policies in shaping global value chains (GVCs) in the digital economy. The transition from Liberal Internationalism to a fragmented Geoeconomic Digital Order echoes the changing priorities of major powers, China, the United States, and the European Union. Geopolitical tensions and technological revolution alongside financial and health crises, have revealed vulnerabilities in GVCs, which are marked by supply shortages, and delays. This uncertain environment has led to the revival of economic statecraft tools such as industrial policies offering targeted solutions. In absence of multilateral consensus, plurilateralism emerged to facilitate cooperation among nations, addressing challenges such as supply chain resilience, digital governance, and sustainable trade. New industrial policies and third-generation digital plurilateral agreements, though operating at different levels, complement each other by bridging domestic and international objectives.

The findings emphasize the interconnected roles of industrial policies, global value chains, and digital technology in this changing context. Through a comparative evaluation of governance strategies, this research underscores the diverse mechanisms nations adopt to address economic vulnerabilities while fostering selective international cooperation. By bridging theoretical and practical perspectives, the dissertation contributes to the broader understanding of international economic law and its application in addressing contemporary challenges. In an era of geopolitical uncertainty and technological advancement, the insights presented here offer a structured basis for rethinking global trade governance and ensuring the resilience of value chains.

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