



Noneconomic Objectives, Global Value Chains and International Cooperation

Bernard M. Hoekman^{1,2} · Petros C. Mavroidis³ · Douglas R. Nelson⁴

Received: 8 March 2023 / Accepted: 18 August 2023 / Published online: 2 September 2023
© The Author(s) 2023

Abstract

Systemic conflicts increasingly affect the global value chains (GVCs) underpinning globalization by creating policy uncertainty and politicizing trade and investment decisions. Unilateral policies to attain competitiveness and noneconomic objectives (NEOs), including national security, create incentives for international cooperation to attenuate policy spillovers. Recent initiatives seeking to do so are organized around supply chain governance and need not be anchored in trade agreements. Whether such cooperation is feasible and can be designed to be effective in realizing NEOs is unclear. Plurilateral GVC-centered cooperation offers a potential path for states to pursue NEOs and reduce policy uncertainty for international business. Research offers little guidance to policymakers on the design of such cooperation. A key open question is to determine whether explicit market access commitments are necessary to sustain cooperation. Creating mechanisms for the epistemic communities that are concerned with a specific NEO or policy area to interact with stakeholders and lead firms operating international production networks can help inform the design of cooperation to attain NEOs more efficiently.

This paper builds on a presentation at the Italian Trade Study Group meeting held at the University of Florence, Dec 1–2, 2022. We are grateful to three reviewers, Giorgia Giovannetti, Beata Javorcik, Beniamino Quintieri and meeting participants for comments and suggestions, and to the Jerome A. Chazen Institute for Global Business and APEC Study Center (Columbia University) (Mavroidis) and the ESRC-funded UK Centre for Inclusive Trade Policy (Hoekman) for financial support.

✉ Bernard M. Hoekman
bernard.hoekman@eui.eu

Petros C. Mavroidis
pm2030@columbia.edu

Douglas R. Nelson
dnelson@tulane.edu

- 1 European University Institute, Florence, Italy
- 2 Centre for Economic Policy Research, London, UK
- 3 Columbia Law School, New York, NY, USA
- 4 Tulane University, New Orleans, LA, USA

Keywords Globalization · Geopolitics · National security · Noneconomic objectives · Supply chain clubs

JEL Classification F13 · F15 · K40

1 Introduction

The establishment of the World Trade Organization (WTO) in 1995 was the capstone of a multi-decade process of building a liberal international trade regime. Unilateral decisions to open economies to trade and investment, involving a range of economic reforms, with the GATT and subsequently WTO and PTAs to lock in and deepen trade reforms, resulted in a striking reduction in trade and investment barriers.¹ Among the core trading nations, the years following the formation of the WTO can be characterized as coming close to approximating free trade.² Ironically, just as the WTO provided a stable and effective regime for managing trade, the fundamental structure of the world economy was changing. Dramatic improvements in information and communication technologies (ICT) along with steep reductions in transportation costs permitted firms to realize economies from distributing product development, intermediate production, final assembly, sales, and management services around the world while still maintaining efficient control over the whole structure (Baldwin 2016). Taking advantage of open markets and rapid improvements in information, communication and transportation technologies, firms throughout the global economy reorganized production into GVCs.

Developing nations, most prominently China, greatly expanded their share of global GDP (gross domestic product) and trade. One consequence was that trade and outward investment generated economic displacement in high-income countries. In parallel, trade came to be associated with major non-economic issues of public concern, notably the environment and broader social values. The WTO was designed to address the economic spillovers of national commercial policy. It is not an institution through which members agree on the appropriate use of trade policy to pursue objectives such as national security, protecting labor rights or combating climate change. In this paper we will refer to these sorts of issues collectively as non-economic objectives (NEOs).³ The need for consensus to adapt and update WTO rules and disciplines on the use of

¹ This process was accompanied by extensive foreign direct investment (FDI) that tended to be either horizontal (i.e., doing more-or-less the same thing in production facilities located abroad) or investment in extractive industries.

² Average tariffs at less than 2% is a close approximation to free trade. There are, of course, significant tariff peaks and emerging economies maintain higher average tariffs, but these countries have engaged in very considerable liberalization of border measures. Nontariff measures have become relatively more important as tariffs have fallen, but here also the types of quantitative restrictions and capital controls that were prevalent up to the mid-1980s have largely disappeared. While product standards and other types of product regulation are an increasingly prominent feature of the policy landscape, these are generally not intended as a form of protection for domestic producers but aim to protect consumers. As documented by Bown (2023), the early 2000s also saw a steady fall in the use of “trade remedies” (antidumping, countervailing duties, safeguards).

³ Francois et al (2023) discuss the economics literature on NEOs.

trade policies motivated by NEOs, in conjunction with major differences in preferences and priorities among the large trade powers, have led many states to adopt trade-NEO policies unilaterally. Often this involves policies that target GVC-based production and exchange, reflected in regulatory instruments seeking to make supply chains more resilient to shocks, to prohibit the use of specific inputs or production processes, reduce dependence on specific sources of supply of critical materials, intermediate inputs, and final products, and require due diligence and third-party auditing of international supply chain operations. Even if policies motivated by NEOs do not specifically target GVCs, they may—and generally will—have implications for GVCs. The EU has been at the forefront of using unilateral actions motivated by NEOs, reflected in measures enhancing its ability to respond to coercive use of trade policy by foreign countries,⁴ bolster screening of inward foreign investment,⁵ control exports of dual use technologies (European Union 2021), act against subsidized imports and restrict trade in goods that are produced in a manner inconsistent with EU values, and protecting the environment.⁶

In this paper, we argue that the use of measures affecting international trade and investment that are justified by NEOs should be informed by domestic processes that clarify the objective to be pursued, and inform national policy choices, and by deliberation and dialogue between states to consider and address the negative spillovers of policies justified by NEOs. Robust analytical frameworks to identify appropriate policy instruments and evaluate the effectiveness and efficiency of alternative measures targeting NEOs must include a focus on design, operation, and robustness of the GVCs associated with or impacted by NEOs, including their international dimensions and the scope/need for international cooperation to reduce adverse spillovers. This calls for analysis that goes beyond the default models and frameworks based on terms-of-trade effects and a presumption that cooperation takes the form of binding trade agreements (Bagwell and Staiger 2002).

The paper proceeds as follows. Section 2 briefly discusses the state of play in the WTO. Section 3 discusses the use of trade policy to achieve NEOs. Section 4 makes some specific suggestions to bolster cooperation among states to reduce spillovers on and from GVCs associated with national policies motivated by NEOs. Section 5 concludes.

2 State of Play in the WTO

The COVID-19 pandemic, Russia's war against Ukraine, concerns about excessive dependence on a small number of countries for critical materials, and more generally a desire to safeguard sovereignty and strategic autonomy ("policy space") has caused

⁴ https://ec.europa.eu/commission/presscorner/detail/en/ip_21_6642.

⁵ <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:02019R0452-20200919&from=EN>.

⁶ For instance, measures to ban imports of goods produced with forced labor (<https://www.euractiv.com/section/economy-jobs/news/meps-experts-ask-to-shift-burden-of-proof-in-forced-labour-products-ban/>); strengthened anti-subsidy regulation (https://competition-policy.ec.europa.eu/foreign-subsidies-regulation_en); Regulation to curb EU-driven deforestation and forest degradation; and supply chain due diligence requirements (https://ec.europa.eu/commission/presscorner/detail/en/ip_22_1145).

a reassessment of maintaining liberal trade and investment relations with potential adversaries.⁷ China is the major focal point for such reflection, one that has become a greater priority given China's explicit association with Russia's violation of Ukraine's territorial sovereignty, international law, and human rights. Unlike Russia, China is a major economic power. Views of China as a major economy that is open to trade and with a large stake in a rules-based global trading system are being replaced with concerns that China has illiberal international ambitions and a political system where the leadership confronts few constraints on the exercise of power. Because China has become so integrated in the world economy since the late 1980s, this reconsideration of China as a status-quo power increases national security concerns with respect to trade and investment relations. This pertains as much to firms as to states, reflected in investment responses by multinational companies to changes in Chinese economic policies.

While national security issues have become more prominent, they are additional to the global challenges that confront states, notably combatting climate change and pandemics, and using trade to achieve sustainable development. Rising pressures to use trade policy instruments to attain a range of NEOs—not only environmental but more broadly relating to values such as human rights—suggests a need to consider not just the use of trade policy justified by national security but also issue-specific cooperation that establishes criteria for the use of trade policy to pursue NEOs. There is no *prima facie* case that cooperation on policies in a range of areas that give rise to large spillovers is not feasible among states with very different governance and economic systems. On the contrary, the scope for such cooperation is substantial, in part because the differences are not as stark as often presented. Many emerging economies perceive that the state has an important role to play in the economy, but the same is true in OECD member countries, reflected in the state often playing an important role that goes beyond regulation of economic activity, including use of SOEs. The common agricultural policy of the EU and similarly extensive support provided to farmers in the US are examples that at the sector level government intervention in market-based economies can be extensive. Aerospace (support for Boeing and Airbus) provides another example, as do recent programs to subsidize the semiconductor industry on both sides of the Atlantic.

In principle, the WTO should be the focal point for efforts to cooperate and discuss rules of the road for trade instruments used to achieve NEOs. The WTO has three basic functions. It provides: (i) a forum where 164 members meet and negotiate agreements on trade-related policies; (ii) an elaborate system of disclosures, notifications, and multilateral surveillance to monitor implementation of negotiated commitments; and (iii) an adjudication process to address disputes between members. In the run-up to the 12th Ministerial Conference of the WTO (MC12) in June 2022, these functions no longer operated as originally envisaged in 1995. The membership had been unable to conclude the 2001 Doha round and generally confronted a deadlock on new proposed agreements. There was extensive dissatisfaction regarding the notification

⁷ The strategic implications of high levels of concentration in trade relations have long been recognized in the academic literature. See e.g., Hirschman (1945).

performance of many members. The US action forcing the Appellate Body to cease operation in 2019 greatly undermined the ability to settle trade disputes.

2.1 Rulemaking: The Negotiating Function

Conflicts regarding the use of trade policy call for negotiations to address associated negative spillover effects. In the two decades before MC12, WTO members were able to negotiate only one new multilateral agreement, the 2013 Trade Facilitation Agreement.⁸ Other topics that were part of the Doha round could not be agreed, in large part reflecting the increasing share of global production and trade accounted for by developing nations. China, India, and other large emerging economies grew consistently faster than OECD nations in the post 1995 period, leading to demands for greater reciprocity by OECD countries that were strongly resisted.⁹ The resulting deadlock led to a shift in rulemaking from Geneva towards preferential trade agreements (PTAs),¹⁰ given that cooperation on domestic regulatory instruments that affect trade and investment is more feasible in the context of arrangements that are limited to like-minded states. However, as most large developing countries have not participated in deep PTAs, the impact of the shift away from Geneva had only a limited impact in addressing sources of trade policy spillovers. More recently, the US has become less enamored of classic PTAs that encompass binding commitments on market access, eschewing new trade agreement negotiations, and instead seeking to pursue cooperation on regulatory matters with like-minded states through arrangements that do not entail binding market access commitments. Many of the associated issue areas concern policies to pursue NEOs.¹¹

International cooperation may increasingly center around non-PTA-based initiatives among groups of countries. This is nothing new for the trading system. GATT contracting parties successfully negotiated the first plurilateral agreements dealing with behind-the-border instruments (nontariff barriers) in the Tokyo round (1979).¹² Even the EU, a substantially more homogenous construct than the WTO, provides for variable geometry. In a multi-polar world dominated by a several large economies

⁸ https://www.wto.org/english/thewto_e/minist_e/mc10_e/nairobipackage_e.htm.

⁹ See e.g., Martin and Messerlin (2007), Narlikar and van Houten (2010), Wolfe (2015). Reciprocity by China was not a problem in the early 2000s as it was negotiated and reflected in the terms of its accession to the WTO.

¹⁰ Limão (2016) and Mattoo et al. (2020) discuss and document the steady increase in both the number of PTAs and the extent to which they go beyond the WTO in addressing domestic “behind-the-border” regulation.

¹¹ On the new US approach and thinking about trade agreements, see Sullivan (2023), Tai (2023). For an example of a non-trade agreement-based initiative to cooperate on trade related regulation, see the Indo-Pacific Economic Framework for Prosperity. See <https://ustr.gov/about-us/policy-offices/press-office/press-releases/2022/september/indo-pacific-economic-framework-prosperity-biden-harris-administrations-negotiating-goals-connected>. The US approach under the Biden Administration differs markedly with that of the EU, Japan, and other OECD countries, which continue to pursue deeper (preferential) trade agreements.

¹² An argument can be made that the trend commenced in the Kennedy round with the negotiation of the Agreement on Anti-Dumping Practices. This entered into force in 1967 but was never signed by the United States.

with dissimilar political systems, governance frameworks and core values, the WTO must accommodate variable geometry. Many WTO members recognize this. Starting in 2017 groups of WTO members turned to so-called joint statement initiatives (JSIs) and open plurilateral discussions on topics that pertain to NEOs, such as regulation to reduce plastics pollution and fossil fuel subsidies.¹³ Insofar as resulting agreements apply on an MFN basis, they are akin to coordinated scheduling of new commitments, and as such, should not raise doubts regarding their WTO consistency (Hoekman and Mavroidis 2015).

2.2 Dispute Settlement

Because of the US decision to block new appointments to the Appellate Body, the appeals function no longer operates. One result has been reticence of WTO members to submit disputes. The average number of submitted disputes fell from 24 per year before 2020, to seven since then (Mavroidis 2022). The Biden Administration has committed to work with other WTO members towards rescuing dispute settlement from its current fate, but so far has not undone the decision by the Trump Administration to block Appellate Body appointments, nor rolled back much of Trump trade policy more broadly. While re-establishing a functional dispute settlement system is important, it is not evident that formal adjudication is the appropriate path to address disputes arising from the use of trade policy motivated by NEOs, notably national security concerns. Alternative processes involving dialogue and debate are more appropriate and potentially more effective to address the use of trade for national security purposes (Hoekman et al. 2023).

2.3 Transparency, Dialogue, and Deliberation

Where rulemaking and dispute settlement are relatively well-specified tasks, “transparency, dialogue and deliberation” makes up a sort of residual category (by task, not by importance). Transparency is, in fact, clear and well-specified: members commit to publish and notify laws and regulations relevant to trade. Such notifications might be seen as a formal reflection of commitment to WTO process and an essential support to institutional legitimacy. For the core members of the WTO such reporting is unlikely to provide much information beyond what is already required by national transparency laws or available from publicly available sources but in conjunction with regular Trade Policy Reviews provides a basis for reflection by the membership on trade policy developments. “Dialogue and deliberation” are fundamental to the operation of a rule-based, liberal international order. These have always played an essential role in both rulemaking and dispute settlement, but the WTO has seen important innovation in these tasks, especially around Technical Barriers to Trade (TBT) and Sanitary and Phyto-Sanitary Measures (SPS) (Karttunen 2020).¹⁴ It is an important

¹³ In the run-up to MC12, one JSI resulted in a new plurilateral agreement on Services Domestic Regulation.

¹⁴ Karttunen, as well as Collins-Williams and Wolfe (2010), follow Fung et al. (2007, esp. Chap. 7) in treating dialogue and deliberation as “collaborative transparency”. Karttunen does this a part of a framing of a detailed analysis of SPS and TBT, but as part of a general analysis of the WTO this is essentially

and interesting question whether this sort of dialogue and deliberation is replicable in less technical areas—i.e. where the terms of discourse are not clearly set by bodies of technical knowledge.

3 NEOs and Global Value Chains

The WTO was created in a world in which most of the value added embedded in products originated in a single customs territory and was exported to another. Trade liberalization, along with reductions in transportation costs, supported concentration of production in large firms that reap the benefits of scale economies by serving global markets. The key barrier to trade of this sort was tariffs, and other border measures. While GVC production also capitalizes on low or zero tariffs that support relatively low cost cross-border movement of materials, inputs and semi-processed goods that make up a value chain, this sort of production is also more sensitive to behind-the-border policies—regulation and policies that define the business environment. Firms that can profit from GVC technologies will adopt them and the associated reorganizations of production can be expected to raise productivity at the firm level and, if the technologies are sufficiently widely adopted, raise aggregate productivity.¹⁵ The ability to profitably operate GVCs will be affected by policies in each country in which participating firms are located. Prevailing policy environments therefore will be a determinant of the design of GVCs (e.g., World Bank 2019; Antràs and Chor 2022).

The far-reaching changes in the extent and intensity of GVC-based division of labor makes firms, rather than sectors, the central objects of concern for policymakers. This raises issues that were much less salient when the GATT and WTO were designed. One is whether the ability of firms to shift parts of the production process in ways that Grossman and Rossi-Hansberg (2008) call “trade in tasks” affects the standard analytical frameworks for thinking about policy (which tend to evaluate policy in terms of sectors and factors with homogeneous sector attachments). Another is whether and how to cooperate on policies that are motivated by NEOs. But the essential challenge confronting any programme of thinking about the future of the liberal trading system is accommodating GVC production in a world economy characterized by systemic differences between large economic powers. Such differences pertain both with respect to policies targeting economic objectives and NEOs.

Like any enterprise, lead firms organizing GVCs need an environment conducive to recouping investments and profiting from economic activity (e.g., rule of law, enforcement of property rights, functional capital markets, etc.). Because GVC activities occur across multiple sovereign jurisdictions, the (re-)construction of a liberal trade and investment regime must involve some form of attempt to align policies motivated by NEOs that affect the functioning of firms in a GVC environment. In very broad terms,

Footnote 14 continued

a category mistake. The key here is discourse and deliberation, collectively seeking solutions away from formal dispute processes. Transparency supports, but is second-order to those tasks, as it is in negotiation and dispute settlement.

¹⁵ ICT technologies are examples of general-purpose technologies that have economywide impact (Bresnahan and Trajtenberg 1995).

this is the same programme undertaken by the members of the GATT/WTO for border measures in the post Second World War period: liberalization; transparency; and dispute resolution. However, because each of these will impinge on non-trade policy elites concerned with NEOs, it will not be possible to constrain the associated politics in the technocratic framework that served global trade politics well until recently. The relevant political and epistemic communities will be much messier.¹⁶

Globalization implies not only increased opportunities for firms to take advantage of production in places which offer a discount for looking the other way when, say, human rights are violated; but it also makes the fact of such opportunism more obvious, leading to a more active civil society response. While firms will seek to internalize the consequences of such responses, there is no reason that company decisions will align with the civil society or the state's objectives with respect to NEOs. GVCs may require (and permit) a more targeted response along a value chain to address a specific NEO, instead of a blunter response affecting a whole firm or industry.¹⁷ Independently of the specific NEOs that concern the policymaker, policy areas salient to NEOs relate to (overlap with) each other. At the level of the economy, this is the full general equilibrium, raising the question how a change in the structural or policy environment alters the payoffs of concern to the policymaker. For example, new GVC opportunities—e.g., digitalization and digital trade—will change incentive structures of firms, investors, and households. Some of those changes require no policy intervention, but sufficiently large changes are likely to set adjustment processes in motion that do require intervention. Large changes in the policy environment driven by NEOs may trigger spillovers across issue areas that must be explicitly incorporated in the policy optimization problem.

Examples of policies motivated by NEOs that target (impact on) GVCs include the EU Deforestation-Free Products Regulation, conditional cross-border data flow regimes (e.g., requirements under the EU General Data Protection Regulation that foreign firms operating value chains that entail cross border flows of personal data comply with EU standards of data protection), and mandatory due diligence of the operation of international supply chains by lead firms. Other examples are interventions motivated by national security, such as sanctions imposed on Russia by the EU and the US, export control regimes and screening of inward or outward foreign direct investment, and measures to safeguard access to essential materials and supplies (e.g., minerals), and subsidies to increase domestic sourcing of critical products, and retain and expand the capacity to produce high technology goods (e.g., batteries; semiconductors). In addition to the direct costs of such policies on affected supply chains and the associated responses by firms to re-tool or re-organize value chains, the step

¹⁶ The term epistemic community describes “a network of professionals with recognized expertise and authoritative claims to policy-relevant knowledge in a particular issue area” (<https://www.britannica.com/topic/epistemic-community>).

¹⁷ As GVC firms engage in labor markets at the level of the task, not the general factor (like labor) or the sector (like automotive) the application of traditional policy instruments may be ineffective, or worse. The issue is not the underlying objective function but, rather, development of appropriate information and analytical structures to understand the task structure of GVCs, including the national as well as the international economics. With better information, identifying the policy inventory, including possible new instruments, becomes a straightforward technical task that should inform the (political) instrument selection choice.

increase in unilateral policies seeking to bolster resilience and robustness of supply chains to shocks and “de-risking” international production networks may generate policy uncertainty with adverse effects for investment and the operation of GVCs.

3.1 Policy Choice: Effectiveness, Efficiency, and Tradeoffs

Designing policies to attain NEOs efficiently requires the use of analytical frameworks that help policymakers define NEOs, identify policy instruments that are feasible and among these select those that are effective and most efficient. Restrictive trade and investment policies and activist industrial policies to support domestic firms and activity is nothing new for economic analysis. Analytical frameworks to evaluate the effectiveness and efficiency of different instruments and tradeoffs across objectives were developed in the 1960s.¹⁸ The resulting theory of economic policy analyses economic objectives (EOs) in terms of distortions and policies in terms of responses to those distortions.¹⁹ For the case of EOs, the theory provides a clear analytical framework that permits explicit answers to the instrument identification, ranking and choice problems in an optimizing, welfare theoretic framework. Because the goal is economic efficiency, evaluation in terms of marginal conditions, and degrees of deviation from those conditions, permit a sensible and sophisticated analysis of policy choice and evaluation. For the case of NEOs, however, the theory assumes that such objectives cannot be analyzed with the measuring rod of money and therefore do not fit comfortably in the framework applied to EOs. Instead, the approach to NEOs is to treat a policy target that deviates from the undistorted equilibrium as a constraint in the analysis and identify the optimal intervention to achieve that target.²⁰

Corden (1957) is the first systematic analysis of NEOs using a theory of economic policy framework. Corden considers an industrial policy adopted for strategic or other political reasons, which involves greater production of the import-competing good than would occur in the undistorted equilibrium and shows that, for a large economy, the optimal policy involves the application of both a tariff (given by the optimal tariff) and a production subsidy. Harry Johnson builds on this approach, focusing on policies that seek to promote NEOs “...of various kinds, identified in one way or another with the effects of the tariff on domestic production and consumption of certain products.” (Johnson 1960, p. 341). Bhagwati and Srinivasan (1969) develop this type of analysis

¹⁸ Johnson (1960), Bhagwati and Ramaswami (1963), Bhagwati (1967) and Bhagwati et al. (1969). For a modern textbook treatment, see Bhagwati et al. (1998, Part III).

¹⁹ In the standard 2-good \times 2-factor \times 2-country framework that motivates much of this early analysis, the undistorted economy is characterized by equalities between the marginal rate of transformation (i.e. slope of the production possibilities frontier), the marginal rate of substitution (i.e. slope of the social welfare function) and the marginal rate of transformation through trade (i.e. the “foreign rate of transformation”, which is the world price for a small economy)—usually denoted $MRT = MRS = FRT$. In addition, the marginal rates of technical substitution between the two factors must be equalized between firms in the two sectors (given the assumption that firms in each sector share the same constant returns to scale technology). The failure of each of these equalities yields the typology of distortions that is the core of the theory of economic policy: monopoly power in trade ($FRT \neq MRT = MRS$); production externality ($MRT \neq MRS = FRT$); domestic monopoly ($MRS \neq MRT = FRT$); and nonoperation on the production possibility frontier (failure of equality of MRTS between sectors).

²⁰ What follows draws on Francois et al. (2023).

further, analyzing four types of NEOs: (i) production of a good should not fall below a certain level; (ii) consumption of a good should not exceed a certain level; (iii) import or export of a good should not exceed a certain level; and (iv) the level of factor use in a good should exceed a certain level.²¹ These are not actually objectives, but instruments for achieving goals given from outside the model. There is no real way to compare, in welfare terms, the level of achievement of a NEO with EOs, but for each NEO there is a parallel EO which is characterized by the same ranking of policies.²² As with EOs, the ranking is based on using the least distorting method of pursuing the NEO.

The early papers on the theory of economic policy use basic 2-good \times 2-factor \times 2-country models. Vandendorpe (1974) extends the analysis to the m -factor \times n -good case, showing that the optimal NEO structure involves a differentiated (as opposed to uniform) tax structure. Another extension that is pertinent to GVCs is Tan (1971), who analyzes the case with imported materials, inter-industry flows and non-trade goods. Tan shows that a NEO calling for "...a minimum level of *gross* production of any good requires a tax-cum-subsidy on gross domestic production; a goal of achieving a minimum level of *net* production of any good requires a subsidy on gross production combined with a tax on inter-industry linkage," while with imported intermediates "self-sufficiency is no longer identifiable with curbing of final imports (since imports of intermediates still need to be paid for); and a goal of increasing domestic value-added is optimally met by uniformly subsidizing domestic inputs" (Tan 1971, p. 105).²³

With very few exceptions (e.g. Johnson 1960), the trade literature on NEOs tended to focus on the cost of achieving a fixed NEO. As a result, that literature could not contemplate tradeoffs across objectives where some are NEOs, in contrast to the way trade theory, as well as public economics, could (and did) focus on tradeoffs across EOs (since EOs are evaluated purely in terms of efficiency considerations). The same problem emerges at a more meta level when considering analysis of the WTO as a system. While it is clearly interesting to evaluate the creation and operation of the GATT/WTO system through the lens of terms-of-trade effects, since NEOs such as national security or democracy or labor market justice are not reducible to straightforward analysis of the standard marginal conditions, that sort of analysis will be generically incomplete and potentially misleading.²⁴ For example, it is hard to explain the drive to create the GATT away from a clear understanding of the demands of Cold War foreign policy. Similarly, faced with environmental catastrophe, a land

²¹ Johnson considers tariffs as an instrument to achieve five specific NEOs: (1) to promote national self-sufficiency and independence; (2) to promote diversification, industrialization, or agriculturalization; (3) to promote a "way of life"; (4) to promote military preparedness and (5) a bargaining tariff.

²² This is proposition 3.ii in Bhagwati (1971): (a) When distortions have to be introduced into the economy because the values of certain variables have to be constrained, the policy interventions that do this can be ... welfare ranked. (b) The ranking of these policies is further completely symmetrical with that under the "corresponding" class of [economic objectives]. (p. 18).

²³ Rodrik (1986, 1987) makes the important point that, in a full political economic equilibrium, the ranking of interventions in terms of cost may differ from the ranking that does not consider response by politically engaged agents. Rodrik points out this is true for both economic objectives and NEOs.

²⁴ Of course, as Samuelson makes clear in Chapter 9 of the *Foundations*, there will still be marginal conditions characterizing the optimum (because "best policy choice" is still about optimization), NEOs will require content in the objective function that is not necessary for the analysis of EOs.

war in Europe and concerns about economic justice, internalization of a terms-of-trade externality provides at best only a very incomplete analysis.

Heterogeneous and inconsistent domestic policy regimes make management of GVCs more difficult and riskier. The increasing concerns with respect to access of potential geopolitical competitors to sensitive parts of supply chains compounds the challenge. The main issue is dependence on countries that may seek to exploit some level of economic dependence in a coercive way. A contemporary example in the tech sector concerns exposure of sensitive information. Although such concerns motivate talk about reducing dependence and “de-risking” supply chains, there is nothing inherently different about this relative to the older literature about national security policy. If there is genuine increased exposure to geopolitical risk, there is a justification for policy. However, that justification rests on a demonstration of genuine risk. In most cases, there are multiple sources of supply, including from reliable allies. This logic rendered the Trump administration claims about national security risks in steel and aluminum obviously fallacious.

Similar considerations attend concern with the wider array of NEOs. For example, GVCs do not appear to bring any essentially new issues to the consideration of environmental policies. While it is clearly the case that firms can, and in fact do, shift pollution along value chains in ways that may increase total pollution (though the overall effect is empirically complicated, see Copeland et al. 2022), the fundamental policy issues in terms of the instrument inventory and the selection from that inventory do not change significantly. The clearer the trade-offs involved, the better will be overall policy from the perspective of national pursuit of the underlying objective function. Much of the domestic politics around the use of trade policy to attain NEOs is about who gets to define these tradeoffs. This calls for recognizing potential interdependencies and spillovers across issues. An insistence on values (labor standards; rule of law) may come at cost of military security; energy security may require relaxing environmental policies that otherwise would preclude use of more polluting technologies.

Efforts to address concerns regarding the use of trade measures on NEO grounds through policies targeting GVCs would benefit from applying elements of the theory of economic policy, asking three basic questions (Hoekman and Nelson 2020):

- What is the problem?
- What instruments are available to deal with the problem?
- Of those instruments, which politically feasible one(s) achieves the goal at lowest cost?

The first step is to determine what the policy objectives are with respect to GVCs and the firms that manage them. There is nothing about GVCs that should cause a change in the objective function of states (or civil society). The weights on various components of the objective function may change, and the instruments appropriate to respond to an economy characterized by GVCs may change, but the fundamental objectives are determined by factors other than the use of GVCs and new technologies and economic opportunities for firms. Take the case of national security. If conflict breaks out, how easy is it to repurpose domestic production for national defense purposes? Are there alternative sources of the products? What is the level of supply risk? What is the additional output necessitated by the presence of geopolitical risk,

given the opportunity cost in terms of domestic production and consumption? All these questions should feature in assessing the resilience and robustness of GVCs to large shocks and the potential to confront attempts to exercise market power to restrict trade in key products. Insurance against sanction risk involves diversification of sources of supply of critical products, securing supplies of strategically important goods and establishing or maintaining domestic production capacity.

Assessing exposures when production involves GVCs will be more complex than in a world where production is mostly national, but this does not change state preferences with respect to security. The appropriate response is securing better information so that risks can be better evaluated. If it turns out that some specific links in a GVC are exposed to this sort of risk, and it can be shown that firms are unconcerned with (i.e., do not take action to protect against) that risk, policies targeting the weak links are appropriate. As in the general case, the appropriate instruments will be some form of targeted subsidy to ensure hardening of the link and/or resilience.²⁵ By targeting genuine national security problems more precisely than at the simple sector level, the cost of an appropriate national security policy could be lower.

Analytical frameworks to help decision-makers to recognize and evaluate the inevitable trade-offs between efficiency and greater security associated with policy choices must consider both the underlying goal(s) and the utility of alternative instruments to achieve them. If the goal is to expand output or the capacity to produce a given set of goods and services deemed vital to national security, basic economic theory suggests use of subsidies (Bhagwati and Srinivasan 1969). An import tariff or ban would also support domestic production but incur a potentially avoidable consumption cost. Overall, there is little justification for a general policy of “friend-shoring” or the use of trade policy instruments to encourage re-shoring of value chains. Insofar as specific goods are so essential to national security that domestic capacity must be expanded beyond what obtains from the normal operation of the market, or more generally, call for diversification in sourcing of critical supplies, intervention may come at the cost of economic inefficiency.

The foregoing suggests the importance of establishing frameworks and processes for deliberation, independent analysis and mechanisms that can guide and inform the use trade measures to pursue NEOs, recognizing that much of the real income gains and global poverty reduction realized in recent decades through international specialization and trade is associated with GVC production (World Bank 2019). Moreover, as elaborated in Hoekman et al. (2023) adjudication is not geared towards elucidating the goal of contested policy instruments and whether they are effective or efficient, focusing instead on pronouncing on the legality of challenged measures. A process that centers on a government clarifying its policy objectives can guide a discussion on the effectiveness and (opportunity) cost of alternative instruments to realize NEOs.²⁶ Most

²⁵ We abstract from large country considerations that may motivate optimal tariffs. While technically a first-best trade intervention, this has never seemed a plausible basis for policy to either decisionmakers or analysts. This becomes even more difficult in a GVC world because identifying the appropriate optimal tariff schedule for a specific GVC and the economy that embeds it is empirically impossible.

²⁶ One of the virtues of the theory of economic policy as a framework for such discussion is precisely the recognition that trade policy is an instrument, not an objective, of policy. The discourse around trade policy should consider, as a central component, what it is that trade policy can, and should, target as a policy goal.

countries have bureaucratic mechanisms for evaluating national security risks associated with trade and investment.²⁷ As was revealed during the COVID-19 pandemic, in many countries this is not the case for broader economic security, public health or environmental risks that are associated with GVC-based production and trade (Findlay and Hoekman 2020). Ex ante evaluation of such risks calls for collaboration with lead firms that operate and control GVCs for essential products. Post COVID-19, rising concerns about excessive dependence on China for essential products and Russia's war against Ukraine and the consequent trade sanctions and supply chain disruptions for energy, food and fertilizers, governments have launched efforts to determine instances of high dependence on one or a small number of suppliers for key products and inputs (e.g., European Commission 2020; White House 2021).

Some of these assessments have motivated policies to reduce dependence by incentivizing domestic production of products deemed to be important for sustaining autonomy and reducing risks that trading partners might weaponize trade dependence (Farrell and Newman 2019). Both the risk assessments and policy measures motivated by them are mostly national in nature. Generally limited effort is devoted to working with foreign governments to assess and reduce supply chain risks, improve the ability to respond to shocks and cooperate in pursuit of shared NEOs. Given the multi-country nature of GVCs, realization of many NEOs requires international cooperation. This can take different forms. In what follows we discuss two types: information sharing and analysis of supply chain risks and resilience, and cooperation to pursue shared NEOs.

4 International Cooperation

Domestic policymaking settings often devote little attention to the consequences of policy choices on third parties, potentially leading to decisions that are unnecessarily inefficient and/or costly for trading partners. Mechanisms that help inform when and how to use trade to attain NEOs should explicitly consider GVCs. Policy dialogue and discussion of trade concerns, including existential threats (national security-related, environmental, global pandemics) that make large claims on resources, can help to manage the negative spillovers of national policies motivated by NEOs. Agreement on guardrails, let alone binding rules on contested policies, requires the major players to have a common understanding of the sources and magnitude of policy-induced spillovers.

Footnote 26 continued

By emphasizing a discussion of the set of potential instruments that might be targeted on a given objective (the "policy space" associated with that objective), the constraints on selection from that set, and the ways that the objectives are related to the underlying economics and politics, it should be possible to get greater clarity with respect to the role of trade in the broader NEO context.

²⁷ In the case of imports or exports of goods or services, this may occur at any point in time. As Bilateral Investment Treaties protect investment post-establishment, national security considerations and associated review occur ex ante, i.e., before foreign investment occurs.

4.1 Sharing Information, Monitoring and Evaluation: GVC Knowledge Platforms

Designing mechanisms to support engagement with firms and other stakeholders can help provide countries with information to enhance their understanding of the operation of specific GVCs that are associated with products that governments deem critical, or policies that target GVCs with a view to attain specific NEOs.²⁸ The COVID-19 pandemic revealed that governments were irrationally ignorant when it comes to understanding how GVCs for medical products work, their resilience to shocks and what governments should do, both nationally and collaboratively, to develop new vaccines, therapies, and distribute medical supplies globally (World Bank and World Trade Organization 2022). One lesson from the pandemic responses is the need for cooperation and collaboration and sharing information on the operation and design of the associated supply chains. Such data must come from firms, who are likely to be concerned that providing such information may assist competitors or violate antitrust regulations. Conversely, governments may not trust information provided by private sector operators. As discussed in Findlay and Hoekman (2020), this calls for a trusted intermediary that acts as a depository, anonymizes relevant data on the operation of GVCs and undertakes analysis that addresses salient policy concerns defined by governments.

Miroudot (2020) makes a compelling case for investment by governments in better understanding different types of risks to GVCs that produce critical goods and services as a precondition for considering policy interventions, as these otherwise run the risk of being ineffective or counterproductive in enhancing resilience. Such risks include demand or supply shocks deriving from natural events or the use of trade for foreign policy reasons by dominant suppliers of critical products. Assessing such 'supply chain vulnerabilities' has been a major focus of governments following the value chain disruptions caused by the COVID-19 pandemic and the war against Ukraine by Russia.²⁹ How to reduce the supply risks is a common challenge for many governments, suggesting cooperation in undertaking assessments and identifying desirable policy responses. The same is true for policies mandating supply chain due diligence, e.g., requiring that firms audit and monitor operations to ensure human rights are not violated and prevailing environmental standards are met. Here also cooperation can reduce policy uncertainty for enterprises and help governments identify the type of intervention that is needed to ensure supply chains satisfy salient standards associated with NEOs.³⁰

Platforms through which the public and private sector can work together to agree on methods that are feasible and efficient to measure and track NEO-related variables of public interest—such as measuring the carbon content of GVC activities—could help both firms and governments by clarifying what should be monitored and how to do so in ways that satisfy regulatory objectives (Findlay and Hoekman 2020). Doing so in a cooperative manner with a view to developing approaches that can be

²⁸ In what follows we will use the word platform to describe such mechanisms.

²⁹ E.g., White House (2021), United States (2022), European Commission (2020).

³⁰ Baldwin and Freeman (2022) note that assessment of risk-reward tradeoffs associated with GVCs may differ between the private and public sector, reflecting greater risk aversion by voters.

adopted by multiple jurisdictions would reduce compliance costs for firms and the burden on governments (national regulators) of developing criteria to use to ascertain implementation by companies. Similarly, if the goal of governments is to reduce excessive dependence on key suppliers and ensure access to critical raw materials through diversification across existing suppliers and/or by allocating subsidies to boost additional supply of critical inputs and raw materials,³¹ collaboration to generate and share information on extant production capacity, stocks and weak links in supply chains can help identify potential areas for joint action to bolster supplies. Information on the operation of supply chains is a key input into efforts to identify potential points of failure that can affect the economy.

4.2 Clubs

Alliances (clubs) have long been a form of cooperation among states and are likely to figure more in the future as vehicles to support regulatory cooperation to achieve NEOs. Recent examples of nascent clubs include the US-led Indo-Pacific Economic Framework (IPEF) for Prosperity³² and calls for “friend shoring” value chains and associated trade and investment (Yellen 2022).³³ Insofar as states decide on trade and supply chain initiatives that involve concerted action and cooperation to diversify sourcing of critical inputs, collaboration on measures to control trade and foreign investment in a jointly agreed set of dual-use technologies, etc. this need not take the form of traditional (deep) trade agreements. The trade economics literature, including recent papers that consider regulatory regimes and not just border measures, generally takes as given that cooperation will center on deep trade agreements (e.g., Grossman et al. 2021; Maggi and Ossa 2021; Kawabata and Takarada 2021; Parenti and Vannoorenberghe 2022). Initiatives such as IPEF, a proposed EU Raw Materials Club (European Commission 2020, 2023) and nascent plurilateral initiatives by states to consider that national personal data protection frameworks are equivalent (Ferracane et al. 2023) illustrate that trade agreements may not be needed to sustain international cooperation on regulatory policies and underlying NEOs.

Whether clubs can be open to broad membership and apply benefits on a nondiscriminatory basis will depend on the issues they address. Security-related clubs of countries joining together to safeguard their autonomy or respond to potential economic coercion or national security threats from non-member states will by nature be discriminatory in the sense that trade in certain types of products deemed to be sensitive will be restricted by club members. Cooperation has long occurred between states on export control regimes for weapons and dual use technologies. The Wassenaar Arrangement on export control of dual use technologies is an example. It promotes information sharing on export licensing regimes for trade in dual-use goods and technologies and

³¹ See e.g., Nakano (2021).

³² <https://ustr.gov/about-us/policy-offices/press-office/press-releases/2022/september/indo-pacific-economic-framework-prosperity-biden-harris-administrations-negotiating-goals-connected>.

³³ Viz. G7 Trade Ministers committing “to enhance cooperation and explore coordinated approaches to address economic coercion both within and beyond the G7...” <https://www.bmwk.de/Redaktion/DE/Downloads/G/20220915-g7-trade-ministers-statement-neuhardenberg-15-september-2022.html>.

conventional arms. The Arrangement spans 42 countries. It is a voluntary, ‘soft law’ regime that has expanded over time to include a focus on threats from non-state actors, cybersecurity, and technologies that may be used to violate human rights—e.g., trade in cyber-surveillance technologies. While a useful platform for dialogue and information sharing, it is not a mechanism for participants to deny a specific state or states access to specific technologies. This is left to nation states. States may decide to act jointly in this regard,³⁴ and calls have been made for like-minded nations to do so—e.g., Barker and Hagebölling (2022) have suggested a multilateral technology access and control club that brings together like-minded states to jointly determine whether to restrict access to specific technologies. By construction, any such club would discriminate against states deemed to threaten the security of club members but would nonetheless benefit from transparency and information sharing with non-members on the rationale for taking joint action, and as well as cooperation in assessing the effectiveness of the measures taken.

From a GVC perspective, the greatest potential for open, nondiscriminatory clubs is likely to exist for NEOs other than national security. Many of the NEOs pursued by states—human rights, labor standards, reducing carbon footprints and environmental degradation—are shared by other states. Cooperation and coordination among like-minded nations is a means to enhance the impact of domestic policies in realizing a given NEO. In practice, effective actions will call for a deep understanding of how GVCs work, as policies will need to affect the behavior of the actors involved in GVCs to help achieve societal NEOs in ways that are effective and efficient and reduce negative spillover effects. There may (will) be overlaps across NEOs and thus potential synergies (complementarities) that can be realized through club-based cooperation. The need to shift to renewable energy as part of reducing carbon emissions is an example. Solar-generated energy, expected to account for the greatest share of the energy mix in the future, will be associated with a large increase in global demand for critical raw materials. Given long lead times for expanding and developing mineral supply chains, socio-environmental regulation, geographical concentration of the associated natural resources, political risk and great power rivalry in pursuit of supplies, there is a significant prospect for instability and supply shocks that affect the renewables value chain and energy network (Nijse et al. 2022). Clubs that cooperate on mitigating these risks along the value chains—through joint investment in expanding and diversifying upstream supply, bolstering processing capacity, and recycling could address these challenges.

In previous work we have argued that the WTO should become more accommodating of clubs, given the high likelihood that WTO members will otherwise continue to cooperate through preferential trade agreements and non-transparent issue-specific arrangements (Hoekman and Mavroidis 2015; Hoekman and Nelson 2020). WTO

³⁴ An EU regulation aims to ensure that in the area of dual-use items, Member States fully take into account international commitments, obligations under relevant sanctions, considerations of national foreign and security policy including human rights, and intended end-use and the risk of diversion of dual-use items, including those identified by the Australia Group (<https://www.australiagroup.net/>), the Missile Technology Control Regime (<http://mtrc.info/>), the Nuclear Suppliers Group (<http://www.nuclearsuppliersgroup.org/>), the Wassenaar Arrangement (<http://www.wassenaar.org/>) and the Chemical Weapons Convention (<https://www.opcw.org/chemical-weapons-convention>). See European Union (2021).

members that use trade policy to pursue non-trade goals—e.g., conditioning access to the market on satisfying specific production requirements—can always do so in a coordinated manner, i.e., engage in concerted unilateralism. This could be, in principle, consistent with WTO rules. One element of WTO reform should center on creating a framework that accommodates open plurilateral agreements (OPAs) affecting trade in certain products to which a subset of members subscribes but that are applied on a nondiscriminatory basis (Hoekman and Sabel 2021). Clubs that provide a framework to guide action to pursue shared objectives, or to reduce the compliance and implementation costs for business of regulation aiming to influence the design and operation of supply chains, e.g., due diligence requirements, can help clarify objectives, reduce uncertainty through improved transparency, and provide a framework for dialogue, monitoring and evaluation.

Many developing countries do not support efforts to negotiate OPAs, reflecting concerns about potential discrimination and exclusion, legitimacy (e.g., arguments that this is a means for powerful states to set rules of interest to them while excluding issues of importance to non-participants); government capacity constraints and asymmetries; and the potential for pressure being exerted on non-parties to join in the future without being to alter what was agreed by the incumbents. Accommodating more plurilateral agreements in the WTO would be facilitated by a strong governance framework to ensure they are consistent with the rules-based trading system. In related work on plurilateral cooperation we have proposed possible criteria for OPAs, including being open to any WTO member, provisions to provide technical and financial assistance to countries seeking to accede, transparency and regular reporting to the WTO membership on the implementation of the agreement (Hoekman and Sabel 2021). Credible commitments to this effect by members are important preconditions for OPAs to support the multilateral trade regime. Putting in place a framework that encourages WTO members to use WTO-sanctioned clubs instead of PTAs or to engage in concerted unilateral action to address the use of trade policy to support NEOs is in all members' interest. Greater scrutiny, transparency and discussion of the rationale and analysis of the effects of trade-nontrade issue linkages pursued by groups of countries would benefit the jurisdictions pursuing such policies as well as those that do not but may be affected. A multilateral framework to guide the use of trade policy motivated by NEOs by groups of like-minded economies would benefit members of potential clubs in designing and implementing policies that are effective and efficient, and benefit non-members by enhancing transparency and providing opportunities to engage with club members with a view to reducing potential negative spillovers of measures adopted by the club, as well as a pathway for gradual multilateralization of cooperation to achieve shared NEOs.

Recent club-based initiatives tend to be 'soft law' initiatives in that they lack binding dispute settlement mechanisms—which are a central feature of trade agreements. While it is often argued that this makes such arrangements less pertinent (valuable), such arrangements can and do produce tangible results. The resolution of the long-running Airbus/Boeing dispute is an example. This did not emerge from formal dispute settlement but reflected a bilateral informal agreement. Greater use of deliberative mechanisms in the WTO, as suggested by European Union (2023), is a means of avoiding litigation on complex matters, instead leaving it to the principals, supported

by independent analysis and Secretariat support, to identify possible solutions that are not bounded by a legal text.

There is an important outstanding research agenda concerning the feasibility of “NEO clubs” and the design of international cooperation motivated by NEOs. The increasing prominence and salience of NEOs implies a need to consider both economic objectives (the basic assumption in modeling of trade agreements) and NEOs in the analyses of trade cooperation. Trade agreements are designed to achieve economic objectives and the analytical literature focuses on this dimension. They encompass substantially all trade between signatories and constitute package deals in which issues are linked to each other, with negotiations involving both within and cross-issue trade-offs. The standard rationale for including many issues in a trade agreement is to expand the bargaining set and thus the potential net gain from an agreement to parties.³⁵

What is needed are analytical frameworks that consider the feasibility and design of issue-specific plurilateral cooperation that is not accompanied by market access commitments; includes domestic interest groups (as opposed to a unitary state assumption); and considers factors such as transaction costs, uncertain payoffs and alternative enforcement mechanisms. We currently do not have robust models that help to understand non-trade agreement-based cooperation and inform initiatives such as the IPEF or OPAs. If technical interdependencies across issues (complementarity or substitutability of policy instruments) call for issue linkage, states confront a choice between negotiation a package or pursuit of multiple issue-specific plurilateral agreements. Multiple issue specific clubs are likely to have non-overlapping memberships, a factor that does not arise in a trade agreement setting where a package of linked commitments applies to all members. Multiple domain-specific clubs allow for flexibility (variable geometry) to reflect differences in preferences, which is more difficult to accommodate in a trade agreement (although exceptions may be negotiated) but differentiated memberships of clubs will limit benefits of cooperation if issues are complements and constrain cooperation if they are substitutes. Participation linkage strategies across different plurilateral initiatives give rise to similar challenges as those arising in negotiating a multilateral package deal.

5 Conclusion

Noneconomic objectives have moved center-stage in world trade, with yet to be determined implications for the ability to continue to employ and rely on GVCs to produce and distribute a wide range of goods and services. There is an increasing focus on reshoring, near-shoring and friend-shoring trade, investment and associated value chains that are not necessarily embedded in (deep) PTAs. Lead firms that operate GVCs to produce and distribute goods and services around the world confront rising political risk and policy uncertainty, forcing a re-think of their international investment and commercial partnership strategies. The boundary between national security

³⁵ Maggi (2016) distinguishes between enforcement, negotiation, and participation linkage and their implications for the design of international cooperation. This framework is relevant because of its focus on linkages between trade policy and non-economic policies, but the focus remains on contexts where countries make binding market access commitments.

and other NEOs such as sustainable development, protection of the environment and combatting climate change has become fuzzier. The scope of national security has expanded because of technological developments and accompanying threats that go beyond traditional military considerations such as regulation of arms or exports of dual use technologies. Increasingly, other NEOs—notably combatting climate change through reductions in carbon and other greenhouse gases and safeguarding human rights—overlap with national and economic security goals. The ability of the world to shift to renewable energy sources depends in part on access to critical raw materials and the development of new technologies.

The threat to the open rules-based trading system and the global integration that this system has helped support, notably through GVC-production, is significant. Continued pursuit of unilateral measures to attain or protect NEOs is likely to be costly, both to the countries doing so and to those that do not—mostly lower-income developing nations that depend on the ability to engage in trade and participate in GVCs. Recourse to policies to induce reshoring and friendshoring, whether for economic or noneconomic reasons is not only likely to be costly but ineffective. International cooperation should help inform and guide policy aimed at NEOs with a view to reducing negative spillovers, while recognizing and accepting that states (must) have the freedom to regulate their economies as they deem appropriate to attain domestic objectives, and to retaliate against unilateral measures that violate commitments negotiated in the past.

The fact that China acceded to the WTO and accepted the many conditions and requirements that were associated with membership, and arguably has mostly implemented what it agreed to and largely complied with dispute settlement rulings, illustrates that in principle cooperation on rules of the road that extend beyond border barriers is feasible. The request by China to accede to the Comprehensive and Progressive Trans-Pacific Partnership (CPTPP) and the successful conclusion of the Comprehensive Agreement on Investment (CAI) talks with the EU, which included disciplines on subsidies and state-owned enterprises (SOEs),³⁶ suggests that systemic differences need not preclude agreement on new rules of the road to attenuate pecuniary and nonpecuniary international policy externalities. The challenge is to determine where cooperation is feasible on an issue-by-issue basis and what form cooperation should take, informed by an understanding of the GVCs that are used to produce and distribute goods and services and the likely effects—and effectiveness—of national policies that seek to influence their design, location, and operation to achieve specific NEOs.

The idea that there can be no agreement on common purpose between nations with very different economic and political systems is fallacious insofar as the common purpose relates to the international trade regime. There is no reason why the core members of the WTO cannot find an understanding of common purpose. Agreeing to adjustment in the current rules is a major challenge, but it is not clear to us that it is a bigger challenge than many of the changes the international order has already absorbed. The framers of the post-War order were dealing with radically new domestic political-economic environments that differed quite widely across GATT contracting parties. In

³⁶ The CAI was frozen by the European Parliament because of Chinese sanctions against several of its members and other EU persons. While moribund, the CAI illustrates the EU and China can agree on disciplines that go beyond the WTO. See Kurtz and Gong (2021).

addition to liberal norms like liberalization and non-discrimination, sovereignty norms were built into the system via the right to pursue safeguards (broadly construed) and reciprocity in negotiations. China is not a democracy, but the government (and the Communist Party) must still seek political legitimation, in part by delivering strong economic performance. Given the lack of input legitimacy (elections, free press, open public discourse, etc.), the reliance on economic performance (output legitimacy) is particularly important. China's economic performance over decades was underwritten by extensive use of markets and international trade, on essentially liberal terms. China has a strong interest in a robust global market and the right to access that market on the same terms as democracies do. Thus, it seems quite plausible that China would be supportive of a liberal trade regime that works for China and its other trade partners.

Getting the major players around the table in the current geopolitical environment characterized by lack of trust and zero-sum thinking is perhaps Panglossian. Starting with platforms that are organized around GVCs to support technical discussion and analysis of how (proposed) trade-related interventions will impact on GVCs and how NEOs can be pursued by the actors that operate and benefit from GVCs is to our mind both a way of improving on the unilateral status quo and a means of establishing a basis for cooperation across countries on whether and how trade and trade policy can play a role in achieving NEOs.

Funding Open access funding provided by European University Institute - Fiesole within the CRUI-CARE Agreement. Jerome A. Chazen Institute for Global Business Columbia University, APEC Study Center Columbia University, Center for Inclusive Trade Policy.

Data Availability Data sharing is not applicable to this article—no datasets were generated or analyzed.

Open Access This article is licensed under a Creative Commons Attribution 4.0 International License, which permits use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons licence, and indicate if changes were made. The images or other third party material in this article are included in the article's Creative Commons licence, unless indicated otherwise in a credit line to the material. If material is not included in the article's Creative Commons licence and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder. To view a copy of this licence, visit <http://creativecommons.org/licenses/by/4.0/>.

References

- Antràs P, Chor D (2022) Global value chains. *Handb Int Econ* 5:297–376
- Bagwell K, Staiger R (2002) *The economics of the world trading system*. MIT Press, Cambridge
- Baldwin R (2016) *The great convergence: information technology and the new globalization*. Harvard University Press, Cambridge
- Baldwin R, Freeman R (2022) Risks and global supply chains: what we know and what we need to know. *Annu Rev Econ* 14:153–180
- Barker T, Hageböling D (2022) Germany's economic security and technology: optimizing export control, investment screening and market access instruments. <https://www.ssoar.info/ssoar/handle/document/85212>
- Bhagwati J (1967) Non-economic objectives and the efficiency properties of trade. *J Polit Econ* 75(5):738–742
- Bhagwati J, Ramaswami VK (1963) Domestic distortions, tariffs and the theory of optimum subsidy. *J Polit Econ* 71(1):44–50

- Bhagwati J, Srinivasan TN (1969) Optimal intervention to achieve non-economic objectives. *Rev Econ Stud* 36(1):27–38
- Bhagwati J, Ramaswami VK, Srinivasan TN (1969) Domestic distortions, tariffs, and the theory of optimum subsidy: some further results. *J Polit Econ* 77(6):1005–1010
- Bhagwati J, Panagariya A, Srinivasan TN (1998) *Lectures on international trade*. MIT Press, Cambridge, MA
- Bown C (2023) United States special protection in historical perspective: 1974–2019. *Rev Int Econ* (forthcoming)
- Bresnahan T, Trajtenberg M (1995) General purpose technologies: ‘Engines of growth’? *J Econometr* 65(1):83–108
- Collins-Williams T, Wolfe R (2010) Transparency as a trade policy tool: the WTO’s cloudy windows. *World Trade Rev* 9(4):551–581
- Copeland B, Shapiro J, Taylor M (2022) Globalization and the environment. In: Gopinath G, Helpman E, Rogoff K (eds) *Handbook of international economics*. Elsevier, Amsterdam, pp 61–146
- Corden M (1957) Tariffs, subsidies and the terms of trade. *Economica* 24(95):235–242
- European Commission (2020) Critical raw materials resilience: charting a path towards greater security and sustainability. COM(2020) 474 final
- European Commission (2023) Joint communication of European Economic Security Strategy. JOIN(2023) 20 final
- European Union (2023) Reinforcing the deliberative function of the WTO to respond to global trade policy challenges. WT/GC/W/864. WTO, Geneva
- European Union (2021) Regulation 2021/821 of the European Parliament and of the Council of 20 May 2021 setting up a Union regime for the control of exports, brokering, technical assistance, transit and transfer of dual-use items. PE/54/2020/REV/2, OJ L 206
- Farrell H, Newman A (2019) Weaponized interdependence: how global economic networks shape state coercion. *Int Secur* 44(1):42–79
- Findlay C, Hoekman B (2020) Value chain approaches to reducing policy spillovers on international business. *J Int Bus Policy* 4(3):390–409
- Francois J, Hoekman B, Nelson D (2023) Trade and sustainable development: non-economic objectives in the theory of economic policy. *World Trade Rev* 22(3–4) (EUI RSC Working Paper 2022/68)
- Fung A, Graham M, Weil D (2007) *Full disclosure: the perils and promise of transparency*. Cambridge University Press, Cambridge
- Grossman G, Rossi-Hansberg E (2008) Trading tasks: a simple theory of offshoring. *Am Econ Rev* 98(5):1978–1997
- Grossman G, McCalman P, Staiger R (2021) The “new” economics of trade agreements: from trade liberalization to regulatory convergence? *Econometrica* 89(1):215–249
- Hirschman A (1945) *National power and the structure of foreign trade*. University of California Press, California
- Hoekman B, Mavroidis PC, Nelson D (2023) Geopolitical competition, globalization and WTO reform. *World Econ* 46(5):1163–1188
- Hoekman B, Mavroidis PC (2015) WTO ‘à la carte’ or WTO ‘menu du jour’? Assessing the case for plurilateral agreements. *Eur J Int Law* 26:319–343
- Hoekman B, Nelson D (2020) Rethinking international subsidy rules. *World Econ* 43(12):3104–3132
- Hoekman B, Sabel C (2021) Plurilateral cooperation as an alternative to trade agreements: innovating one domain at a time. *Glob Policy* 12(S3):49–60
- House White (2021) Building resilient supply chains, revitalizing American manufacturing and fostering broad based growth. 100-Day reviews under executive order 14017. The White House, Washington DC
- Johnson H (1960) The cost of protection and the scientific tariff. *J Polit Econ* 68(4):327–345
- Karttunen M (2020) *Transparency in the WTO SPS and TBT agreements: the real jewel in the crown*. Cambridge University Press, Cambridge, UK
- Kawabata Y, Takarada Y (2021) Deep trade agreements and harmonization of standards. *South Econ J* 88(1):118–143
- Kurtz J, Gong B (2021) The EU–China comprehensive agreement on investment: a model for investment coverage in the WTO? In: Hoekman B, Tu X, Wang D (eds) *Rebooting multilateral trade cooperation: perspectives from China and Europe*. CEPR Press, London

- Limão N (2016) Preferential trade agreements. In: Bagwell K, Staiger R (eds) Handbook on commercial policy. Elsevier, Amsterdam, pp 280–367
- Maggi G (2016) Issue linkage. In: Bagwell K, Staiger R (eds) The handbook of commercial policy. Elsevier, Amsterdam
- Maggi G, Ossa R (2021) The political economy of deep integration. *Annu Rev Econ* 13:19–38
- Martin W, Messerlin P (2007) Why is it so difficult? Trade liberalization under the Doha agenda. *Oxf Rev Econ Policy* 23(3):347–366
- Mattoo A, Rocha N, Ruta M (eds) (2020) Handbook of deep trade agreements. World Bank, Washington, DC
- Mavroidis PC (2022) The WTO dispute settlement system, how, why and where? Elgar Publishing, Cheltenham, UK
- Miroudot S (2020) Reshaping the policy debate on the implications of COVID-19 for global supply chains. *J Int Bus Policy* 3:430–442
- Nakano J (2021) The geopolitics of critical minerals supply chains. CSIS, Washington, DC
- Narlikar A, van Houten P (2010) Know the enemy: uncertainty and deadlock in the WTO. Deadlocks. In: Narlikar A (ed) Multilateral negotiations: causes and solutions. Cambridge University Press, Cambridge, pp 142–163
- Nijse F, Mercure J, Ameli N, Larosa F, Kothari S, Rickman J, Vercoulen P, Pollitt H (2022) Is a solar future inevitable? Exeter Global Systems Institute working paper 2022/02
- Parenti M, Vannoorenbergh G (2022) A simple theory of deep trade integration. CEPR discussion paper 17199
- Rodrik D (1986) Tariffs, subsidies, and welfare with endogenous policy. *J Int Econ* 21(3/4):285–299
- Rodrik D (1987) Policy targeting with endogenous distortions: theory of optimum subsidy revisited. *Q J Econ* 102(4):903–911
- Sullivan J (2023) Renewing American Economic Leadership. <https://www.whitehouse.gov/briefing-room/speeches-remarks/2023/04/27/remarks-by-national-security-advisor-jake-sullivan-on-renewing-american-economic-leadership-at-the-brookings-institution/>
- Tai K (2023) Remarks at the National Press Club on Supply Chain Resilience. <https://ustr.gov/about-us/policy-offices/press-office/speeches-and-remarks/2023/june/ambassador-katherine-tais-remarks-national-press-club-supply-chain-resilience>
- Tan A (1971) Optimal trade policies and non-economic objectives in models involving imported materials, inter-industry flows and non-traded goods. *Rev Econ Stud* 38(1):105–111
- United States (2022) Securing defense-critical supply chains: an action plan developed in response to President Biden’s Executive Order 14017
- Vandendorpe A (1974) On the theory of non-economic objectives in open economies. *J Int Econ* 4(1):15–24
- Wolfe R (2015) First diagnose, then treat: what ails the Doha Round? *World Trade Rev* 14(1):7–28
- World Bank (2019) World Development Report 2020: trading for development in the age of global value chains. World Bank, Washington DC
- World Bank and World Trade Organization (2022) Trade therapy: deepening cooperation to strengthen pandemic defenses. World Bank, Washington DC
- Yellen J (2022) Way forward for the global economy. <https://home.treasury.gov/news/press-releases/jy0714>

Publisher’s Note Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.