

## SHORT SUPPLY CONDITIONS AND THE LAW OF INTERNATIONAL TRADE: ECONOMIC LESSONS FROM THE PANDEMIC

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### ABSTRACT

*The COVID-19 pandemic has been accompanied by shortages and potential shortages of products critical to the public health response. Many nations have responded with export restrictions on these products, restrictions that are permitted under international trade law as a temporary response to short supply conditions generally and to public health emergencies in particular. This Essay argues that such export restrictions are economically counterproductive from a global efficiency perspective, and that governments acting unilaterally will nevertheless employ them due to international externalities that propagate through the “terms of trade.” This observation raises a puzzle as to why international law should facilitate rather than curtail them. The most plausible answer is that legal authority for such measures is a politically necessary “escape clause” in trade agreements, akin to safeguard measures.*

The news accompanying the COVID-19 pandemic has been replete with discussions about actual or potential shortages of products critical to the public health response, including personal protective equipment (PPE), respiratory ventilators, testing supplies, and certain medicines. Many of these shortages have begun to abate in wealthier nations but remain an issue in developing countries. Further problems of acute short supply may emerge as medical research identifies effective antiviral treatments or a vaccine.

In the face of COVID-19-related shortages or feared shortages, many national governments have imposed restrictions on the exportation of medical supplies and equipment. The United States has placed temporary export restrictions on exports of PPE, requiring prior approval by the Federal Emergency Management Agency (FEMA).<sup>1</sup> The European Union has taken similar measures to block the export of certain hospital supplies outside the European single market.<sup>2</sup> China’s exports of COVID-19-related medical supplies have not been prohibited but have recently been restricted.<sup>3</sup> At this writing, the World Customs Organization lists a

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<sup>1</sup> Fed. Emergency Mgmt. Agency, Prioritization and Allocation of Certain Scarce or Threatened Health and Medical Resources for Domestic Use (Apr. 10, 2020), at <https://www.federalregister.gov/documents/2020/04/10/2020-07659/prioritization-and-allocation-of-certain-scarce-or-threatened-health-and-medical-resources-for>.

<sup>2</sup> Chad P. Bown, *EU Limits on Medical Gear Exports Put Poor Countries and Europeans at Risk*, PETERSON INST. INT’L ECON. (Mar. 19, 2020), at <https://www.piie.com/blogs/trade-and-investment-policy-watch/eu-limits-medical-gear-exports-put-poor-countries-and>.

<sup>3</sup> Kate O’Keefe, Liza Lin & Eva Xiao, *China’s Export Restrictions Strand Medical Goods U.S. Needs to Fight Coronavirus, State Department Says*, WALL ST. J. (Apr. 16, 2020), at <https://www.wsj.com/articles/chinas-export-restrictions-strand-medical-goods-u-s-needs-to-fight-coronavirus-state-department-says-11587031203>.

total of thirty-six countries (treating the EU as one) that have adopted some form of export restrictions including, in addition to those countries already mentioned, Australia, Brazil, India, Indonesia, Russia, Switzerland, and the United Kingdom.<sup>4</sup> A World Trade Organization (WTO) report suggests an even more pervasive set of restrictions put in place by eighty countries and customs territories.<sup>5</sup>

Short supply restrictions in international trade have received limited attention in the literature.<sup>6</sup> The recent spate of COVID-19-related export restrictions, however, has elicited some critical economic commentary. A common concern is that export restrictions may elicit retaliation, leading to a distorted market afflicted by widespread impediments to trade in critical supplies.<sup>7</sup> Restrictions may also have the effect of depressing local prices in countries where production occurs, which reduces the incentive to ramp up production.<sup>8</sup> Restrictions may impose especially serious costs on countries without the capacity to manufacture their own medical supplies.<sup>9</sup> Depending on the details, restrictions may also disrupt global supply chains, creating shortages of important input products for the production of critical downstream supplies and incentivizing the reorganization of supply chains with less efficient producers.<sup>10</sup> Restrictions may also lead to panic-buying and hoarding by governments and individuals, exacerbating price spikes due to the initial shortage.<sup>11</sup>

If these policies are so counterproductive, why do so many national governments pursue them? This Essay will contribute to the economic analysis of short supply restrictions by relating them to the “terms of trade” theory of trade agreements, the predominant account of the logic of trade agreements developed by modern economists.<sup>12</sup> The terms of trade theory suggests that trade agreements arise primarily to reduce the harm attributable to international price externalities. When countries determine their trade policies unilaterally, they tend to ignore externalities that harm foreigners rather than domestic interest groups, and accordingly

<sup>4</sup> World Customs Organization, *List of National Legislation of Countries that Adopted Temporary Export Restrictions on Certain Categories of Critical Medical Supplies in Response to COVID-19*, at <http://www.wcoomd.org/en/topics/facilitation/activities-and-programmes/natural-disaster/list-of-countries-coronavirus.aspx>.

<sup>5</sup> World Trade Org. Press Release, WTO Report Finds Growing Number of Export Restrictions in Response to COVID-19 Crisis (Apr. 23, 2020), at [https://www.wto.org/english/news\\_e/news20\\_e/rese\\_23apr20\\_e.htm](https://www.wto.org/english/news_e/news20_e/rese_23apr20_e.htm); see also World Trade Org. Press Release, COVID-19: Trade and Trade-Related Measures (May 29, 2020), at [https://www.wto.org/english/tratop\\_e/covid19\\_e/trade\\_related\\_goods\\_measure\\_e.htm](https://www.wto.org/english/tratop_e/covid19_e/trade_related_goods_measure_e.htm).

<sup>6</sup> The subject received some attention after a number of nations enacted export restrictions in response to commodity price spikes in the late 2000s. See Gabrielle Marceau, *WTO and Export Restrictions*, 50 J. WORLD TRADE 563 (2016); Robert Howse & Tim Josling, *Agricultural Export Restrictions and International Trade Law: A Way Forward*, INT’L FOOD & AGRICULTURAL TRADE POL’Y COUNCIL (2012), at <https://www.agritrade.org/Publications/ExportRestrictionsandTradeLaw.html>.

<sup>7</sup> Chad P. Bown, *COVID-19: Trump’s Curbs on Exports of Medical Gear Put Americans and Others at Risk*, PETERSON INST. INT’L ECON. (Apr. 9, 2020), at <https://www.piie.com/blogs/trade-and-investment-policy-watch/covid-19-trumps-curbs-exports-medical-gear-put-americans-and->

<sup>8</sup> Simon J. Evenett, *Tackling COVID-19 Together: The Trade Policy Dimension*, *Global Trade Alert*, GLOB. TRADE ALERT (Mar. 23, 2020), at <https://www.globaltradealert.org/reports/51>.

<sup>9</sup> World Trade Org., *Export Prohibitions and Restrictions* (Apr. 23, 2020), available at [https://www.wto.org/english/tratop\\_e/covid19\\_e/export\\_prohibitions\\_report\\_e.pdf](https://www.wto.org/english/tratop_e/covid19_e/export_prohibitions_report_e.pdf).

<sup>10</sup> *Id.*

<sup>11</sup> Bernard M. Hoekman, Matteo Fiorini & Aydin Yildirim, *Export Restrictions: A Negative-Sum Policy Response to the COVID-19 Crisis* (European University Institute Working Paper RSCAS 2020/23), available at <https://cadmus.eui.eu/handle/1814/66828>.

<sup>12</sup> A classic treatment is KYLE BAGWELL & ROBERT W. STAIGER, *THE ECONOMICS OF THE WORLD TRADING SYSTEM* (2002).

act in ways that cause such externalities to an excessive degree (much as a polluter will generate too much pollution if it need not pay for the costs). As I will argue, export restrictions during periods of short supply also have price externalities that lead to their excessive use in the absence of international cooperation to curtail them.

This claim, however, raises another puzzle. Trade agreements (such as WTO)/General Agreement on Tariffs and Trade (GATT) do not prohibit short supply restrictions.<sup>13</sup> To the contrary, short supply restrictions are specifically authorized as an exception to ordinary commitments, both in general and in particular where employed to protect human health. If such measures are globally inefficient and trading nations collectively would be better off without them, why do trade agreements permit them?

One possible answer is that the drafters of trade agreements were insufficiently prescient in relation to the harm that might be done by self-interested nations acting in the face of a serious global shortage of critical products. But a better answer, I will argue, lies in the observation that trade agreements do not eliminate all inefficiencies. Instead, they address inefficiencies that can successfully be curtailed in self-enforcing agreements. In some instances, the political pressure to deviate from commitments will be so intense that tit-for-tat retaliation mechanisms, and formal dispute resolution to the extent that it is available, are insufficient to induce fidelity to commitments. To promote the stability of international compacts despite the prospect of such conditions arising at times, sophisticated trade agreements will facilitate renegotiation and even outright “escape” from commitments under politically exigent circumstances. This observation offers a prominent explanation for safeguard measures under GATT Article XIX, an explanation that I will argue applies with equal force to short supply exceptions.

The Essay proceeds as follows. Part I considers the economics of short supply restrictions, first from the global welfare perspective and next from the perspective of a trading nation acting unilaterally. Part II then briefly reviews the international law on short supply restrictions, focusing primarily on WTO/GATT. Part III makes the argument that short supply provisions in trade agreements are best understood as politically efficient escape clauses. Part IV concludes.

## I. THE ECONOMICS OF SHORT SUPPLY RESTRICTIONS DURING A PANDEMIC

Consider a stylized account of recent shortages of medical supplies. Prior to the pandemic, essential medical supplies are produced by a competitive industry spread across numerous countries. Prices are competitively determined by the cost of production and supplies are adequate for perceived needs. The pandemic comes as an unexpected shock, greatly increasing global demand for particular medical supplies. Stockpiles are woefully inadequate,<sup>14</sup> and although producers of essential supplies are incentivized to increase output, constraints on productive capacity and distribution networks prevent rapid expansion of supply. Panic buying may add to the surge in demand. Market prices for essential supplies spike dramatically to

<sup>13</sup> Hoekman, Fiorini & Yildirim, *supra* note 11; Joost Pauwelyn, *Export Restrictions in Times of Pandemic: Options and Limits Under International Trade Agreements* (last rev. May 8, 2020), available at [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=3579965](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3579965).

<sup>14</sup> The reasons for insufficient stockpiles present a complicated and interesting set of economic issues beyond the scope of this Essay.

the extent that governments do not intervene to regulate them. An acute “shortage” then emerges, by which we mean either that the prices for available supplies on the market seem exorbitant relative to their pre-pandemic levels, or that true rationing occurs because prices are not allowed to increase to clear markets.

From a global welfare perspective, how should the limited supplies of essential medical products be allocated during the pandemic? Section (I)(A) addresses that question from the perspective of a hypothetical global social planner. But in the absence of a global mechanism to achieve an ideal allocation, how will individual countries respond to short supply conditions? Section (I)(B) addresses that question from the perspective of a national government focused on domestic welfare.

### *A. Short Supply Conditions and Global Welfare*

Any statement about “global welfare” presupposes some metric for evaluating welfare. The details of that metric are not important to my argument, and let us simply assume that a global social welfare function exists. Such a function evaluates the “utility” of allocating resources to particular recipients—they might be individuals, groups, or countries. Let us further assume that the maximization of global utility is the objective of the global social planner. This problem has a simple solution—allocate scarce resources so that their “marginal” utility—the increment in utility from the last unit allocated to each recipient—is the same everywhere. To “prove” this proposition, consider an alternative allocation in which a resource is allocated to *A* rather than to *B*, yet the marginal utility of the resource to *B* is greater. Then, a small shift of resources from *A* to *B* would generate an increment in utility to *B* that exceeded the loss to *A*, and global welfare would increase.

What does this principle imply as a practical matter? For example, does it imply that a purely market-driven allocation of scarce resources is “optimal?” The so-called “first theorem of welfare economics” holds that under certain assumptions a competitive equilibrium will be Pareto optimal. In such an equilibrium, goods are indeed allocated such that the marginal consumer of each good derives utility from the last unit consumed in an amount exactly equal to the price of the good.<sup>15</sup> In that sense, competitive market equilibrium offers an allocation that equalizes marginal utility across marginal consumers.

This proposition offers some support for *laissez-faire* policies that permit market allocation of resources, including in times of unusual scarcity. Yet, there are many standard objections to the first welfare theorem as a guide to policy relating to violations of underlying assumptions.<sup>16</sup> And more important here, there are an infinite number of competitive equilibria that vary according to the initial distribution of wealth. The marginal consumer of the good in short supply must not only be willing to pay the prevailing price but must have the ability to pay that price. A pure market allocation of scarce supplies will tend to allocate them to those with greater wealth. Wealthier, less vulnerable people may well outbid poorer, more vulnerable people for the scarce resource. We may well object to this outcome and prefer some alternative measure of “marginal utility” that is not linked to ability to pay. One might

<sup>15</sup> Classic treatments include: Tjalling C. Koopmans, *Three Essays on the State of Economic Science* (1957); and Gerard Debreu, *Theory of Value: An Axiomatic Analysis of Economic Equilibrium* (1959).

<sup>16</sup> The required assumptions are that all actors are price takers, all firms maximize profits, all consumers maximize utility, and no “non-pecuniary externalities” exist. *See id.*

instead focus, for example, on the marginal increase in quality-adjusted life years,<sup>17</sup> a criterion often used for policy analysis in the health care domain, which would likely point to an allocation favoring health care workers and individuals most vulnerable to severe complications from infection.

Accordingly, the equal marginal utility criterion, while simple to articulate, can be controversial to apply in practice. But a precise resolution of the question of how to measure utility or welfare is not essential to my argument as will become clear. However one conceptualizes the equal marginal utility criterion, the next section indicates that unilateral action by national governments will violate it.

### *B. National Policies Toward Short Supply Conditions*

In this section, we assume that national governments focus on promoting the well-being of their domestic constituents, giving less or even no weight to the welfare of foreigners. Such parochialism is unsurprising when foreigners cannot vote in elections, cannot make campaign contributions, and so on. This framework is widely used to understand the logic of trade agreements and offers a simple account of why tariffs and other instruments of trade protection are used excessively in the absence of international cooperation—national governments ignore the harm that such trade protection does to foreign exporters by lowering the prices that they receive.<sup>18</sup> International economists refer to this effect as a “terms of trade” externality, as it represents a worsening in foreign countries’ terms of trade (the ratio of the prices of goods that they export to the prices of goods that they import). The primary function of an international trade agreement is to induce cooperating nations to internalize these externalities, resulting in reductions in tariffs and other trade barriers. The effects of national export restrictions during a pandemic can also be analyzed within this framework.

The domestic rationale for export restrictions has two dimensions—one driven by exigent political circumstances attributed to the pandemic, and one driven by the opportunity for domestic sellers of essential supplies to profit from the global demand shock. As to the first, access to critical medical supplies during a pandemic can be a matter of life and death. The political pressure on officials to respond to shortages or prohibitive prices with any available policy instruments will be intense. Analytically, the pandemic creates a shock that leads to great political weight being attached to the welfare of domestic patients, medical personnel, and ordinary citizens who fear the possibly dire consequences of becoming sick. Rational political officials will respond by embracing any available policies to address shortages or prohibitive prices for essential supplies, and an obvious choice is to restrict exportation of essential supplies to increase domestic supply and dampen domestic price spikes.

Thoughtful officials may recognize that other jurisdictions may do the same, but the prospect of direct retaliation is speculative, and foreign jurisdictions may enact their own restrictions in any event. Moreover, because production of essential supplies is not uniformly distributed around the world, the harmful effects of restrictions are asymmetrical and

<sup>17</sup> See, e.g., ERIK NORD, *COST-VALUE ANALYSIS IN HEALTH CARE: MAKING SENSE OF QALYs* (1999).

<sup>18</sup> This externality only arises if the importing country is “large” in economic parlance—that is, if its market is important enough to foreign exporters that reduced access to it affects their export prices. See BAGWELL & STAIGER, *supra* note 12.

major producers of essential supplies may find restrictions desirable even if they anticipate retaliation.

An obvious terms of trade externality attends these parochial export restrictions anytime the nation imposing them is an important enough producer to affect world prices, as the effect is plainly to reduce prices at home and increase prices abroad for essential supplies. This price differential is almost certainly at odds with the solution to the global social planner's problem discussed above because export restrictions generally make no allowance for circumstances abroad where shortages may be much more acute and vulnerable populations much more underserved. A sizeable wedge can be driven between the marginal utility of scarce supplies at home and abroad, however marginal utility is measured.

A second possible motivation for export restrictions relates to the exploitation of monopoly power. Such behavior is often condemned by national governments as a matter of domestic antitrust or competition policy—the harm to consumers from monopoly is generally thought to outweigh the benefits to producers. But if the adverse effects on consumers can be limited to *foreign* consumers, the exploitation of monopoly power suddenly becomes more attractive from a parochial perspective.<sup>19</sup>

A government can facilitate precisely that outcome through export restrictions on the exportation of goods over which its domestic producers collectively have a commanding market position.<sup>20</sup> One instrument for this purpose is an export tax, which raises the price to foreign purchasers and captures the associated monopoly profit for the government treasury. Another instrument is a quantitative restriction on exports, such as an export quota, that can have the same effect on prices abroad while allowing local firms to capture the attendant profits. Such quantitative measures have been the policy of choice during the pandemic.<sup>21</sup>

The opportunity to exploit monopoly power over essential medical supplies is a transitory but potentially important phenomenon during a pandemic. In normal times, any attempt to charge high prices on medical supplies will simply cause customers to buy them elsewhere or to draw down their inventories while searching for alternative supplies. But in times of a severe demand shock, sellers will find that demand has become highly insensitive to price—highly “inelastic” in economic parlance. Buyers will pay dramatically higher prices than in normal times.

The exploitation of temporary monopoly power offers a possible account of several of the export restrictions in the recent pandemic. As noted in the introduction, U.S. restrictions on the exportation of PPE allow such exports with FEMA approval. The criteria for approval are murky and approved exporters will benefit from elevated prices on global markets. China has restricted exports ostensibly for purposes of “quality control,” although the effect of such restrictions has been to increase prices and create shortages abroad, benefiting the Chinese exporters who have been able to sell abroad despite the export restrictions.<sup>22</sup>

<sup>19</sup> This observation offers the standard explanation for the Webb Pomerene Act in the United States, which exempts export cartels that do not affect domestic commerce from the Sherman Antitrust Act. *See* 15 U.S.C. §§ 61 et. seq.

<sup>20</sup> Saul Levmore, *Interstate Exploitation and Judicial Intervention*, 69 VA. L. REV. 563 (1983). A total ban on exports, of course, cannot be explained by a monopoly motivation as there are no sales abroad through which to capture monopoly rents, but policies to restrict but not eliminate exports may yield monopoly profits.

<sup>21</sup> *See* notes 1–5 *supra* and accompanying text.

<sup>22</sup> *See* notes 1, 3 *supra*.

The introduction of monopoly exploitation into an otherwise competitive global trading system is, of course, economically inefficient from the global perspective. The benefit to the exporting country results from an international price externality that flows through the terms of trade, albeit once again through an increase in the prices of things that foreigners import rather than a reduction in the prices of things that they export. And the resultant allocation of resources is again at odds with the allocation that would be promoted by a global social planner seeking to equalize marginal utility across the users of scarce resources. A monopoly allocation channels resources to those with the greatest willingness to pay for them, and then seeks to extract as much of their surplus from consumption as possible while typically making the same resource more cheaply available locally, again driving a sizeable wedge between marginal utility at home and abroad.

If this analysis is correct, conventional accounts of economic cooperation through international law—which suggest that a central function of law is the control of inefficient international externalities<sup>23</sup>—might predict that trade agreements would condemn export restrictions during a pandemic and in other circumstances where essential products are in short supply globally. The reality is quite the opposite as Part II will document. Part III will then consider possible explanations for the apparent puzzle.

## II. SHORT SUPPLY PROVISIONS IN TRADE AGREEMENTS

Other commentators have documented the legal authority under trade agreements for short supply restrictions.<sup>24</sup> This part thus affords only a brief discussion of existing law, with primary focus on the rules of WTO/GATT.

GATT Article XI prohibits, inter alia, “restrictions” on exportation “other than duties, taxes or other charges.”<sup>25</sup> The recent restrictions on exports of medical supplies during the pandemic would thus violate Article XI if not for certain exceptions to this obligation.<sup>26</sup>

One of these exceptions is contained in Article XI itself, which exempts “export prohibitions or restrictions temporarily applied to prevent or relieve critical shortages of foodstuffs or other products essential to the exporting contracting party.”<sup>27</sup> Jurisprudence on this provision is scant,<sup>28</sup> but there is little doubt that it would be interpreted to encompass temporary export restrictions on critical medical supplies during a pandemic.

The general exceptions found in GATT Article XX also authorize deviation from primary commitments to address shortages of supplies critical to public health. Article XX(b) permits measures “necessary to protect human . . . health,” with the proviso that they are not “a means

<sup>23</sup> See, e.g., ERIC A. POSNER & ALAN O. SYKES, *ECONOMIC FOUNDATIONS OF INTERNATIONAL LAW*, at ch. 3 (2013).

<sup>24</sup> See note 13 *supra*.

<sup>25</sup> General Agreement on Tariffs and Trade 1994, Art. XI, 1.4.4, Apr. 15, 1994, Marrakesh Agreement Establishing the World Trade Organization, Annex 1A, 1867 UNTS 187, 33 ILM 1153. Duties and taxes are subject to negotiation and “binding” under GATT Article II.

<sup>26</sup> I note in passing that GATT does not contain a general prohibition on export taxes. Limits on export taxes must be negotiated much like limits on import tariffs. Thus, even absent the exceptions to Article XI noted in the text, exporting nations could restrict their exports through tax measures.

<sup>27</sup> GATT, *supra* note 25, Art. XI(2)(a).

<sup>28</sup> The leading case is *China – Measures Relating to the Exports of Various Raw Materials*, WT/DS394/AB/R (2012), which held that Chinese restrictions on bauxite exports were not “temporarily applied” and did not address a “critical shortage.”

of arbitrary or unjustifiable discrimination between countries where the same conditions prevail” or a “disguised restriction on international trade.” This provision is most often invoked to defend import restrictions on products deemed to create a health hazard but is equally available to justify a deviation from the prohibition on export restrictions in Article XI. Once again, there is little doubt that it would be interpreted to cover export restrictions on medical supplies during a pandemic.

Article XX(j) offers a further exception for measures “essential to the acquisition or distribution of products in general or local short supply,” subject to the same proviso above and to the further proviso that such measures be “consistent with the principle that all contracting parties are entitled to an equitable share of the international supply of such products.” Jurisprudence on this provision is virtually nonexistent,<sup>29</sup> but it too affords a possible justification for restrictions on exports of scarce medical supplies.

Other modern trade agreements tend to be similarly permissive of short supply restrictions. The new U.S.-Mexico-Canada Agreement, for example, incorporates the above provisions of GATT Articles XI and XX by reference.<sup>30</sup> Similar flexibilities exist in the European Union and in the Canada-Europe Comprehensive Economic and Trade Agreement.<sup>31</sup>

### III. SHORT SUPPLY PROVISIONS AS AN “ESCAPE CLAUSE”

Most of the key obligations found in trade agreements—such as the limitations on tariffs and quotas, and prohibitions on discriminatory taxation and regulation<sup>32</sup>—can be understood as measures to curtail terms of trade externalities. The attendant effects on global welfare are favorable in the view of most commentators who laud these commitments as diminishing the economic inefficiencies of protectionism. The authority to impose export restrictions during periods of global shortage of critical products, by contrast, tends to exacerbate terms of trade externalities as demonstrated in Part I, and thus appears at odds with the promotion of global welfare through international cooperation. What explains the divergence?

One conjecture might be that the drafters of GATT and other trade agreements simply did not anticipate the kind of unfortunate self-interested behavior that arises in circumstances such as a pandemic. The difficulty with this conjecture is that multiple features of GATT suggest that negotiators were well aware of the fact that export restrictions may have harmful effects abroad due to price externalities, including the general ban on export restrictions in Article XI. Likewise, the text of Article XX(j) reflects an awareness of the potential global harm from short supply restrictions when it urges that all countries are entitled to an “equitable share.”

<sup>29</sup> The only significant discussion in the WTO/GATT case law is *India – Certain Measures Relating to Solar Cells and Solar Modules*, WT/DS456/AB/R (2016), which held that India could not invoke Article XX(j) to justify a violation of the national treatment obligation in GATT when it sought to protect its nascent solar cell industry to avoid a potential future shortage of domestically produced solar cells.

<sup>30</sup> U.S. Mexico-Canada Agreement, Arts. 32.1, 2.11(1).

<sup>31</sup> Pauwelyn, *supra* note 13.

<sup>32</sup> Robert W. Staiger & Alan O. Sykes, *International Trade, National Treatment and Domestic Regulation*, 40 J. LEGAL STUD. 149 (2011) (discussing terms of trade externalities associated with deviations from national treatment).



An alternative explanation relies on the inherent limits of international cooperation. When a nation violates its commitments under a trade agreement, no enforcement authority will force it to reverse its policies or put its officials in jail. The violator may suffer some reputational damage that reduces its opportunities for future international cooperation,<sup>33</sup> and injured counterparties may retaliate in a variety of formal or informal ways. Even if the trade agreement provides for formal dispute resolution as does the WTO, the penalty for non-compliance is at most some degree of retaliation from complaining nations.

If compliance with trade agreements is to be sustained, therefore, the agreements must be “self-enforcing” in economic parlance.<sup>34</sup> Cooperation will be sustained only as long as the parties believe cooperation to be in their self-interest. Likewise, if an agreement requires a party to act in a manner that leaves it worse off than by deviating from the agreement, taking into account all reputational and retaliatory consequences, it will deviate. For this reason, the ideal or “first-best” level of cooperation may be unsustainable, and parties may have to settle for somewhat less ambitious cooperation.<sup>35</sup> Furthermore, parties must recognize that changing circumstances may lead to situations in which a bargain that was previously sustainable is no longer viable.

This last observation suggests that trade agreements should include the flexibility to respond to changing circumstances that make commitments untenable.<sup>36</sup> Should they fail to do so, deviation from commitments will nevertheless occur, triggering retaliation and a potential breakdown of cooperation. A better approach is to “legalize” deviation under exigent circumstances that induce behavior that would otherwise violate the agreement. In a classic paper on “managed trade,” Bagwell and Staiger utilize this insight to offer a formal account of GATT “safeguard measures” pursuant to Article XIX (also known as the GATT “escape clause”).<sup>37</sup>

Export restrictions on critical medical supplies during a pandemic, or restrictions under other circumstances where an unexpected shock creates an acute global shortage of vital products, offer a good example of policies that would be difficult to prohibit effectively in a self-enforcing agreement. The fact that eighty countries have imposed export restrictions on medical supplies over the past few months (according to the WTO)<sup>38</sup> offers powerful evidence that the political pressure for export restrictions is enormous, and likely to overwhelm any worries about the consequences of violating a trade agreement. An exception to general obligations to allow for such measures likely has little consequence for the behavior of signatories, therefore, and avoids jeopardizing broader cooperation on matters of mutual benefit.

<sup>33</sup> *But see* Rachel Brewster, *Unpacking the State’s Reputation*, 50 HARV. INT’L L.J. 231 (2009) (critiquing accounts of compliance with international law based on reputation).

<sup>34</sup> POSNER & SYKES, *supra* note 23. The agreement must also benefit its signatories *ex ante*. Even if limitations on short supply restrictions promote aggregate global welfare, an agreement to curtail them might not be feasible if the net benefits and costs are asymmetrical and some countries expect to incur net costs. Issue linkage might overcome this problem *ex ante*, but asymmetrical benefits and costs *ex post* may still render self-enforcement infeasible.

<sup>35</sup> *See* BAGWELL & STAIGER, *supra* note 12, ch. 6 (discussing politically feasible depth of commitments).

<sup>36</sup> *See* Warren F. Schwartz & Alan O. Sykes, *The Economic Structure of Renegotiation and Dispute Settlement in the WTO/GATT System*, 31 J. LEGAL STUD. S179 (2002).

<sup>37</sup> Kyle Bagwell & Robert W. Staiger, *A Theory of Managed Trade*, 80 AM. ECON. REV. 779 (1990).

<sup>38</sup> *See* note 5 *supra*.

## IV. CONCLUSION

Suppose that a safe and effective vaccine emerges for COVID-19 in the coming months. Suppose further that capacity for manufacturing the vaccine is limited and that many more months will be required before the number of doses manufactured can come close to satisfying global demand. Will the home government(s) of the facility(ies) that manufactures the vaccine take action to prioritize the allocation of scarce supplies to vulnerable domestic citizens?<sup>39</sup> Even though such measures are globally inefficient, efforts to prohibit them in trade agreements would likely fail. The political pressure for such intervention will be enormous, and the manufacturer may actually profit from export restrictions if it is able to capture the resulting increment in prices abroad on the units that it is allowed to sell. The drafters of modern trade agreements recognized these inherent limitations of international cooperation and responded with the authority to impose temporary export restrictions in the face of acute shortages.

<sup>39</sup> We may also expect that governments elsewhere will take available measures to ramp up production of supplies to which their own citizens have access. If the technical capacity to manufacture locally is available, for example, governments may employ compulsory licensing (or the threat of it) to enable local production. Article 31 of the Agreement on Trade-Related Aspects of Intellectual Property Rights contains the authority for compulsory licensing.