WAIVER OF THE WTO'S INTELLECTUAL PROPERTY RULES (TRIPS): AN INDISPENSABLE TOOL TO FIGHT THE COVID-19 PANDEMIC.

This is part of a Global Trade Watch series on the TRIPS Waiver.

Contrary to Pharma Company Promises, COVID-19 Vaccine **Producers Are Not on Track to Make Enough for Everyone**

We Need a Waiver of WTO-Required Intellectual Property Monopoly Barriers and a Scale Up of Manufacturing Worldwide to Beat COVID-19 and Save Lives

Current production capacity cannot supply enough COVID-19 vaccines for the world. The poorest countries may wait until 2024 for mass immunization, if it happens at all, per the Economist Intelligence Unit. To date, 75% of vaccines have been administered in just 10 countries, and only 1% of people in low-income countries have received at least one dose, according to World Health Organization (WHO) statistics.

As laudable as the June G7 pledge to "donate" 870 million COVID-19 vaccine doses in 2021-2022 was, redistributing existing doses does not address the overall shortage of total available. There is no way out of the pandemic by more equitably sharing slices of the existing pizza, when in the end there simply is not enough to go around. What we need is to build new pizza factories. Absent more production of vaccine and related supply chain products, there won't be sufficient doses to vaccinate the world and knock out COVID-19.

The global vaccine apartheid unfolding right now could cost millions of lives and push tens of millions more into poverty. Unmitigated mass outbreaks greatly increase the risk that a vaccine-resistant strain will be hatched and put the entire world back on lockdown. The International Chamber of Commerce concluded that the world could face economic losses of more than \$9 trillion under the scenario of wealthy nations being fully vaccinated by mid-2021, but poor countries largely shut out. The United Nations Development Program, the WHO and the University of Oxford recently issued an analysis showing that every additional million people vaccinated would add \$7.93 billion to the global economy, and high-income countries have the most to gain.

Clearly, the global supply of all COVID-19 medical goods — vaccines, treatments and diagnostic tests — must be greatly increased. The good news is nations with existing world-class drug manufacturing capacity and expertise, such as South Africa, Pakistan, Egypt, Argentina and more, could ramp up production to remedy global shortfalls. That is why most countries of the world support a temporary waiver of World Trade Organization (WTO) intellectual property monopoly rules that empower a few vaccine makers to control if, how much and where shots are produced. The firms with monopoly control have refused to cooperate with other manufacturers, particularly those in developing countries, to make the doses needed to inoculate the world. Perhaps they are keen to avoid competition for their lucrative 2022 booster sales plans? Pfizer, which projects \$26 billion in 2021 vaccine revenue, briefed investors about plans to sell boosters in wealthy countries for \$175 per dose, after \$20 per dose "pandemic pricing" ends.

Pharma Only Made 4% of Promised Doses in 2020, Is Not on Track to Produce the 10-15 Billion Doses Needed in 2021 for Herd Immunity, But Opposes More Production

There is significant confusion among policymakers, press and consumers around the world about how much COVID-19 vaccine is now being made, how much could become available and when.

Serious discrepancies between sources tracking COVID-19 vaccine production show there is no reliable data about the total number of doses that will be available in 2021 and 2022. Vaccine makers repeatedly reference proprietary data generated by Airfinity and Duke University's Global Health Innovation Center projections to assert that supply will meet demand by the end of 2021. Both sources' forecasts rely on the vaccine industry's announced production goals. Yet, beyond the inherent perils of relying on industry production targets and the uncertainty of what the actual demand will be, there are substantial discrepancies between the two main datasets. This further underscores the unreliability of the underlying corporate data. This chart compares the most recent forecasts for the most important COVID-19 vaccines currently in the market:

Airfinity and Duke University Forecasts of 2021 Vaccine Production Compared¹

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Firm(s)	Airfinity	Duke University	Difference (Absolute Values)
Sinovac	2,856,484,000	1,750,000,002	1,106,483,998
Pfizer/BioNTech	2,179,275,000	3,000,000,000	820,725,000
AstraZeneca	2,137,408,000	2,100,000,000	37,408,000
Sinopharm	1,576,923,000	1,000,000,000	576,923,000
Moderna	667,270,000	800,000,000	132,730,000
1&1	517,885,000	1,000,000,000	482,115,000
Gamelaya (Sputnik V)	289,973,000	390,000,000	100,027,000
Bharat	263,724,000	590,000,000	326,276,000
CanSino	161,746,000	500,000,000	338,254,000

(Numbers of Doses)

- The sum of all the discrepancies between Big Pharma's most quoted sources adds up to 3.9 billion doses. This means that in an unfortunate but not unlikely scenario where only the lowest forecast for each company is actually produced, the world would have 3.9 billion doses less in 2021 than promised. The differences are particularly stark with respect to the firms from which the world most expects to get shots. For instance, while Duke data accepts Pfizer/BioNTech's pledges, according to which these firms will have produced 3 billion doses by the end of 2021, Airfinity estimates that the actual number will be closer to 2.2 billion. This is an 820 million dose difference, which would be enough to immunize the entire population of Africa's three largest countries: Nigeria, Ethiopia and Kenya. Likewise, according to Airfinity, Sinovac can be expected to produce 2.8 billion doses in 2021. However, Duke data projects 1.7 billion. This 1.1 billion dose difference is enough to vaccinate everyone in Indonesia and Pakistan, the fourth and fifth largest countries of the world.
- And, although Airfinity claims that its forecasts have been accurate so far because it factors in current production rates, its model still relies heavily on companies' announced targets and plans. A close look at its dataset shows that 32 out of the 71 COVID-19 vaccine production facilities identified by Airfinity are inactive. This means that 45% of the plants on which Airfinity is relying for industry to meet its production promises have not produced a single vaccine as of the end of July 2021.
- Other sources, like UNICEF's Vaccine Market Dashboard, which is supposed to be based on public sources and Airfinity's data, display markedly different forecasts. If one uses the filters for approved vaccines on the UNICEF

¹ Airfinity forecasts were extracted from its CEO's presentation before the WTO on June 29, 2021. Available at: https://twitter.com/Airfinity/status/1409792141258276867/photo/1. Duke University's figures were updated on July 16, 2021 and are available at: https://launchandscalefaster.org/covid-19/vaccinemanufacturing.

Vaccine Market Dashboard site, the figure for 2021 is 5.3 billion. That is especially interesting because until a few weeks ago, that filter showed the industry-pledged figure of 12 billion. Additionally, the 43 billion doses figure that some Pharma interests cite as UNICEF's projection for 2022 doses represents an unfiltered view that includes all vaccine candidates, even those in pre-clinical trial stage plus industry guesses about projected mythical doses. That figure assumes that development of every vaccine candidate is a success, that the final candidate survives efficacy and safety trials, gets regulatory approval and is manufactured at the rate to which its developer aspires.

These discrepancies underscore that the data being used to claim that vaccine supply will meet demand (and, thus, that increasing production capacity is unnecessary) is helplessly unreliable.

Vaccine Makers Are Likely Inflating Production Targets, Perhaps to Chill Government Action to Increase Global **Production and Competition in a Now-Captive Market**

It would not be the first time that industry projections were grossly inflated. In 2020, vaccine manufacturers projected they would make 800 million doses by the end of the year, but in reality produced between 20-30 million. While industry promises to produce 12 billion doses in 2021, at the end of July 2021, more than halfway through 2021, actual production for all of 2020 and 2021 put together hit only 4.25 billion doses. On the upside, mid-June was the first time that the combined output of all producers broke 200 million doses completed in a week. However, the largest portion of that, and the source for the production jump, is Chinese vaccines that have proved less effective against variants. (Of course, with some countries having not obtained a single dose, there is great demand for any and all vaccines that can help reduce infection and mortality rates now growing in a dangerous third wave.)

- According to Airfinity's data, six out of the nine producers of the most important COVID-19 vaccines currently on the market are producing fewer doses than needed to meet their targets. Granted, some vaccines' production rates have exceeded expectations, which is what has driven output increases during the last weeks. However, the vaccines that are beating production targets are mainly the Chinese shots, CoronaVac (Sinovac) and BBIBP-CorV (Beijing/Sinopharm), which are less effective than the mRNA and viral vector vaccines, especially against recent variants. In the meantime, Moderna, J&J and AstraZeneca are not meeting the monthly production necessary to fulfill their pledges for 2021.
- The projections also do not factor in production errors, like those at the Baltimore Emergent BioSolutions factory, that caused many U.S. and South African doses to be destroyed, nor raw material shortages, including the inputs whose supply is artificially limited by intellectual property monopolies.

Absent Much Greater Manufacturing Capacity, Shifts to Booster Production for Rich Nations Will Exacerbate **COVID-19 Vaccine Shortages for Developing Nations**

The current COVID-19 vaccine manufacturing regime will not create sufficient supply to vaccinate the whole world. And to make matters even worse, there is a very real prospect that by the end of this year, major vaccine producers will start shifting production to boosters for sale at much higher profits in rich countries while billions of people in developing countries have not had initial immunizations. This means that the overall demand is much more likely to lean towards 15 billion doses than the optimistic 11 billion mark. Having regions of the world go for years without vaccinations is not only unjust and guarantees needless deaths and economic pain, but increases the chances of vaccine-resistant variants emerging that put the whole world back to square one on immunization. The answer: a speedy comprehensive TRIPS waiver to unlock the path to full global immunization and production of treatments and tests, as well as the technology transfer and funding to create vaccine production hubs around the world to manufacture the doses needed to save lives and end the pandemic.

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