STRENGTHENING THE RESILIENCE OF PANDEMIC-RELATED MEDICAL PRODUCT SUPPLY CHAINS: ASSESSING THE RELATIONSHIP BETWEEN THE WHO PANDEMIC AGREEMENT AND THE WTO

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I. INTRODUCTION

The outbreak of the COVID-19 pandemic has significantly impacted global governance in various aspects. Although we are now entering a post-pandemic era, the threat of another unknown disease that could trigger a new global public health crisis remains a possibility. Consequently, it is urgent and necessary for members of the international community, including states, international organizations, and private sectors, to collaboratively enhance their capacity for public health emergency preparedness in anticipation of the next unknown pandemic.

Responding to the unprecedented pandemic has imparted a painful yet invaluable lesson to policymakers. The chaotic and politicized decision-making processes of the World Health Organization, the excessive trade-restrictive measures adopted by numerous countries—including export bans on masks, medicines, and other essential medical products—and the inequitable distribution of vaccines all highlight the fragility and susceptibility of essential medical product supply chains to disruption. In response to these deficiencies exposed during the COVID-19 pandemic, WHO member states agreed in 2023 to initiate a global process for negotiating an international legal instrument under the WHO Constitution aimed at strengthening pandemic prevention, preparedness, and response capacities worldwide. In addition to the efforts led by WHO, the World Trade Organization (WTO) is expected to play a critical role in ensuring or even enhancing the fair, prompt, and equitable distribution of essential medical products. However, during the pandemic, the WTO's role in regulating the distribution of medical products was notably

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limited. Even though export bans or restrictions on essential medical products are generally prohibited under Article XI:1 of the General Agreement on Tariffs and Trade (GATT)[1], almost all WTO members imposed various forms of restrictions or prohibitions on the export of these products during the pandemic, with their legality remaining untested. In the face of such potential widespread non-compliance, the WTO functioned primarily as a platform for recording trade-restrictive measures related to pandemic health products, without the ability to ensure the WTO law consistency. Therefore, exploring how the WTO could do a better job to enhance the resilience of medical product supply chains is a timely and crucial discussion.

The notion of ensuring that all human beings, especially vulnerable populations in developing countries, have equal access to essential medical supplies has emerged as a central issue during the WHO pandemic treaty negotiations. Article 13 of the WHO draft pandemic agreement outlines the establishment of the "Global Supply Chain and Logistics Network" intending to "enhance equitable, timely and affordable access to pandemic-related health products.[2]" In this regard, as the leading multilateral platform with the authority over international trade, the WTO and its members should bear the responsibility not only to refrain from obstructing the distribution of medical products, but also to proactively facilitate the delivery of these products to countries in need and strengthen the medical products' supply chain resilience. In this paper, I argue that the forthcoming WHO pandemic agreement should not be a valuable reference for determining the legality of trade-restrictive measures imposed by WTO members during future public health emergencies. In addition to that, WTO members with the capacity to manufacture essential medical goods should actively contribute to strengthening supply chain resilience, guided by humanitarian principles aligned with the WHO pandemic treaty.

This paper is structured as follows. Section II introduces the current status and substance of the WHO draft pandemic agreement, with a particular focus on the establishment of the global supply chain network aimed at ensuring the stable, equitable, and fair distribution of pandemic-related health products. Section III reviews the trade-restrictive measures adopted by WTO members during the COVID-19 pandemic and

[1] GATT Art. XI:1 "No prohibitions or restrictions other than duties, taxes or other charges, whether made effective through quotas, import or export licences or other measures, shall be instituted or maintained by any contracting party on the importation of any product of the territory of any other contracting party or on the exportation or sale for export of any product destined for the territory of any other contracting party."
[2] WHO Draft Pandemic Agreement, Art. 13.

revisits the WTO's efforts to enhance its capacity for responding to future pandemics. While progress has undeniably been made to provide WTO members with greater policy flexibility for managing the next public health emergency, I argue that the current legal tools within the WTO framework still have limitations and fail to fully strengthen the resilience of supply chains for pandemic-related health products. Section IV explores the potential role of the future WHO pandemic agreement in guiding WTO members to actively support the fair and equitable distribution of critical medical products and devices. This paper proposes both legislative and interpretive approaches that the WTO should adopt to foster synergy between trade and health legal frameworks. Section V concludes.

II. THE ESTABLISHMENT OF THE GLOBAL SUPPLY CHAIN AND LOGISTICS NETWORK UNDER THE WHO DRAFT PANDEMIC AGREEMENT

A. The background of drafting a new pandemic agreement

The COVID-19 pandemic emerged during a period of declining international economic and political cooperation. Governments around the world implemented measures to limit the export of medicines and medical equipment, close borders, and prioritize domestic industries.[3] The disorder and chaos during the pandemic exposed deficiencies in the existing international legal framework for public health crisis preparedness and response. Recognizing that the question is not whether another pandemic will occur, but when, WHO member states, led by the European Union, initiated negotiations for a new international treaty within the WHO framework to "strengthen national, regional, and global capacities and resilience to future pandemics.[4]" Specifically, the COVID-19 pandemic highlighted the fragility of supply chains for pandemic-related products, making it a priority to develop an international legal instrument that can ensure

[3] G. John Ikenberry & Charles A. Kupchan, Global Distancing, Wash. Post (May 21, 2020).
[4] European Council, "An international treaty on pandemic prevention and preparedness". Available from https:// www.consilium.europa.eu/en/policies/coronavirus/ pandemic-treaty/. WHO, "COVID-19 shows why united action is needed for more robust international health architecture", 30 March 2021. Available from https://www.who.int/news-room/commentaries/ detail/op-ed---covid-19-shows-why-united-action-isneeded-for-more-robust-international-health-architecture.

effective distribution and affordable access to critical pandemic-related medical goods, services, and technologies during future pandemics.

The WHO Constitution serves as the fundamental legal instrument that directs and coordinates international health efforts.[5] According to Article 19 of the WHO Constitution, the World Health Assembly—the highest authority of the WHO, composed of its member states—is empowered to adopt international legal instruments (e.g., conventions, treaties, or agreements) concerning any matter within the WHO's competence.[6] Acknowledging deficiencies in the current regulatory framework, in December 2021, a special session of the World Health Assembly established the Intergovernmental Negotiating Body (INB) to negotiate an accord—which could take the form of a convention, agreement, or other instrument—under the WHO Constitution to strengthen pandemic prevention, preparedness, and response. The primary objective of the proposed legal instrument is to ensure access to essential medical products needed to prevent pandemics (including vaccines, medicines, masks, and other personal protective equipment). Governments pledged to finalize negotiations on a global pandemic agreement by the end of the following year, and potentially even within 2024.[7] The latest version of the draft was released this September, with consensus reached on a great portion of subjects.[8]

B. The main contents of the draft pandemic agreement with regard to supply chain resilience

The current version of the draft pandemic agreement contains three main parts: principles governing the interpretation and application of the agreement; substantive provisions promoting equity in, for, and through pandemic prevention, preparedness, and response; and institutional arrangements detailing the agreement's operation and

[5] WHO Constitution, Art. 2.2.
[6] WHO Constitution, Art. 19.
[7] WHO Member States agree way forward to conclude Pandemic Agreement, World Health Organization (May 28, 2024), https://www.who.int/news/item/28-05-2024-who-member-states-agree-way-forward-to-conclude-pandemic-agreement.
[8] Governments progress on negotiations for a pandemic agreement to boost global preparedness for future emergencies, World Health Organization (Sep. 20, 2024), https://www.who.int/news/item/20-09-2024-governments-progress-on-negotiations-for-a-pandemic-agreement-to-boost-global-preparedness-for-future-emergencies.

administration.

In facilitating the supply chain of essential medical products, the preamble of the draft pandemic agreement emphasizes the importance of "rapid and unimpeded access to humanitarian relief in accordance with international law, including international human rights law and international humanitarian law, and respect for the principles of humanity, neutrality, impartiality, and independence in the provision of humanitarian assistance.[9]" With regard to specific approaches and logistical matters, Article 13 of the draft pandemic agreement establishes the Global Supply Chain and Logistics Network (the Network) to ensure equitable, timely, and affordable access to health products during pandemics. Managed by WHO in collaboration with various stakeholders, the Network prioritizes collective resource sharing over bilateral agreements, focusing on public health needs. Regarding the detailed structure and operation of the Network, this Article specifies five functions: (1) collaboration among stakeholders (e.g., government officials, manufacturers of essential medical products, international carriers, container service providers, medical and public health experts) during and between pandemics; (2) task delegation to the most suitable organizations; (3) addressing the needs of developing nations and vulnerable populations; (4) fair distribution of health products; and (5) accountability and transparency in governance.[10]

With respect to the relationship between trade and public health, this Article outlines legal standards governing public health measures that may act as barriers to international trade, including reasonableness, transparency, and necessity.[11] Additionally, during pandemics, this Article further requires contracting parties to proactively facilitate medical product supply chains in a manner consistent with relevant international law, particularly international humanitarian principles.[12]

In addition to establishing the supply chain network, the WHO draft pandemic agreement also provides supplementary schemes to support the distribution and resilience of supply chains for pandemic-related medical products. For example, Article 13bis of the agreement requests that contracting parties refrain from stockpiling pandemic-related medical products "that unnecessarily exceed the quantities anticipated to be needed for

[9] WHO Draft Pandemic Agreement, Preamble.
[10] WHO Draft Pandemic Agreement, Art. 13.2.
[11] WHO Draft Pandemic Agreement, Art. 13.4.
[12] WHO Draft Pandemic Agreement, Art. 13.5.

domestic pandemic preparedness and response.[13]" When distributing and sharing these medical products, parties are encouraged to streamline administrative procedures and requirements to accelerate custom processes.[14] Moreover, given that countries may enforce differing standards regarding the quality and safety of medical products, the distribution of these supplies may be disrupted or delayed if products are subject to conformity assessment procedures.[15] In response, Article 14.5 of the WHO draft pandemic agreement stipulates that parties should strive to harmonize relevant technical and regulatory requirements and procedures by referencing applicable international standards. Relevant information, procedural requirements, and assessments concerning the quality, safety, and efficacy of pandemic-related medical products should also be made transparent.[16] Strengthening regulatory coherence, whether by adhering to international standards or pursuing mutual recognition of each other's technical regulations or standards, is crucial in public health emergencies.[17] This approach can ensure the quality, safety, and effectiveness of imported medical supplies, while also expediting their distribution to regions in need.[18]

C. The relationship with other international agreements

The success of global pandemic governance depends on collaboration between the WHO and other relevant international institutions. Notably, negotiations on the WHO draft pandemic agreement are running in parallel with revisions to the International Health Regulations (IHR).[19] In particular, regarding the resilience of supply chains for essential medical products, the IHR is relatively silent on directing their distribution, as its primary role is to direct the prevention and preparedness of the global spread of disease in various

[13] WHO Draft Pandemic Agreement, Art. 13bis.4.
[14] WHO Draft Pandemic Agreement, Art. 13bis.5
[15] OECD (2017), International Regulatory Co-operation and Trade: Understanding the Trade Costs of Regulatory Divergence and the Remedies.
[16] Draft Pandemic Agreement, Art. 14.5 "The Parties shall align and, where possible, harmonize technical and regulatory requirements and procedures, in accordance with applicable international standards, guidance and protocols, including those covering regulatory reliance and mutual recognition, and shall make publicly available relevant information, data and assessments concerning the quality, safety and efficacy of pandemic-related health products with other Parties."
[17] OECD, Securing Medical Supply Chains in a Post-Pandemic World (OECD Health Policy Studies, 2024).
[18] OECD (2020). Covid-19 crisis underscores need to address trade in fake pharmaceuticals, say OECD & EUIPO. http://www.oecd.org/health/covid-19-crisis-underscores-need-to-address-trade-in-fakepharmaceuticals-say-oecd-and-euipo.htm.
[19] *How will the new accord relate to the International Health Regulations (IHR)?*, World Health Organization, https://www.who.int/news-room/questions-and-answers/item/pandemic-prevention--preparedness-and-response-accord (last visited Nov. 4, 2024).

types of diseases and health emergencies.[20] Consequently, the draft pandemic agreement and the revised IHR can complement each other.

Another important legal instrument with which the draft pandemic agreement would reasonably be expected to interact is international trade law. In the area of trade, discussions primarily focus on the extent of regulatory flexibility states may exercise under the WTO during pandemics. The legal consistency of trade-restrictive measures enacted in response to the pandemic—specifically, whether such measures constitute arbitrary discrimination, are unnecessary, or are disproportionate—has attracted considerable academic debate.[21] On one hand, these measures reflect WTO members' rights to protect their nationals; on the other, unnecessary trade restrictions may significantly hinder the distribution of essential medical supplies to countries in need, thereby frustrating global efforts to combat the pandemic.[22]

Notably, both the IHR and the draft pandemic agreement recognize the importance of avoiding unnecessary trade measures during public health emergencies. Article 43.1 of the IHR requires that health measures enacted by states be no more restrictive of international trade than a "reasonably available alternative that would achieve the appropriate level of health protection.[23]" Similarly, Article 13.4 of the WHO draft pandemic agreement reinforces this principle by stating that emergency trade measures "shall be targeted, proportionate, transparent, and temporary, and shall not create unnecessary barriers to trade or disruptions in supply chains of pandemic-related health products.[24]" As these rulings share similar rationales with WTO case law addressing trade restrictiveness, further exploration is needed to understand the roles and implications of the WHO draft pandemic agreement, the IHR, and WTO law within each other's legal frameworks in promoting the resilience of essential medical product supply chains.

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[20] International Health Regulations (2024), Preamble.
[21] Ignacio CARREÑO et al., The Implications of the COVID-19 Pandemic on Trade, 11(2) Eur. J. Risk Reg. 402 (2020). Simon J. Evenett & Richard Baldwin (eds.), Revitalising Multilateralism: Pragmatic Ideas for the New WTO Director-General (2020).
[22] David Chieng, Supply chains, covid-19 and the GATT security exception: Legal limits of "pandemic exceptionalism", 39(1) Australian Y.B. Int'l L. 13 (2021).
[23] International Health Regulations, Article 43.1 "These Regulations shall not preclude States Parties from implementing health measures, in accordance with their relevant national law and obligations under international law, in response to specific public health risks or public health emergencies of international concern….Such measures shall not be more restrictive of international traffic and not more invasive or intrusive to persons than reasonably available alternatives that would achieve the appropriate level of health protection."
[24] WHO Draft Pandemic Agreement, Article 13.4.

III. THE WTO'S RESPONSES DURING THE PANDEMIC AND ITS STRUCTURAL WEAKNESSES

A. During the Pandemic: The Creation of the Reporting System

The unprecedented outbreak of COVID-19 posed a significant challenge to states' preparedness systems to respond to such a severe and expansive public health emergency. In the early stages of the pandemic, limited scientific evidence regarding the transmissibility and lethality of COVID-19 compelled countries to take immediate actions to stop its spread, such as suspending international flights, restricting exports of personal protective equipment, and implementing city-wide or even nationwide lockdowns. Without sufficient time to carefully design and evaluate these measures in response to the public health crisis, flaws were unavoidable in hindsight. Some of the measures adopted at that time caused unnecessary restrictions on international trade and travel or even hindered efforts to protect human life and health. According to an estimate by the United Nations early in the pandemic, the global economy could suffer losses of about $8.5 trillion due to trade-restrictive measures.[25] Even worse, the pandemic exacerbated poverty and inequality between the Global North and South, as countries with the capacity to manufacture pandemic-related medical goods imposed export restrictions on these products, hindering economic and social recovery in developing and least-developed countries.

The pandemic-related measures undoubtedly have legitimate goals—namely, protecting people's lives and health and maintaining societal stability with the hope of returning to normalcy. However, these public health measures raise issues with countries' legal commitments under international economic law, which require the liberalization of cross-border trade in goods and services, as well as obligations to protect private property and the commercial interests of companies and individuals. Given the unexpected severity and contagiousness of COVID-19, most measures disrupting international commerce or even freedom of transit were not challenged at the international level, including within the

[25] COVID-19 to slash global economic output by $8.5 trillion over next two years, United Nations Department of Economic and Social Affairs (May 13, 2020), https://www.un.org/development/desa/en/news/policy/wesp-mid-2020-report.html.

WTO and investor-state dispute settlement mechanisms.

In an effort to maintain transparency, the WTO Secretariat established a COVID-19 reporting system, allowing WTO members to submit, update, or lift information regarding trade and trade-related measures implemented during the COVID-19 crisis.[26] However, scholars have noted that this monitoring mechanism has inherent weaknesses, as its accuracy relies entirely on the willingness of members to report.[27] Moreover, being recorded in this reporting system does not necessarily imply that these trade-restrictive measures are consistent with WTO rules. The unresolved legality of these measures could increase the likelihood of treaty challenges in future public health crises.[28]

The COVID-19 pandemic has highlighted legal deficiencies in WTO provisions concerning the uninterrupted supply chain of medical products. Therefore, it is essential for WTO members to consider establishing a legal framework to ensure a stable and predictable trading environment for goods and services. This framework should conform to WTO rules and facilitate the manufacturing, supply, and distribution of medical products related to pandemics..

B. After the Pandemic: The Adoption of "Geneva Package"

In 2022, members of the WTO adopted the "Ministerial Declaration on the WTO response to the COVID-19 pandemic." (hereinafter "2022 Declaration") The Declaration primarily acknowledged that during the pandemic, WTO members, particularly developing and least-developed countries, faced supply constraints for vaccines, therapeutics, diagnostics, and other essential medical goods.[29] It emphasized that the WTO should take a more active role in "supporting the expansion and diversification of production of essential goods and related services needed to combat future pandemics.[30]"

Notably, Paragraph 7 of the Declaration states that any trade measures designed to

[26] https://www.wto.org/english/tratop_e/covid19_e/covid19_e.htm.
[27] Marianne Schneider-Petsinger, US and European strategies for resilient supply chains: Balancing globalization and sovereignty, Chatham House Research Paper (2023), https://www.chathamhouse.org/2021/09/us-and-european-strategies-resilient-supply-chains/05-existing-efforts-supply-chain.
[28] Julian Arato et. al., The Perils of Pandemic Exceptionalism, 114(4) Am. J. Int'l L. 627-636 (2020). See also Julien Chaisse, Both Possible and Improbable – Could COVID-19 Measures Give Rise to Investor-State Disputes?, 13(1) Contemporary Asia Arb. J. 99 (2020).
[29] Ministerial Declaration on the WTO response to the COVID-19 pandemic, para. 1.
[30] Ministerial Declaration on the WTO response to the COVID-19 pandemic, para. 3.

address the pandemic should be targeted, proportionate, transparent, and should not create unnecessary barriers to trade or disruptions in the medical goods supply chain.[31] While reaffirming members' rights to impose export restrictions on essential medical products, it stressed that such measures should be exercised with due restraint.[32] Alongside the 2022 Declaration, the Ministerial Conference also adopted a decision to provide a partial waiver of the obligations under TRIPS Article 31(f) concerning the issuance of compulsory licenses for COVID-19 vaccines.[33]

The adoption of the Geneva Package is seen as an achievement, demonstrating the WTO's continued relevance in global governance.[34] However, at the 13th Ministerial Conference held this year, WTO members did not make further progress on the 2022 Declaration by detailing how to ensure the stable distribution of pandemic-related medical products during and before a pandemic.[35] Most importantly, the current WTO legal framework exhibits a systemic flaw in creating better synergies between trade and public health regimes.

C. The Structural Undesirability of the WTO amid Public Health Emergencies

The COVID-19 pandemic has prompted the parties of the WHO to consider a new international convention for managing future pandemics and has highlighted the WTO's role in mitigating disruptions to the supply chain of pandemic-related medical equipment. Many trade-restrictive measures implemented during the pandemic, such as various restraints, mandates, and emergency actions, may lead to legal challenges regarding their compatibility with WTO rules.

Currently, WTO laws and many major preferential trade agreements include general and security exception provisions. These provisions potentially allow WTO members the flexibility to implement trade restrictive measures designed to ensure adequate domestic supply. For example, Article XX of the GATT and Article XIV of the GATS permit members to take necessary, albeit WTO-inconsistent, measures for purposes like

[31] Ministerial Declaration on the WTO response to the COVID-19 pandemic, para. 7.
[32] Ministerial Declaration on the WTO response to the COVID-19 pandemic, para. 7.
[33] Ministerial Decision on the TRIPS Agreement, WTO Doc WT/MIN(22)/30 WT/L/1141 (June 22, 2022).
[34] Bryan Mercurio & Pratyush Nath Upreti, From Necessity to Flexibility: A Reflection on the Negotiations for a TRIPS Waiver for Covid-19 Vaccines and Treatments, 21(5) World Trade Rev. 633 (2022).
[35] WTO: MC13 fails to deliver on COVID-19 diagnostics & therapeutics, Third World Network Board (Mar. 4, 2024), https://www.twn.my/title2/wto.info/2024/ti240306.htm.

protecting public morals, safeguarding human and animal life and health, conserving exhaustible natural resources, and addressing certain shortages. However, invoking these general exceptions requires compliance with the overarching conditions outlined in the chapeau of GATT Article XX and GATS Article XIV, which state that measures must not lead to arbitrary or unjustifiable discrimination or serve as disguised restrictions on international trade. Beyond general exceptions, there is a growing consensus that actions to protect citizens' lives and health during severe public health crises should be considered within the scope of WTO members' essential security interests.[36] Consequently, Article XXI of the GATT and Article XIV bis of the GATS should be applicable, enabling WTO members to undertake measures deemed necessary to protect essential security interests.

However, the COVID-19 pandemic has exposed the structural weaknesses of the exceptions-oriented justification paradigm in international economic law.[37] As Arato et al. argue, when states invoke exceptions to justify pandemic-related measures, it reinforces the perception that international economic law generally prohibits such interventions under normal circumstances. This notion of exceptionalism implies that while the existing legal framework may be flexible enough to address extreme public health crises, it falls short of accommodating long-term industrial or national policy changes that may arise from such crises.[38] This presents a troubling message for the international community, which expects the WTO to avoid obstructing the efforts of states and the WHO in responding effectively to the pandemic.

In addition to the shortcomings of the exceptionalism paradigm, a significant regulatory loophole may further undermine the legitimacy of the WTO in addressing global health crises. That is, the WTO law does not impose requirements on members to enhance the resilience of the medical goods supply chain. While it may be argued that trade-restrictive measures on medical goods can be justified under exception clauses, the critical issue of how to effectively, equitably, and proactively facilitate the distribution of essential medical goods from countries with sufficient capacity to those in urgent need remains unresolved. Although the 2022 Declaration reiterated that WTO members should not disrupt the essential medical goods supply chain through emergency trade measures

[36] David Chieng, Supply chains, covid-19 and the GATT security exception: Legal limits of "pandemic exceptionalism", 39(1) Australian Y.B. Int'l L. 13 (2021).
[37] Julian Arato et. al., The Perils of Pandemic Exceptionalism, 114(4) Am. J. Int'l L. 627-636 (2020).
[38] Julian Arato et. al., The Perils of Pandemic Exceptionalism, 114(4) Am. J. Int'l L. 627-636 (2020).

inconsistent with the principles of proportionality and transparency, it primarily addresses the extent to which such trade-restrictive measures are permissible under existing WTO laws. In other words, it fails to establish legal obligations for WTO members on how to proactively facilitate the distribution of pandemic-related medical goods in future crises. Combined with the exceptionalist approach, this could erode the WTO's legitimacy, as the international economic legal regime struggles to collaborate with other legal fields to achieve better global health governance. It is not surprising that some commentators assert that the WTO "failed the world during COVID.[39]"

In fact, the WTO has experience in adopting legal instruments that primarily focus on non-trade issues. A notable example is the Agreement on Fisheries Subsidies, concluded at the 12th Ministerial Conference (MC12), which represents a landmark achievement for advocates of a more inclusive and sustainable global economic governance framework. This agreement is significant as it is the first multilateral trade deal specifically aimed at promoting environmental sustainability at its core.[40] Building on this successful precedent, I will argue in the next section that the WTO and its members should take significant steps forward to bridge the gap between global trade and public health governance. This should involve addressing both substantial and institutional aspects to create a more cohesive and effective response to global health challenges.

IV. PROPOSALS SUPPORTING CLOSER COLLABORATION BETWEEN THE WTO AND THE WHO TO STRENGTHEN THE SUPPLY CHAIN RESILIENCE

A. The Common Ground for Facilitating Supply Chain Resilience: The Humanitarian Principle

During the COVID-19 pandemic, the production and distribution of essential

[39] *See, e.g.*, Matthew M. Kavanagh, The WTO Failed the World in Covid: Pandemic-related technology and intellectual property cannot remain in its authority, Foreign Policy (Feb. 28, 2024), https://foreignpolicy.com/2024/02/28/wto-covid-pandemic-treaty-vaccines-patents-intellectual-property/.

[40] Paulina Resich, A Global Deal to Tackle Harmful Fisheries Subsidies: A look behind the scenes, International Institute for Sustainable Development (Dec. 6, 2022), https://www.iisd.org/articles/success-story/fisheries-subsidies-deal-behind-scenes.

medical products, such as masks, medicines, and vaccines, highlighted significant challenges to international solidarity. Consequently, during the negotiations of the WHO draft pandemic agreement, there has been a strong push to connect pandemic response and preparedness with international human rights principles, particularly the right to health.[41] This includes the responsibility to take proactive measures to prioritize and allocate resources for the prevention, preparedness, and response to public health emergencies, as well as the obligation to avoid implementing regressive actions that could undermine the right to health and related rights.[42] Additionally, the principles enshrined in international humanitarian law are relevant when addressing potential disruptions to the supply chains of pandemic-related medical products. Incorporating these principles can help ensure that the response to health emergencies is equitable and respects the rights of individuals, promoting a more effective and humane global response to future pandemics.[43]

As an international legal instrument governing pandemic prevention, preparedness, and response, the interpretation and application of the WHO draft pandemic agreement should be guided by the Charter of the United Nations and the Constitution of the World Health Organization.[44] In the context of facilitating and ensuring the resilience of the supply chain for pandemic-related medical goods during future public health emergencies, Article 13.5 of the WHO draft pandemic agreement stipulates that states must adhere to the principles of humanity, neutrality, impartiality, and independence when providing humanitarian assistance.[45] These principles align with UN General Assembly resolutions that outline the operation of humanitarian assistance during emergencies.[46] The principle of "humanity" emphasizes the importance of addressing human suffering wherever it occurs, with a particular focus on the most vulnerable populations. "Neutrality" indicates that humanitarian aid should not favor any party in an emergency situation. "Impartiality" asserts that assistance must be provided solely based on need, without discrimination. Lastly, "independence" underscores the necessity for humanitarian objectives to remain free from political, economic, military, or other irrelevant considerations.[47] Adhering to

[41] Haik Nikogosian, A GUIDE TO A PANDEMIC TREATY 30-31 (2021).
[42] The Principles and Guidelines on Human Rights and Public Health Emergencies
[43] The Principles and Guidelines on Human Rights and Public Health Emergencies, Principle 11.
[44] WHO Draft Pandemic Agreement, Art. 26.1.
[45] WHO Draft Pandemic Agreement, Art. 13.5.
[46] The United Nations General Assembly Resolutions (46/182 and 58/114)
[47] Id. See also Heather Rysaback-Smith, History and Principles of Humanitarian Action, 15(1) Turkish Journal of Emergency Medicine 5-7 (2015).

these principles will be essential to ensuring that pandemic response efforts are effective, equitable, and focused on alleviating human suffering.

In light of these principles, I argue that during the pandemic, countries have an obligation to proactively facilitate the supply of pandemic-related medical products to regions where these goods are scarce and where local capacity to meet domestic needs is insufficient. Furthermore, when addressing the needs of countries facing similar challenges in obtaining essential medical products, the principles of neutrality, impartiality, and independence should guide the decision-making processes for distribution. In other words, countries with the capacity to export medical goods must objectively assess the quantity and frequency of supplies based on the severity of the public health emergency affecting the countries or regions in need. This assessment should be made without consideration of irrelevant factors, such as political ideology, economic relationships, or other concerns that do not pertain directly to addressing public health emergencies. By adhering to these principles, the international community can work towards a more equitable and effective response in times of crisis.[48]

The aforementioned humanitarian principles, although not explicitly stated in WTO covered agreements, should serve as guiding principles for the WTO and its members when adopting measures in response to future public health emergencies. In fact, the fundamental principles of international trade law—including Most Favored Nation Treatment (e.g., GATT Article I), National Treatment Standard (e.g., GATT Article III), and the prohibition on quantitative restrictions (e.g., GATT Article XI)—establish disciplines that prevent WTO members from distributing pandemic-related medical products in a discriminatory manner or from imposing unnecessary trade barriers that could disrupt the global supply chain. Moreover, the principle of respecting, protecting, and realizing the right to health is directly or indirectly referenced in various WTO laws, allowing WTO members to fulfill their duty to care for their own populations. For instance, the preamble of the WTO Agreement emphasizes that "…relations in the field of trade and economic endeavor should be conducted with a view to raising standards of living.[49]" The Appellate Body in the *China - Raw Materials* case interpreted the preamble to reflect the balance struck by WTO members between trade and non-trade-related

[48] Gabrielle Z. Marceau & Mishael M. Wambua, The (New) Role of the WTO in Vaccine Distribution and Equity, 45 HOUS. J. INT'l L. 1, 37 (Fall 2022).
[49] WTO Agreement, Preamble.

concerns.[50]

Efforts to accommodate non-trade values are also demonstrated in relevant WTO covered agreements, decisions adopted by the Ministerial Conference, and case law pertaining to states' regulatory measures and their compatibility under WTO laws. This includes general exceptions outlined in GATT Articles XX(b) and XX(j)[51], as well as GATS Article XIV(b)[52], among others. In terms of the relationship between trade and public health, Article 8.1 of the TRIPS Agreement[53], the Doha Declaration[54], and the 2022 Ministerial Declaration all underscore the WTO's role in broader national and international efforts to address global public health emergencies. Therefore, regulatory flexibilities should be granted to WTO members, and relevant treaty obligations must be interpreted and implemented in a manner that supports members' rights to protect public health. This approach can foster a more harmonious integration of trade and health considerations in future policy-making.

The shared principles guiding humanitarian assistance and the regulations governing states' actions during the pandemic create a pathway for the WTO and the WHO to collaboratively address future public health emergencies. From my perspective, these humanitarian principles provide a legal foundation for encouraging—or even mandating—the WTO to adopt a more proactive role in securing supply chain resilience during global public health crises. They also serve as a cornerstone for strengthening cooperation between the WTO and the WHO on an institutional level. Currently, WTO members are

[50] Appellate Body Reports, China – Raw Materials, para. 306.

[51] GATT Arts. XX(b) & (j) "Subject to the requirement that such measures are not applied in a manner which would constitute a means of arbitrary or unjustifiable discrimination between countries where the same conditions prevail, or a disguised restriction on international trade, nothing in this Agreement shall be construed to prevent the adoption or enforcement by any contracting party of measures: … (b) necessary to protect human, animal or plant life or health; … (j) essential to the acquisition or distribution of products in general or local short supply; Provided that any such measures shall be consistent with the principle that all contracting parties are entitled to an equitable share of the international supply of such products, and that any such measures, which are inconsistent with the other provisions of the Agreement shall be discontinued as soon as the conditions giving rise to them have ceased to exist…"

[52] GATS Art. XIV(b) "Subject to the requirement that such measures are not applied in a manner which would constitute a means of arbitrary or unjustifiable discrimination between countries where like conditions prevail, or a disguised restriction on trade in services, nothing in this Agreement shall be construed to prevent the adoption or enforcement by any Member of measures:…(b) necessary to protect human, animal or plant life or health;… "

[53] TRIPS Agreement, Art. 8.1 "Members may, in formulating or amending their laws and regulations, adopt measures necessary to protect public health and nutrition, and to promote the public interest in sectors of vital importance to their socio-economic and technological development, provided that such measures are consistent with the provisions of this Agreement."

[54] The Doha Declaration on the TRIPS Agreement and Public Health, WT/MIN(01)/DEC/2 (Nov. 20, 2001).

generally prohibited from imposing export restrictions that could disrupt the supply and distribution of medical products.[55] However, there are no specific rules emphasizing members' responsibility to enhance the resilience of medical product supply chains during both normal times and pandemics. In the next section, I will explore interpretative and legislative approaches to develop mechanisms that actively support the distribution of medical goods, ensuring alignment between WTO provisions and the WHO draft pandemic agreement. This alignment is essential for creating a cohesive framework that addresses both trade and public health needs effectively.

B. Envisaging the Legal Instruments under the WTO Guided by the WHO Draft Pandemic Agreement

This paper argues that WTO members should not only be prohibited from distributing medical supplies in a discriminatory manner and imposing export restrictions on medical products without valid justifications, but they should also proactively facilitate the distribution of pandemic-related products during health emergencies.[56] To achieve this goal, multiple proposals should be considered, categorized based on their feasibility. Given the challenges of advancing multilateral lawmaking within the WTO in the current crisis, I propose reforms that could be implemented in the short term without necessitating amendments to the existing WTO covered agreements. Additionally, I advocate for more substantial and structural changes aimed at the medium and long term. These reforms will help create a more responsive framework for addressing public health needs while ensuring that trade practices align with humanitarian principles and the necessity of maintaining supply chain resilience during pandemics.

1. Short term: Taking humanity principles into account in adjudicating disputes concerning

[55] GATT Art. XI.

[56] The 2001 Doha Declaration on the TRIPS agreement and public health partially touches upon this matter by stating that … the Agreement [i.e., TRIPS Agreement] should be interpreted and implemented in a manner supportive of WTO members' right to protect public health and, in particular, to promote access to medicines for all." However, the Declaration merely applies to the interpretation and application of the TRIPS Agreement. More comprehensive and proactive disciplines on the WTO and its member are still needed.

In the short term, WTO adjudicators should keep the notion of facilitating supply chain resilience in mind when evaluating relevant claims arising from the distribution of medical products. While WTO rules provide some regulatory flexibility for members to adopt trade-restrictive or distorting measures (e.g., the use of export restrictions) to prevent or alleviate critical shortages of pandemic-related medical products, the legality of these public health measures should be assessed based on the humanitarian principles shared by the WHO draft pandemic agreement and WTO laws. For example, Article XI:2 of the GATT permits members to temporarily restrict exports to prevent or relieve critical shortages of essential products.[57] However, the negative impacts of export restrictions on global trade can be highly undesirable, as such measures may create significant externalities for the worldwide supply of essential medical goods and could provoke tit-for-tat retaliation, ultimately leading to a trade war and public health crisis.[58] Therefore, the legality of export restrictions on essential medical products under GATT Article XI:2 should be subject to stricter scrutiny – especially during the time of pandemic. Relevant factors to consider include the duration and scope of the restriction, the severity of the shortages, and the essential nature of the restricted products related to the member's export restrictions. By applying a more rigorous examination of these measures, the WTO can help ensure that trade policies align with the principles of humanitarian assistance and support global public health efforts effectively.[59]

In addition to these considerations, WTO adjudicators should factor in elements of humanitarian principles—namely, humanity, neutrality, impartiality, and independence—when analyzing disputes arising from members' export restrictions on essential medical products. This is particularly important when members choose to export medical supplies to certain countries experiencing significant shortages while denying others in similar public health crises. In such circumstances, the humanitarian principles are especially pertinent when assessing whether a discriminatory measure could be justified under GATT

[57] GATT Art. XI:1 "No prohibitions or restrictions other than duties, taxes or other charges, whether made effective through quotas, import or export licences or other measures, shall be instituted or maintained by any contracting party on the importation of any product of the territory of any other contracting party or on the exportation or sale for export of any product destined for the territory of any other contracting party." GATT Art. XI:2 "The provisions of paragraph 1 of this Article shall not extend to the following: (a) Export prohibitions or restrictions temporarily applied to prevent or relieve critical shortages of foodstuffs or other products essential to the exporting contracting party;…."

[58] M. Bacchetta et al., COVID-19 and global value chains: A discussion of arguments on value chain organization and the role of the WTO, 47 The World Economy 3709, 3729-3730 (2024).

[59] Chien-Huei Wu, Law and Politics on Export Restrictions: WTO and Beyond (2021).

Article XX(b). Theoretically, trade-restrictive measures aimed at ensuring sufficient domestic storage of medical products should align with the goal of protecting human life and health, and they should be able to pass the necessity test if no viable alternatives exist.[60] However, in determining whether discriminatory export restrictions based on countries' demands for essential medical supplies constitute arbitrary or unjustifiable discrimination among members facing similar conditions, principles such as neutrality, impartiality, and independence can help WTO adjudicators evaluate whether the affected members are indeed in analogous situations. This assessment can aid in ascertaining the consistency of such measures with the requirements outlined in the chapeau of GATT Article XX.[61] By integrating these humanitarian principles into their analyses, adjudicators can promote fairness and equity in trade practices, particularly during public health emergencies.

Moreover, the requirements for ensuring an equitable share of the international supply of essential medical products, as outlined in the WHO draft pandemic agreement, can provide valuable insights into the interpretation and application of Article XX(j) of the GATT. The first sentence of this article has been elaborated upon in WTO case law. For instance, the Appellate Body in the India – Solar Cells case noted that, for Article XX(j), the responding party must first demonstrate the relationship between the measure and "the acquisition or distribution of products in general or local short supply." In determining if the product at issue is "in general or local short supply," the Appellate Body refers to situations where the quantity of a product available does not meet the demand for that product.[62] Additionally, the measure must be "essential" to the acquisition or distribution of those products.[63] To determine if the measure is "essential", the Appellate Body held that assessing its essentiality involves a process of "weighing and balancing" various factors, including the extent to which the measure contributes to acquiring or distributing the products in short supply, "the relative importance of the societal interests or values that the measure is intended to protect", and "the trade-restrictiveness of the challenged measure.[64]" However, the second part of GATT Article XX(j), which provides that the

[60] Appellate Body Report, US – Gasoline, p. 22. Appellate Body Report, US – Shrimp, paras. 119-120. Appellate Body Report, Brazil – Retreaded Tyres, para. 139.
[61] Similar perspective, see Rachel Harris & Gillian Moon, GATT Article XX and Human Rights: What Do We Know From the First 20 Years?, 16 Melbourne Journal of International Law 432, 471 (2015).
[62] Appellate Body Report, India – Solar Cells, paras. 5.61-5.64.
[63] Appellate Body Report, India – Solar Cells, paras. 5.65-5.66.
[64] Appellate Body Report, India – Solar Cells, paras. 5.62-5.63. See also Panel Repot, EU – Energy Package, para. 7.1359.

measure at issue must be "consistent with the principle that all contracting parties are entitled to an equitable share of the international supply of such products", has not been fully clarified. In this context, I argue that the interpretation of the concept of "equitable share" could benefit from the humanitarian principles embodied in Article 13 of the WHO draft pandemic agreement. Given that the primary objective is to avoid circumstances where countries face shortages of medical products during public health crises, ensuring an "equitable share of the international supply" would imply that exclusive arrangements for supplying essential medical goods to specific countries through bilateral agreements—while denying access to other countries facing similar shortages—should not be permitted. The supply and distribution should not be driven by business considerations (e.g., supplying to the highest bidder) but should be based on principles of neutrality, impartiality, and independence, ensuring that medical supplies are directed to countries experiencing severe shortages. When these conditions are met, the distribution of essential medical products solely to countries in need could be justified under GATT Article XX(j).

In summary, the WHO draft pandemic agreement, if it enters into force in the future, could serve as a valuable reference for interpreting relevant WTO treaty provisions, enhancing the coherence between trade and public health governance.[65]

2. Medium term: Supplementing the 2022 Ministerial Declaration emphasizing the notion of improve the supply of pandemic-related medical good

For the medium term, while current WTO laws do not adequately guide members in facilitating the fair and equitable distribution of pandemic-related products, this paper argues that such deficiencies could be addressed by referencing the principles articulated in the WHO draft pandemic agreement concerning the logistical enhancements of medical products' supply chain resilience and equitable distribution. To institutionalize this mandate, WTO members may consider incorporating relevant principles and provisions from Article 13 of the WHO draft pandemic agreement to further supplement the 2022 Ministerial Declaration in the next Ministerial Conference. For instance, although paragraph 8 of the 2022 Ministerial Declaration encourages members to exercise due

[65] *See* Tsai-yu Lin, *The Forgotten Role of WHO/IHR in Trade Responses to 2009 A/H1N1 Influenza Outbreak*, 44(3) J. World Trade 515, 531 (2010).

restraint in imposing export restrictions on pandemic-related medical goods and their inputs, there is a notable absence of obligations concerning the proactive distribution of these products to strengthen public health resilience during pandemics. In this regard, the principles of equity, solidarity, inclusiveness, and transparency should serve as guiding frameworks for facilitating the distribution of essential medical products during public health crises.

Moreover, recognizing the significant diversity among WTO members in terms of economic development status and the capacity to manufacture pandemic-related medical products, it is essential to strike an appropriate balance between the legal rights and obligations of countries with varying levels of development.[66] To this end, the spirit of the "Common but Differentiated Responsibilities" doctrine—traditionally applied in international environmental law to acknowledge the varying capabilities and responsibilities of individual countries in addressing climate change[67]—could be a useful model in future negotiations to determine WTO members' duties to distribute pandemic-related medical products. This principle aligns well with the concept of equality enshrined in the WHO draft pandemic agreement, emphasizing that the notion of "equality" should not be rigidly applied to impose the same level of obligations on all countries without considering the unique needs and capacities of developing and least-developed countries.[68]

This paper proposes that, by applying the doctrine of Common but Differentiated Responsibilities to the context of pandemic prevention, preparedness, and response, countries with advanced technology and sufficient capacity to produce pandemic-related medical products should bear primary responsibility for manufacturing goods that meet the needs of other regions. These medical products, aimed at addressing public health emergencies, should be priced affordably for developing and least-developed countries.[69] In exchange for this responsibility, benefits should be provided to incentivize these technologically advanced countries to support the timely and equitable distribution of

[66] The disparity of the manufacturing capacity has been recognized in the 2001 Doha Declaration.
[67] For the discussion of this concept, see Christopher D. Stone, *Common But Differentiated Responsibilities in International Law*, 98(2) Am. J. Int'l L. 276 (2004).
[68] WHO Draft Pandemic Agreement, Art. 3.5bis "To achieve the objective of the WHO Pandemic Agreement and to implement its provisions, the Parties shall be guided, inter alia, by the following principles and approaches: … Full recognition of the special circumstances of developing countries, in particular small island developing States and of least developed countries in relation to pandemic prevention, preparedness and response;…"
[69] This is aligned with the principle of affordability stipulated under Article 13.1 of the WHO draft pandemic agreement.

essential medical goods, aligning with the provisions of Article 10.2(d) of the WHO draft pandemic agreement.[70] To mitigate potential legal challenges regarding such financial incentives offered to the medical industry, members can clarify that benefits conferred to domestic medical sectors to ensure global supply and distribution of medical products would either not be classified as subsidies at all or would not constitute prohibited or actionable subsidies under the Agreement on Subsidies and Countervailing Measures (SCM Agreement).[71]

Without substantially modifying the legal framework of the WTO, the proposals for medium term fosters a collaborative environment where more advanced nations take on the responsibility of producing essential medical products while simultaneously ensuring that these products remain accessible and affordable for those in developing and least-developed countries. This strategy not only facilitates equitable access to critical medical supplies but also strengthens global health resilience in the face of future pandemics.

3. Long term: Envisaging a plurilateral agreement ensuring supply chain resilience during the pandemic

a. General overview

In the long term, the pandemic presents an opportunity to reevaluate the relationship between economic liberalization and non-economic values.[72] Specifically, one of the painful yet valuable lessons of the pandemic is the chance for the international community to reimagine what a multilateral trading system would look like if it were driven by non-trade priorities, including the imperative of responding to public health crises.[73] Several like-minded countries and economies have already begun to emphasize the importance of

[70] WHO Draft Pandemic Agreement, Art. 10.2(d) "The Parties, in collaboration with WHO and other relevant organizations, shall, as appropriate and subject to national and/or domestic law …(d) endeavour to promote and/or incentivize public and private sector investments, purchasing arrangements, and partnerships, including public-private partnerships, aimed at creating or expanding manufacturing facilities or capacities for pandemic-related health products, including facilities with a regional operational scope in developing countries;…"

[71] SCM Agreement, Arts. 1.1 & Art. 3. More academic discussions, see Ying-Jun Lin & Feng-Jen Tsai, Public Health Policy Space for Responding to Potential Pandemics Under the SCM Agreement, 17(1) Asian J. WTO & Int'l Health L. and Pol'y 201 (2022).

[72] See generally Harlan Grant Cohen, What Is International Trade Law For?, 113 Am. J. Int'l L. 326 (2019).

[73] Dani Rodrik, Globalisation After COVID-19: My Plan for a Rewired Planet, Prospect (May 4, 2020).

promoting better synergies between trade and health within the framework of the WTO. A notable example is the Ottawa Group, which comprises 13 countries and the EU, and is working to advance a Trade and Health Initiative aimed at increasing the resilience of medical supply chains.[74]

Building on these existing efforts, I propose that several approaches should also be considered. First, to clarify the definition of "pandemic-related medical products" or "essential medical products," it would be beneficial to draw from the list of goods designated by the WHO.[75] Additionally, the reporting system established during the COVID-19 pandemic should be maintained and its role should also be expanded. Specifically, in future public health emergencies, WTO members should not only be obliged to report measures that have restrictive effects on the supply of medical goods, but they should also be able to indicate the specific medical products needed and seek imports from other WTO members with sufficient stocks. This matching mechanism could effectively identify global supply shortages and ensure that medical goods are distributed in the most efficient manner.

In addition to enhancing existing measures, I envision a new legal instrument that establishes disciplines governing the supply chain of pandemic-related medical products during both normal times and public health crises. The Joint Statement Initiative could serve as a valuable mechanism to provide a framework for launching the negotiation and building WTO members' collective understanding of significant supply chain risks.

a. Disciplines that are applicable in normal time

During normal times, collaboration, information sharing, and capacity building are essential tasks for enhancing states' pandemic preparedness. To this end, this paper proposes that the provisions or chapters related to supply chain resilience found in some new-generation plurilateral trade agreements serve as valuable references for WTO members in developing an instrument to facilitate the distribution of pandemic-related

[74] Ottawa Group proposes a global Trade and Health Initiative, European Commission (Nov. 23, 2020), https://policy.trade.ec.europa.eu/news/ottawa-group-proposes-global-trade-and-health-initiative-2020-11-23_en.

[75] For example, in the context of COVID-19, such a list has been published here: https://www.who.int/publications/m/item/list-of-priority-medical-devices-for-covid-19-case-management.

medical products during public health emergencies.

In terms of the regulatory design, the Indo Pacific Economic Framework for Prosperity Supply Chain Agreement provides insightful tools for contracting parties to "identify supply chain vulnerabilities and work together to prevent, mitigate, and respond to disruptions that risk harm to our national security, public health and safety, and the economic well-being of our workers, companies, and consumers.[76]" Specifically, the establishment of a "Supply Chain Council" is recommended, with the aim of targeting critical sectors and key goods to align policies and build initiatives that proactively enhance the resilience, competitiveness, and diversification of supply chains.[77] Drawing from such an institutional and legal framework, WTO members should initiate exploratory discussions toward future negotiations on supply chain resilience, particularly for medical products essential for responding to public health emergencies. For instance, WTO members could promote regulatory cooperation between the agencies responsible for the approval of medical products. While each member retains the authority to adopt different approaches, evidentiary requirements, and assessments to ensure the safety and quality of medical products, varying regulatory standards among members may lead to delays or disruptions in cross-border medical supplies.[78] As a result, the new legal instrument should encourage regulatory authorities to harmonize diverse standards by following international standards (when available) or by entering into mutual recognition agreements, thereby avoiding duplicate inspections and unnecessary delays that could expedite the cross-border supply of essential medical products.[79] In this context, the Ministerial Declaration on Strengthening Regulatory Cooperation to Reduce Technical Barriers to Trade, adopted at MC13, could serve as a starting point for further collaborative efforts among WTO members.[80] Although it does not explicitly mention the pursuit of regulatory coherence and mutual recognition, the Declaration affirms that the Agreement on Technical Barriers to Trade (TBT) remains relevant to emerging policy issues, including measures taken to address global health pandemics. Consequently, it encourages members to engage early in communication to mitigate potential regulatory inconsistencies. Additionally, the TBT

[76] https://www.commerce.gov/ipef/pillar-ii
[77] https://www.commerce.gov/ipef/pillar-ii
[78] OECD, Health Policy Studies Securing Medical Supply Chains in a Post-Pandemic World 84 (2024).
[79] Marc Bacchetta et al., COVID-19 and global value chains: A discussion of arguments on value chain organisation and the role of the WTO, 47 The World Economy 3709, 3738 (2024).
[80] World Trade Organization, Strengthening Regulatory Cooperation to Reduce Technical Barriers to Trade, WT/MIN(24)/35 (Mar. 4, 2024).

Committee should act as a platform to promote member-driven initiatives addressing immediate and emerging regulatory challenges.[81]

Another important aspect to consider is the institutional design. In the context of global supply chains for medical products, cooperation at the country level should be complemented by collaboration with the private sector.[82] In other words, a "bottom-up" approach should be adopted by creating an institutional framework that incorporates private sector involvement, including pharmaceutical companies, medical device manufacturers, and civil society, in the negotiation process. This approach acknowledges the vital role that private entities play in the manufacturing and distribution of pandemic-related health products.[83] By engaging the private sector, the institutional framework can leverage the expertise, innovation, and logistical capabilities of these entities to improve the resilience and efficiency of medical supply chains. Additionally, involving civil society can help ensure that the voices of affected communities are heard, fostering transparency and accountability in the processes governing the distribution of medical products.

b. Disciplines that are applicable in public health emergency

In times of public health emergencies, the most critical task is to facilitate the distribution and ensure the accessibility of pandemic-related medical products to the greatest extent possible. Therefore, new disciplines should mandate that all members refrain from enacting any form of export restrictions during crises, unless there are compelling grounds related to securing their own nationals' public health needs that are temporary applied, with scientific-based, and transparent. Additionally, the processes for importation, exportation, and transit should be streamlined to ensure the timely delivery of essential medical goods. Possible measures to consider include: (1) implementing procedures for rapid customs clearance for imports and exports of pandemic-related medical goods; (2) facilitating the electronic submission of relevant documentation; and (3) refraining from imposing restrictions on the transit of goods destined for members

[81] World Trade Organization, Strengthening Regulatory Cooperation to Reduce Technical Barriers to Trade, WT/MIN(24)/35, paras 5.a & 5.d (Mar. 4, 2024).
[82] Gabrielle Z. Marceau & Mishael M. Wambua, The (New) Role of the WTO in Vaccine Distribution and Equity, 45 HOUS. J. INT'l L. 1, 37-39 (Fall 2022).
[83] Gary Gereffi, What does the COVID-19 pandemic teach us about global value chains? The case of medical supplies, 3(3) J. Int'l Bus. Pol'y 287, 297 (2020).

experiencing shortages of medical products. These trade facilitation provisions align with one of the main objectives of the WHO draft pandemic agreement, which is to ensure timely access to pandemic-related medical products.[84]

If countries believe that adopting certain trade-restrictive measures is unavoidable, they should ensure that such restrictions are as non-intrusive as possible, temporary, transparent, and targeted—all elements derived from the WHO draft pandemic agreement.[85] In addition, countries could establish a collaborative framework for the supply of pandemic-related medical products, keeping each other informed about needs and available resources. It is also essential for nations to recognize each other's vulnerabilities, particularly in scenarios where there is a lack of manufacturing capacity for essential medical goods, and to show special consideration for the needs of developing and least-developed countries. To facilitate this collaboration, a "Crisis Response Network" should be established to provide a communication channel for parties to express their needs and request assistance in response to shortages of essential medical goods during supply chain disruptions.[86] Under the Crisis Response Network, a consultation mechanism should also be created for states affected by the imposition of export restrictions. This would allow impacted countries adequate time to adjust their sources for medical supplies.

Most importantly, pandemic-related medical products must not be subject to trade retaliation due to trade disputes during public health emergencies. For instance, countries should not modify concessions on trade in goods or services in a manner that restricts access to essential medical supplies as retaliation against other WTO members for alleged violations of WTO covered agreements. Targeting essential medical products as the subject of trade retaliation would be inconsistent with the principle of proportionality, as it may cause irreversible harm to human life and health in the sanctioned states, hinder their capacity to respond to a pandemic, and offer comparatively limited benefits to the retaliating country.

C. Enhancing the Coordination between the WTO and the WHO

The 2022 Ministerial Declaration emphasized the importance of collaborating with

[84] WHO Draft Pandemic Agreement, Preamble.
[85] WHO Draft Pandemic Agreement, Art. 13bis.4.
[86] Indo-Pacific Economic Framework for Prosperity Agreement Relating to Supply Chain Resilience, Art. 7.

the WHO and relevant international organizations "on an international pandemic response, including activities such as expeditious matching of supply to demand, mapping manufacturing capacities and demands, matchmaking to cater to such demands, and mutual recognition norms, related to goods and services that are essential to respond effectively to COVID-19 and future pandemics.[87]" Similarly, Article 19.3 of the WHO draft pandemic agreement further obliges states to enhance cooperation with relevant international organizations for pandemic-related efforts by establishing pertinent legal instruments or frameworks.[88] Since unnecessary or excessive trade-restrictive measures on essential medical goods not only fail to contribute to the goal of protecting human life and health but also contravene members' obligations under WTO covered agreements, an institutional arrangement should be established to reinforce synergy between the WTO and WHO in addressing pandemics.

Currently, the WTO has two standing forums that facilitate dialogue between its laws and other non-trade concerns: the Committee on Trade and Development (CTD) and the Committee on Trade and Environment (CTE), both supervised by the Trade Negotiation Committee (TNC) under the General Council.[89] While trade and public health issues might be addressed in these committees, they do not specifically focus on this nexus. In light of this gap, this article proposes the establishment of a "Committee on Trade and Public Health" to serve as a dedicated forum for enhancing interaction among trade and health policymakers and stakeholders.[90] At present, the WHO has an official relationship with the WTO that includes observer status in the SPS, TBT, and TRIPS Councils, as well as at WTO Ministerial Meetings. A permanent committee focusing explicitly on the relationship between trade and public health can foster mutual understanding between the two organizations and enhance capacity-building efforts for member states in pandemic preparedness, prevention, and response by strengthening the resilience of medical product supply and distribution. In parallel, once the Supply Chain Logistic Network stipulated

[87] Ministerial Declaration on the WTO response to the COVID-19 pandemic, para. 28.
[88] WHO Draft pandemic agreement, Art. 19.3 "The Parties shall collaborate and cooperate for pandemic prevention, preparedness and response through strengthening and enhancing cooperation among relevant legal instruments and frameworks and relevant global, regional, subregional and sectoral organizations and stakeholders, in the achievement of the objectives of this Agreement, while closely coordinating support with that provided under the International Health Regulations (2005)."
[89] Trade Negotiations Committee, World Trade Organization, https://www.wto.org/english/tratop_e/dda_e/tnc_e.htm (last visited Nov. 2, 2024).
[90] International intergovernmental organizations granted observer status to WTO bodies, World Trade Organization, https://www.wto.org/english/thewto_e/igo_obs_e.htm (last visited Nov. 2, 2024).

under Article 13 of the WHO draft pandemic agreement is established, the WTO should be included in its framework. Coordination with the WTO is critical because the functions of the Supply Chain Logistic Network—such as estimating the supply and demand of pandemic-related products among countries and working to eliminate trade barriers to essential medical supplies—could be more effectively executed with the WTO's support (e.g., through sharing trade data, identifying potential trade barriers, and other technical supports).

Enhancing cooperation between the WTO and WHO concerning supply chain resilience also has practical benefits. To elaborate, although the WHO draft pandemic agreement is an ambitious initiative aimed at improving global, regional, and national pandemic preparedness, it lacks a robust mechanism to ensure that legal obligations are fully enforced. Article 25 of the agreement provides a dispute settlement mechanism with ambiguous procedural details, requiring contracting parties to initially resolve disputes through peaceful means such as negotiation or conciliation. Only if these efforts fail can parties resort to ad hoc arbitration under the Permanent Court of Arbitration Rules, based on mutual consent.[91] This dispute resolution mechanism resembles other legal instruments under the WHO (e.g., FCTC) by narrowing the applicable scope of its application (i.e., only covers the interpretation or application of the agreement), and whether the arbitration could be launched is also subject to parties' consent.[92] From this perspective, it is questionable whether the WHO draft pandemic agreement would provide an effective judicial forum for meaningfully resolving disputes related to compliance with Article 13, such as the imposition of unnecessary barriers to trade or disruptions in the supply chains of pandemic-related health products. In contrast, the WTO dispute settlement mechanism, while facing its own challenges, remains a more suitable forum for addressing supply chain-

[91] WHO Draft Pandemic Agreement, Art. 25.1 "In the event of a dispute between two or more Parties concerning the interpretation or application of the WHO Pandemic Agreement, the Parties concerned shall seek through diplomatic channels a settlement of the dispute through negotiation or any other peaceful means of their own choice, including good offices, mediation or conciliation. In case of failure to reach a solution by the methods mentioned above, the Parties may continue to seek solutions to the dispute through joint consultations, including, if they so agree, by resorting to ad hoc arbitration in accordance with the Permanent Court of Arbitration Rules 2012 or successor rules. The Parties that have agreed to arbitration shall accept the arbitration award as binding and final."

[92] Relevant discussions on the dispute settlement mechanism under other WHO legal instruments, *see* Pei-Kan Yang, Reinforcing Dispute Settlement Mechanism Under the Framework Convention on Tobacco Control as an Option to Solve Trade/Investment-Related Tobacco Disputes, 16(2) Asian J. WTO & Int'l Health L. and Pol'y 369, 379 (2021).

related disputes.[93] Disputes regarding the imposition of unnecessary export restrictions on medical goods that disrupt supply chains or issues concerning the failure of capable countries to proactively distribute pandemic-related medical products in accordance with humanitarian principles could be more effectively resolved through the WTO's established dispute settlement processes.

V. CONCLUDING REMARKS

One of the most valuable lessons learned by the international community from the COVID-19 pandemic is that multilateral collaboration is essential for effectively protecting public health and maintaining economic prosperity. To this end, no country or region should be left behind. Among the public health policy priorities, ensuring reliable medical supply chains is a cornerstone of resilient health systems for preparing for, preventing, and responding to public health emergencies. We witnessed firsthand how shortages of medical products hindered recovery processes during the COVID-19 pandemic, significantly impacting public health and society. These shortages led to delays in treatment and diagnosis, increased strain on already overburdened healthcare systems, rising healthcare costs, and loss of productivity, among other issues.

Under the WHO, negotiations for a new multilateral legal instrument aimed at enhancing countries' resilience to public health crises are currently underway. As another crucial multilateral institution responsible for global economic activities, the WTO serves as a valuable platform for its members to cooperate more closely in addressing the challenges posed by the pandemic. It is important to recognize that the central responses of international economic rules to future public health emergencies should not be limited to merely justifying the legality of public health measures based on existing exception clauses.[94] Instead, WTO members, along with the WTO itself, must adopt a more proactive role in monitoring trade policies that could affect the distribution of critical goods, strengthening international coordination to avoid disruptions in the supply of pandemic-related medical products, and ensuring that these products are provided to

[93] Chad Bown, The WTO and Vaccine Supply Chain Resilience During a Pandemic, 26(2) J. Int'l Econ. L. 343 (2023).
[94] Mona Pinchis-Paulsen, *Thinking Creatively and Learning from COVID-19, How the WTO Can Maintain Open Trade on Critical Supplies*, Opinio Juris (Apr. 2, 2020). Timothy, Meyer, Trade Law and Supply Chain Regulation in a Post-COVID World, 114(4) American Journal of International Law 637-646 (2020).

developing and least-developed countries—those lacking manufacturing capacity—in a fair, equitable, and affordable manner.

To better align the WTO with global efforts to enhance capacities for preventing, preparing for, and responding to future pandemics, it is both reasonable and necessary to refer to the WHO draft pandemic agreement. This step is particularly vital for ensuring the resilience of medical product supply chains and their equitable distribution during times of crisis. By fostering greater cooperation and coordination between the WHO and WTO, the international community can enhance its readiness to address public health emergencies more effectively, ultimately contributing to the well-being of populations worldwide.