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**Pharma profits are up from COVID vaccines, patent waivers threaten this**

**Buchholz 5-17-21**

(Katharina, https://www.statista.com/chart/24829/net-income-profit-pharma-companies/)

The profitability of coronavirus vaccines has been in the spotlight since U.S. President Joe Biden come out in support of temporarily lifting vaccine patents to make the production of the life-saving inoculations more financially feasible for poorer countries. EU leaders meanwhile remain divided over such a move. Company financial reports show that COVID-19 vaccine makers and developers like Johnson & Johnson, Pfizer, Moderna, AstraZeneca and BioNTech have seen their profits increase since the vaccine rollout, at times majorly. In early May, stocks of several companies that benefit from COVID-19 vaccine sales took a nosedive on the news of Biden’s reversal. Moderna stocks, for example, were still down more than 6 percent at close on May 5, the day of the announcement. Stocks recovered somewhat as German chancellor Angela Merkel came out against patent waivers the following day. While fluctuations in the stock market price have hurt drug makers in the short term, patent waivers would diminish the bottom line of companies involved with the development and production of COVID-19 vaccines in the long term. Pharma giants like Johnson & Johnson and Pfizer bring in billions of dollars of income every quarter from diverse sources, so the COVID bump was smaller for them. In the case of Pfizer, which has been a bigger producer than J&J, the year-over-year profit increase was a handsome 44 percent, however. For smaller AstraZeneca, the COVID year meant that its profits doubled. In the case of Moderna, the past year has turned a Q1 loss into a profit. The case is similar for German company BioNTech, which collaborated with Pfizer on its COVID vaccine. While Q1 2021 brought in a profit of $1.1 billion, the company ran a deficit since its founding in 2008 up until Q4 2020, when it posted a profit for the first time. The $446 million earned stood in contrast to losses of almost $428 million accrued in the first nine months of the year.

**Strong IP protection spurs innovation by encouraging risk-taking and incentivizing knowledge sharing—prefer statistical analysis of multiple studies**

**Ezell and Cory 19**

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IPRs Strengthen Innovation Intellectual property rights power innovation. For instance, analyzing the level of intellectual property protections (via the World Economic Forum’s Global Competitiveness reports) and creative outputs (via the Global Innovation Index) shows that counties with stronger IP protection have more creative outputs (in terms of intangible assets and creative goods and services in a nation’s media, printing and publishing, and entertainment industries, including online), even at varying levels of development.46 IPR reforms also introduce strong incentives for domestic innovation. Sherwood, using case studies from 18 developing countries, concluded that poor provision of intellectual property rights deters local innovation and risk-taking.47 In contrast, IPR reform has been associated with increased innovative activity, as measured by domestic patent filings, albeit with some variation across countries and sectors.48 For example, Ryan, in a study of biomedical innovations and patent reform in Brazil, found that patents provided incentives for innovation investments and facilitated the functioning of technology markets.49 Park and Lippoldt also observed that the provision of adequate protection for IPRs can help to stimulate local innovation, in some cases building on the transfer of technologies that provide inputs and spillovers.50 In other words, local innovators are introduced to technologies first through the technology transfer that takes place in an environment wherein protection of IPRs is assured; then, they may build on those ideas to create an evolved product or develop alternate approaches (i.e., to innovate). Related research finds that trade in technology—through channels including imports, foreign direct investment, and technology licensing—improves the quality of developing-country innovation by increasing the pool of ideas and efficiency of innovation by encouraging the division of innovative labor and specialization.51 However, Maskus notes that without protection from potential abuse of their newly developed technologies, foreign enterprises may be less willing to reveal technical information associated with their innovations.52 The protection of patents and trade secrets provides necessary legal assurances for firms wishing to reveal proprietary characteristics of technologies to subsidiaries and licensees via contracts. Counties with stronger IP protection have more creative outputs (in terms of intangible assets and creative goods and services in a nation’s media, printing and publishing, and entertainment industries, including online), even at varying levels of development. The relationship between IPR rights and innovation can also be seen in studies of how the introduction of stronger IPR laws, with regard to patents, copyrights, and trademarks, affect R&D activity in an economy. Studies by Varsakelis and by Kanwar and Evenson found that R&D to GDP ratios are positively related to the strength of patent rights, and are conditional on other factors.53 Cavazos Cepeda et al. found a positive influence of IPRs on the level of R&D in an economy, with each 1 percent increase in the level of protection of IPRs in an economy (as measured by improvements to a country’s score in the Patent Rights Index) equating to, on average, a 0.7 percent increase in the domestic level of R&D.54 Likewise, a 1 percent increase in copyright protection was associated with a 3.3 percent increase in domestic R&D. Similarly, when trademark protection increased by 1 percent, there was an associated R&D increase of 1.4 percent. As the authors concluded, “Increases in the protection of the IPRs carried economic benefits in the form of higher inflows of FDI, and increases in the levels of both domestically conducted R&D and service imports as measured by licensing fees.”55 As Jackson summarized, regarding the relationship between IPR reform and both innovation and R&D, and FDI, “In addition to spurring domestic innovation, strong intellectual property rights can increase incentives for foreign direct investment which in turn also leads to economic growth.”56

**Biopharmaceutical innovation is key to prevent future pandemics and bioterror**

**Marjanovic and Feijao 20**

[Sonja Marjanovic Ph.D., Judge Business School, University of Cambridge. Carolina Feijao, Ph.D. in biochemistry, University of Cambridge; M.Sc. in quantitative biology, Imperial College London; B.Sc. in biology, University of Lisbon. "How to Best Enable Pharma Innovation Beyond the COVID-19 Crisis," RAND Corporation, 05-2020, accessed 8-8-2021, https://www.rand.org/pubs/perspectives/PEA407-1.html] HWIC

As key actors in the healthcare innovation landscape, pharmaceutical and life sciences companies have been called on to develop medicines, vaccines and diagnostics for pressing public health challenges. The COVID-19 crisis is one such challenge, but there are many others. For example, MERS, SARS, Ebola, Zika and avian and swine flu are also infectious diseases that represent public health threats. Infectious agents such as anthrax, smallpox and tularemia could present threats in a bioterrorism context.1 The general threat to public health that is posed by antimicrobial resistance is also well-recognised as an area in need of pharmaceutical innovation. Innovating in response to these challenges does not always align well with pharmaceutical industry commercial models, shareholder expectations and competition within the industry. However, the expertise, networks and infrastructure that industry has within its reach, as well as public expectations and the moral imperative, make pharmaceutical companies and the wider life sciences sector an indispensable partner in the search for solutions that save lives. This perspective argues for the need to establish more sustainable and scalable ways of incentivising pharmaceutical innovation in response to infectious disease threats to public health. It considers both past and current examples of efforts to mobilise pharmaceutical innovation in high commercial risk areas, including in the context of current efforts to respond to the COVID-19 pandemic. In global pandemic crises like COVID-19, the urgency and scale of the crisis – as well as the spotlight placed on pharmaceutical companies – mean that contributing to the search for effective medicines, vaccines or diagnostics is essential for socially responsible companies in the sector. 2 It is therefore unsurprising that we are seeing industry-wide efforts unfold at unprecedented scale and pace. Whereas there is always scope for more activity, industry is currently contributing in a variety of ways. Examples include pharmaceutical companies donating existing compounds to assess their utility in the fight against COVID-19; screening existing compound libraries in-house or with partners to see if they can be repurposed; accelerating trials for potentially effective medicine or vaccine candidates; and in some cases rapidly accelerating in-house research and development to discover new treatments or vaccine agents and develop diagnostics tests.3,4 Pharmaceutical companies are collaborating with each other in some of these efforts and participating in global R&D partnerships (such as the Innovative Medicines Initiative effort to accelerate the development of potential therapies for COVID-19) and supporting national efforts to expand diagnosis and testing capacity and ensure affordable and ready access to potential solutions.3,5,6 The primary purpose of such innovation is to benefit patients and wider population health. Although there are also reputational benefits from involvement that can be realised across the industry, there are likely to be relatively few companies that are ‘commercial’ winners. Those who might gain substantial revenues will be under pressure not to be seen as profiting from the pandemic. In the United Kingdom for example, GSK has stated that it does not expect to profit from its COVID-19 related activities and that any gains will be invested in supporting research and long-term pandemic preparedness, as well as in developing products that would be affordable in the world’s poorest countries.7 Similarly, in the United States AbbVie has waived intellectual property rights for an existing combination product that is being tested for therapeutic potential against COVID-19, which would support affordability and allow for a supply of generics.8,9 Johnson & Johnson has stated that its potential vaccine – which is expected to begin trials – will be available on a not-for-profit basis during the pandemic.10 Pharma is mobilising substantial efforts to rise to the COVID-19 challenge at hand. However, we need to consider how pharmaceutical innovation for responding to emerging infectious diseases can best be enabled beyond the current crisis. Many public health threats (including those associated with other infectious diseases, bioterrorism agents and antimicrobial resistance) are urgently in need of pharmaceutical innovation, even if their impacts are not as visible to society as COVID-19 is in the immediate term. The pharmaceutical industry has responded to previous public health emergencies associated with infectious disease in recent times – for example those associated with Ebola and Zika outbreaks.11 However, it has done so to a lesser scale than for COVID-19 and with contributions from fewer companies. Similarly, levels of activity in response to the threat of antimicrobial resistance are still low.12 There are important policy questions as to whether – and how – industry could engage with such public health threats to an even greater extent under improved innovation conditions.

#### Pharmaceutical profits are key to innovation against emerging disease threats

Engelhardt 8 – PhD, MD, Professor of Philosophy @ Rice

(Hugo, “Innovation and the Pharmaceutical Industry: Critical Reflections on the Virtues of Profit,” EBrary)

Many are suspicious of, or indeed jealous of, the good fortune of oth-ers. Even when profit is gained in the market without fraud and with the consent of all buying and selling goods and services, there is a sense on the part of some that something is wrong if considerable profit is secured. There is even a sense that good fortune in the market, especially if it is very good fortune, is unfair. One might think of such rhetorically disparaging terms as "wind-fall profits". There is also a suspicion of the pursuit of profit because it is often embraced not just because of the material benefits it sought, but because of the hierarchical satisfaction of being more affluent than others. The pursuit of profit in the pharmaceu-tical and medical-device industries is tor many in particular morally dubious because it is acquired from those who have the bad fortune to be diseased or disabled. Although the suspicion of profit is not well-founded, this suspicion is a major moral and public-policy challenge. Profit in the market for the pharmaceutical and medical-device industries is to be celebrated. This is the case, in that if one is of the view (1) that the presence of additional resources for research and development spurs innovation in the development of pharmaceuticals and med-ical devices (i.e., if one is of the view that the allure of profit is one of the most effective ways not only to acquire resources but productively to direct human energies in their use), (2) that given the limits of altruism and of the willingness of persons to be taxed, the possibility of profits is necessary to secure such resources, (3) that the allure of profits also tends to enhance the creative use of available resources in the pursuit of phar-maceutical and medical-device innovation, and (4) if one judges it to be the case that such innovation is both necessary to maintain the human species in an ever-changing and always dangerous environment in which new microbial and other threats may at any time emerge to threaten human well-being, if not survival (i.e., that such innovation is necessary to prevent increases in morbidity and mortality risks), as well as (5) in order generally to decrease morbidity and mortality risks in the future, it then follows (6) that one should be concerned regarding any policies that decrease the amount of resources and energies available to encourage such innovation. One should indeed be of the view that the possibilities for profit, all things being equal, should be highest in the pharmaceutical and medical-device industries. Yet, there is a suspicion regarding the pursuit of profit in medicine and especially in the pharmaceutical and medical-device industries.

**That causes extinction, which outweighs.**

**Millett & Snyder-Beattie 17**

Millett, Ph.D., Senior Research Fellow, Future of Humanity Institute, University of Oxford; and Snyder-Beattie, M.S., Director of Research, Future of Humanity Institute, University of Oxford. 08-01-2017. “Existential Risk and Cost-Effective Biosecurity,” Health Security, 15(4), PubMed

In the decades to come, advanced bioweapons could **threaten human existence**. Although the **probability** of human extinction from bioweapons **may** be low, the **expected value** of **reducing** the risk could **still** be **large**, since such risks jeopardize the existence of **all future generations**. We provide an overview of biotechnological extinction risk, make some rough initial estimates for how severe the risks might be, and compare the cost-effectiveness of reducing these extinction-level risks with existing biosecurity work. We find that reducing human extinction risk can be more cost-effective than reducing smaller-scale risks, even when using conservative estimates. This suggests that the risks are not low enough to ignore and that more ought to be done to prevent the worst-case scenarios. How worthwhile is it spending resources to study and mitigate the chance of human extinction from biological risks? The risks of such a catastrophe are presumably low, so a skeptic might argue that addressing such risks would be a waste of scarce resources. In this article, we investigate this position using a cost-effectiveness approach and ultimately conclude that the expected value of reducing these risks is large, especially since such risks jeopardize the existence of all future human lives. **Historically, disease events have been responsible for the greatest death tolls** on humanity. The 1918 flu was responsible for more than 50 million deaths,1 while smallpox killed perhaps 10 times that many in the 20th century alone.2 The Black Death was responsible for killing over 25% of the European population,3 while other pandemics, such as the plague of Justinian, are thought to have killed 25 million in the 6th century—constituting over 10% of the world's population at the time.4 It is an open question whether a future pandemic could result in outright human extinction or the irreversible collapse of civilization. A skeptic would have many good reasons to think that existential risk from disease is unlikely. Such a disease would need to spread worldwide to **remote populations**, overcome **rare genetic resistances**, and **evade detection**, cures, and **countermeasures**. Even evolution itself may work in humanity's favor: **Virulence and transmission is often a trade-off**, and so **evolutionary pressures** could push against maximally lethal wild-type pathogens.5,6 While these arguments point to a very small risk of human extinction, they **do not rule** the possibility **out** entirely. Although rare, there are recorded instances of **species going extinct due to disease**—primarily in amphibians, but also in 1 mammalian species of rat on Christmas Island.7,8 There are also **historical examples of large human populations being almost entirely wiped out** by disease, especially when multiple diseases were simultaneously introduced into a population without immunity. The most striking examples of total population collapse include **native American tribes** exposed to European diseases, such as the Massachusett (86% loss of population), Quiripi-Unquachog (95% loss of population), and the Western Abenaki (which suffered a staggering 98% loss of population).9 In the modern context, no single disease currently exists that combines the worst-case levels of transmissibility, lethality, resistance to countermeasures, and global reach. But **many diseases are proof** of principle that **each worst-case attribute can be realized independently**. For example, some diseases exhibit nearly a 100% case fatality ratio in the absence of treatment, such as rabies or septicemic plague. Other diseases have a track record of spreading to virtually every human community worldwide, such as the 1918 flu,10 and seroprevalence studies indicate that other pathogens, such as chickenpox and HSV-1, can successfully reach over 95% of a population.11,12 Under optimal virulence theory, **natural evolution** would be an **unlikely** source for pathogens with the **highest possible levels of transmissibility, virulence, and global reach**. But **advances in biotech**nology might allow the creation of diseases that **combine such traits**. Recent controversy has **already emerged** over a number of **scientific experiments** that resulted in viruses with enhanced **transmissibility**, **lethality**, and/or the ability to overcome **therapeutics**.13-17 Other experiments demonstrated that mousepox could be modified to have a 100% case fatality rate and render a vaccine ineffective.18 In addition to transmissibility and lethality, studies have shown that other disease traits, such as incubation time, environmental survival, and available vectors, could be modified as well.19-21 Although these experiments had scientific merit and were not conducted with malicious intent, their implications are still worrying. This is especially true given that there is also a **long historical track record** of **state-run bioweapon research** applying cutting-edge science and technology to design agents not previously seen in nature. The Soviet bioweapons program developed agents with traits such as enhanced virulence, resistance to therapies, greater environmental resilience, increased difficulty to diagnose or treat, and which caused unexpected disease presentations and outcomes.22 Delivery capabilities have also been subject to the cutting edge of technical development, with Canadian, US, and UK bioweapon efforts playing a critical role in developing the discipline of aerobiology.23,24 While there is no evidence of state-run bioweapons programs directly attempting to develop or deploy bioweapons that would pose an existential risk, the logic of deterrence and **m**utually **a**ssured **d**estruction could create such incentives in more unstable political environments or following a breakdown of the Biological Weapons Convention.25 The **possibility of a war** between great powers could also increase the pressure to use such weapons—during the World Wars, bioweapons were used across multiple continents, with Germany targeting animals in WWI,26 and Japan using plague to cause an epidemic in China during WWII.27

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#### Text: The People’s Republic of China should offer Chinese developed vaccines and medical technology related to COVID-19 to the world for free.

#### The CP massively ramps up Chinese “vaccine diplomacy” which solves the case

Juecheng and Yuwei 8-13-21

(Zhao and Hu, https://www.globaltimes.cn/page/202108/1231387.shtml)

One of China’s most valued contributions to the global fair accessibility to COVID-19 vaccines is to enable more developing countries to hone their ability to produce vaccines by themselves, Zha Daojiong, professor of International Political Economy from Peking University, who closely studies the global vaccine equitable allocation framework, told the Global Times in a recent exclusive interview. Sharing his insights on widely discussed “vaccine nationalism,” “wavering vaccine intellectual property,” and “COVAX operation challenges,” Zha believes that China is advocating negotiations among countries on equitable global distribution of vaccines from a humanitarian, and global perspective. China has vowed to make efforts to provide the world with 2 billion doses of COVID-19 vaccines this year and donate $100 million to COVAX to promote global vaccine provision. This commitment comes amid the rampaging Delta variant, which is bringing more challenges for developing countries to access vaccines and combat the pandemic while the West continues to drag its heels in fulfilling its promises. The promise was made at the first meeting of a forum on international cooperation on COVID-19 vaccines held on August 5. Zha suggested that the forum, alongside the Initiative for Belt and Road Partnership on COVID-19 Vaccine Cooperation, reflect China’s efforts to support long-term cooperation in the vaccine industry globally. However, some Western media have labeled China and Russia as the pioneers of the global "vaccine diplomacy" campaign. The choice of vaccines by countries has become the epitome of global geopolitics.   Foreign comments on China using "vaccine diplomacy" in a narrow geopolitical sense reflect the real competition among COVID-19 vaccine providers, Zha told the Global Times. Due to China’s mature vaccine technologies, longer shelf life and lower requirement for storage and transportation, Chinese made vaccines are a more preferable choice for many developing countries with relatively weak vaccination infrastructure . This has been reflected in the approval of Chinese vaccines in more than 100 countries. But the phenomenon of “vaccine nationalism” was never absent in the decision by governments to choose vaccines, Zha suggested. “For example, some countries and regions would include geopolitical factors in choosing vaccines. These countries would reject certain vaccines. Moreover, some media outlets refuse to accept the fact that the professional assessment of vaccine efficacy is also a scientific process. Instead, they made comments on potential vaccines based on their geopolitical interests. This is also a kind of “vaccine nationalism”. Voices blaming “vaccine nationalism” have long been present in developed countries. For instance, Zha recalled how, during the H1N1 pandemic of 2009 which affected more than 200 countries and regions for more than a year, certain developed countries bought out entire stocks of vaccines against H1N1 once they were developed. Though some of those countries had promised to donate vaccines to others after they met their vaccination needs, the virus had long disappeared before their donations were made. Therefore, many in other nations lost the opportunity of a timely vaccination. Providing assistance from one country to another in the field of infectious or non-infectious diseases is often referred to as "health diplomacy." Some international public health research literature support "health diplomacy" because cooperation in this field is conducive to the improvement of political, economic and diplomatic relations, Zha said. China has taken important steps to close the global vaccine gap, including the acceleration of large-scale production, boosting fair distribution, and licensing local production in more countries.

#### Successful vaccine diplomacy is key to overall Chinese Soft Power

Huang, PhD, 3-11-21

(YANZHONG HUANG is Senior Fellow for Global Health at the Council on Foreign Relations, a Professor at Seton Hall University’s School of Diplomacy and International Relations, and Director of the school’s Center for Global Health Studies. https://www.foreignaffairs.com/articles/china/2021-03-11/vaccine-diplomacy-paying-china )

Vaccines have had a place in diplomacy since the Cold War era. The country that can manufacture and distribute lifesaving injections to others less fortunate sees a return on its investment in the form of soft power: prestige, goodwill, perhaps a degree of indebtedness, even awe. Today the country moving fastest toward consolidating these gains may be China, under President Xi Jinping, who proclaimed last May that Chinese-made vaccines against COVID-19 would become a “global public good.” Since that time, top officials have promised many developing countries priority access to Chinese vaccines, and the Chinese Foreign Ministry has announced that the country is providing free vaccines to 69 countries and commercially exporting them to 28 more. China’s competitors worry that where Beijing’s inoculations go, its influence will follow. But the field of COVID-19 vaccination is still a largely uncharted one and scattered with barriers, whether logistical, scientific, psychological, or geopolitical. China’s path through this labyrinth is neither obvious nor assured. The country faces stiffening competition from Russia and India. Now the United States, too, has entered the global stakes for equitable distribution of safe and effective vaccines. China has yet to prove that it can fulfill the role it has taken on or win the trust of those it has offered to aid. CHINA'S STAKE The Chinese government dislikes the term “vaccine diplomacy.” The implication that China would distribute vaccine doses in order to broaden its global political influence is a “sinister” one, according to the official Xinhua News Agency. Rather, the Chinese government contends that “in promoting cooperation in combating the pandemic, China does not seek any geopolitical goals or have any economic interest considerations, and it has never attached any political strings.” Xi has further stressed that by distributing necessary goods in a crisis, China is merely acting as a responsible great power should. In this regard, China may seek to succeed with vaccines where it failed with masks: last spring, quality-control issues and clumsy propaganda tarnished the country’s efforts to supply medical products to the developed world. Now China is looking to showcase its global health leadership to lower- and middle-income countries, where it is distributing vaccines. But Beijing surely has additional foreign policy objectives in mind. China began its vaccine development projects early last spring, and state media made quite clear that through them, China hoped to demonstrate its technological prowess and the superiority of its authoritarian model of governance. “We are not lagging behind the United States as far as the technology is concerned,” a Chinese virologist told the state-backed Global Times. Another scientist highlighted China’s “system advantages”: “The United States is no match for China in terms of concentrating power to accomplish big things.” Indeed, unlike in the United States, vaccine development in China was a highly state-driven process. The Chinese government simultaneously pushed several technological approaches, including inactivated vaccines, mRNA vaccines, and adenovirus vector vaccines. It mobilized at least 22 institutes and firms to work on 17 vaccine development projects. And until last summer, China was leading the global race in vaccine development. It developed a vaccine (Ad5-nCoV) as early as February 2020, started Phase 1 clinical trials on March 16, and published results of the trials in late May. General Chen Wei, the face of China’s vaccine development operation, celebrated such achievements as “an embodiment of our country’s S&T progress, an embodiment of China’s great-power image and responsibility, and, even more, a contribution to humankind.” Behind such lofty goals lie commercial objectives, too. Health-related development assistance has long offered Chinese pharmaceutical companies a low-cost means of expanding their market share in the developing world. In March 2020, President Xi explicitly linked the shipment of medical supplies overseas to the “Health Silk Road,” now an important component of the Belt and Road Initiative. Xiaofeng Liang, a former deputy director of the Chinese Center for Disease Control and Prevention, has publicly called for prioritizing BRI countries for access to Chinese vaccines. But the opportunity hardly ends there. Prior to the COVID-19 pandemic, few Chinese pharmaceutical companies had received World Health Organization prequalification to supply medical products to international organizations and donor funds. In 2019, China’s share in the value of UN-procured medical products was only 1.9 percent, compared with 21.9 percent for India. Chinese media lamented that of the 155 WHO-prequalified vaccines, only four were from China, compared with 44 from India. Indeed, Indian pharmaceutical firms produced more than 60 percent of the vaccines sold worldwide. The huge global demand for COVID-19 vaccines and “vaccine nationalism” in wealthy nations have created a great opportunity for China to break into a market that Indian and Western pharmaceutical firms have long dominated. If the vaccine were priced at $10 per dose with a 40 percent net profit margin, even a 15 percent share of the vaccine market in lower- and middle-income countries would generate total sales of $10.8 billion and a profit of $4.32 billion for the Chinese economy. In reality, Chinese vaccines are often priced higher than $10.

**Chinese leadership solves extinction.**

Shen **Yamei 18**, Deputy Director and Associate Research Fellow of Department for American Studies, China Institute of International Studies, 1-9-2018, "Probing into the “Chinese Solution” for the Transformation of Global Governance," CAIFC, http://www.caifc.org.cn/en/content.aspx?id=4491

As the world is in a period of great development, transformation and adjustment, the international power comparison is undergoing profound changes, global governance is reshuffling and traditional governance concepts and models are confronted with challenges. The international community is expecting China to play a bigger role in global governance, which has given birth to the Chinese solution. A. To Lead the Transformation of the Global Governance System. **The “shortcomings” of the existing global governance system are prominent, which can hardly ensure global development. First, the traditional dominant forces are seriously imbalanced**. The US and Europe that used to dominate the global governance system have been beset with structural problems, with their economic development stalling, social contradictions intensifying, populism and secessionism rising, and states trapped in internal strife and differentiation. These countries have not fully reformed and adjusted themselves well, but rather pointed their fingers at globalization and resorted to retreat for self-insurance or were busy with their own affairs without any wish or ability to participate in global governance, which has encouraged the growth of “anti-globalization” trend into an interference factor to global governance. Second, the global governance mechanism is relatively lagging behind. Over the years of development, the strength of emerging economies has increased dramatically, which has substantially upset the international power structure, as the developing countries as a whole have made 80 percent of the contributions to global economic growth. These countries have expressed their appeal for new governance and begun policy coordination among themselves, which has initiated the transition of global governance form “Western governance” to “East-West joint governance”, but **the traditional governance mechanisms such as the World Bank, IMF and G7 failed to reflect the demand of the new pattern, in addition to their lack of representation and inclusiveness.** Third, the global governance rules are developing in a fragmented way, with governance deficits existing in some key areas. With the diversification and in-depth integration of international interests, the domain of global governance has continued to expand, with actors multiplying by folds and action intentions becoming complicated. As relevant efforts are usually temporary and limited to specific partners or issues, global governance driven by requests of “diversified governance” lacks systematic and comprehensive solutions. Since the beginning of this year, there have been risks of running into an acephalous state **in such key areas as global economic governance and climate change**. **Such emerging issues as nuclear security and international terrorism have suffered injustice because of power politics**. **The governance areas in deficit, such as cyber security, polar region and oceans, have “reversely forced” certain countries and organizations to respond hastily**. All of these have made the global governance system trapped in a dilemma and call urgently for a clear direction of advancement. B. To Innovate and Perfect the International Order. Currently, whether the developing countries or the Western countries of Europe and the US are greatly discontent with the existing international order as well as their appeals and motivation for changing the order are unprecedentedly strong. The US is the major creator and beneficiary of the existing hegemonic order, but it is now doubtful that it has gained much less than lost from the existing order, faced with the difficulties of global economic transformation and obsessed with economic despair and political dejection. Although the developing countries as represented by China acknowledge the positive role played by the post-war international order in safeguarding peace, boosting prosperity and promoting globalization, they criticize the existing order for lack of inclusiveness in politics and equality in economy, as well as double standard in security, believing it has failed to reflect the multi-polarization trend of the world and is an exclusive “circle club”. Therefore, there is much room for improvement. For China, to lead the transformation of the global governance system and international order not only supports the efforts of the developing countries to uphold multilateralism rather than unilateralism, advocate the rule of law rather than the law of the jungle and practice democracy rather than power politics in international relations, but also is an important subject concerning whether China could gain the discourse power and development space corresponding to its own strength and interests in the process of innovating and perfecting the framework of international order. C. To Promote Integration of the Eastern and Western Civilizations. Dialog among civilizations, which is the popular foundation for any country’s diplomatic proposals, runs like a trickle moistening things silently. Nevertheless, in the existing international system guided by the “Western-Centrism”, the Western civilization has always had the self-righteous superiority, conflicting with the interests and mentality of other countries and having failed to find the path to co-existing peacefully and harmoniously with other civilizations. **So to speak, many problems of today, including the growing gap in economic development between the developed and developing countries against the background of globalization, the Middle East trapped in chaos and disorder, the failure of Russia and Turkey to “integrate into the West”, etc., can be directly attributed to lack of exchanges, communication and integration among civilizations.** Since the 18th National Congress of CPC, Xi Jinping has raised the concept of “Chinese Dream” that reflects both Chinese values and China’s pursuit, re-introducing to the world the idea of “all living creatures grow together without harming one another and ways run parallel without interfering with one another”, which is the highest ideal in Chinese traditional culture, and striving to shape China into a force that counter-balance the Western civilization. He has also made solemn commitment that “we respect the diversity of civilizations …… cannot be puffed up with pride and depreciate other civilizations and nations”; “facing the people deeply trapped in misery and wars, we should have not only compassion and sympathy, but also responsibility and action …… do whatever we can to extend assistance to those people caught in predicament”, etc. China will rebalance the international pattern from a more inclusive civilization perspective and with more far-sighted strategic mindset, or at least correct the bisected or predominated world order so as to promote the parallel development of the Eastern and Western civilizations through mutual learning, integration and encouragement. D. To Pass on China’s Confidence. Only a short while ago, some Western countries had called for “China’s responsibility” and made it an inhibition to “regulate” China’s development orientation. Today, China has become a source of stability in an international situation full of uncertainties. Over the past 5 years, China has made outstanding contributions to the recovery of world economy under relatively great pressure of its own economic downturn. Encouraged by the “four confidences”, the whole of the Chinese society has burst out innovation vitality and produced innovation achievements, making people have more sense of gain and more optimistic about the national development prospect. It is the heroism of the ordinary Chinese to overcome difficulties and realize the ideal destiny that best explains China’s confidence. When this confidence is passed on in the field of diplomacy, it is expressed as: first, China’s posture is seen as more forging ahead and courageous to undertake responsibilities ---- proactively shaping the international agendas rather than passively accepting them; having clear-cut attitudes on international disputes rather than being equivocal; and extending international cooperation to comprehensive and dimensional development rather than based on the theory of “economy only”. In sum, China will actively seek understanding and support from other countries rather than imposing its will on others with clear-cut Chinese characteristics, Chinese style and Chinese manner. Second, China’s discourse is featured as a combination of inflexibility and yielding as well as magnanimous ---- combining the internationally recognized diplomatic principles with the excellent Chinese cultural traditions through digesting the Chinese and foreign humanistic classics assisted with philosophical speculations to make “China Brand, Chinese Voice and China’s Image get more and more recognized”. Third, the Chinese solution is more practical and intimate to people as well as emphasizes inclusive cooperation, as China is full of confidence to break the monopoly of the Western model on global development, “offering mankind a Chinese solution to explore a better social system”, and “providing a brand new option for the nations and peoples who are hoping both to speed up development and maintain independence”. II.Path Searching of the “Chinese Solution” for Global Governance Over the past years’ efforts, China has the ability to transform itself from “grasping the opportunity” for development to “creating opportunity” and “sharing opportunity” for common development, hoping to pass on the longing of the Chinese people for a better life to the people of other countries and promoting the development of the global governance system toward a more just and rational end. It has become the major power’s conscious commitment of China to lead the transformation of the global governance system in a profound way. A. To Construct the Theoretical System for Global Governance. The theoretical system of global governance has been the focus of the party central committee’s diplomatic theory innovation since the 18th National Congress of CPC as well as an important component of the theory of socialism with Chinese characteristics for a new era, which is not only the sublimation of China’s interaction with the world from “absorbing and learning” to “cooperation and mutual learning”, but also the cause why so many developing countries have turned from “learning from the West” to “exploring for treasures in the East”. In the past 5 years, the party central committee, based on precise interpretation of the world pattern today and serious reflection on the future development of mankind, has made a sincere call to the world for promoting the development of global governance system toward a more just and rational end, and proposed a series of new concepts and new strategies including engaging in major power diplomacy with Chinese characteristics, creating the human community with common destiny, promoting the construction of new international relationship rooted in the principle of cooperation and win-win, enriching the strategic thinking of peaceful development, sticking to the correct benefit view, formulating the partnership network the world over, advancing the global economic governance in a way of mutual consultation, joint construction and co-sharing, advocating the joint, comprehensive, cooperative and sustainable security concept, and launching the grand “Belt and Road” initiative. The Chinese solution composed of these contents, not only fundamentally different from the old roads of industrial revolution and colonial expansion in history, but also different from the market-driven neo-liberalism model currently advocated by Western countries and international organizations, stands at the height of the world and even mankind, seeking for global common development and having widened the road for the developing countries to modernization, which is widely welcomed by the international community. B. To Supplement and Perfect the Global Governance System. Currently, the international political practice in global governance is mostly problem-driven without creating a set of relatively independent, centralized and integral power structures, resulting in the existing global governance systemcharacterized as both extensive and unbalanced. China has been engaged in reform and innovation, while maintaining and constructing the existing systems, producing some thinking and method with Chinese characteristics. First, China sees the UN as a mirror that reflects the status quo of global governance, which should act as the leader of global governance, and actively safeguards the global governance system with the UN at the core. Second, China is actively promoting the transforming process of such recently emerged international mechanisms as G20, BRICS and SCO, perfecting them through practice, and boosting Asia-Pacific regional cooperation and the development of economic globalization. China is also promoting the construction of regional security mechanism through the Six-Party Talks on Korean Peninsula nuclear issue, Boao Forum for Asia, CICA and multilateral security dialog mechanisms led by ASEAN so as to lay the foundation for the future regional security framework. Third, China has initiated the establishment of AIIB and the New Development Bank of BRICS, creating a precedent for developing countries to set up multilateral financial institutions. The core of the new relationship between China and them lies in “boosting rather than controlling” and “public rather than private”, which is much different from the management and operation model of the World Bank, manifesting the increasing global governance ability of China and the developing countries as well as exerting pressure on the international economic and financial institution to speed up reforms. **Thus, in leading the transformation of the global governance system, China has not overthrown the existing systems and started all over again, but been engaged in innovating and perfecting; China has proactively undertaken international responsibilities, but has to do everything in its power and act according to its ability.** C. To Reform the Global Governance Rules. Many of the problems facing global governance today are deeply rooted in such a cause that the dominant power of the existing governance system has taken it as the tool to realize its own national interests first and a platform to pursue its political goals. Since the beginning of this year, the US has for several times requested the World Bank, IMF and G20 to make efforts to mitigate the so-called global imbalance, abandoned its commitment to support trade openness, cut down investment projects to the middle-income countries, and deleted commitment to support the efforts to deal with climate change financially, which has made the international systems accessories of the US domestic economic agendas, dealing a heavy blow to the global governance system. On the contrary, the interests and agendas of China, as a major power of the world, are open to the whole world, and China in the future “will provide the world with broader market, more sufficient capital, more abundant goods and more precious opportunities for cooperation”, while having the ability to make the world listen to its voice more attentively. With regard to the subject of global governance, China has advocated that what global governance system is better cannot be decided upon by any single country, as the destiny of the world should be in the hands of the people of all countries. In principle, all the parties should stick to the principle of mutual consultation, joint construction and co-sharing, resolve disputes through dialog and differences through consultation. Regarding the critical areas, opening to the outer world does not mean building one’s own backyard, but building the spring garden for co-sharing; the “Belt and Road” initiative is not China’s solo, but a chorus participated in by all countries concerned. **China has also proposed international public security views on nuclear security, maritime cooperation and cyber space order, calling for efforts to make the global village into a “grand stage for seeking common development” rather than a “wrestling arena”; we cannot “set up a stage here, while pulling away a prop there”, but “complement each other to put on a grand show”**. From the orientation of reforms, efforts should be made to better safeguard and expand the legitimate interests of the developing countries and increase the influence of the emerging economies on global governance. Over the past 5 years, China has attached importance to full court diplomacy, gradually coming to the center stage of international politics and proactively establishing principles for global governance. By hosting such important events as IAELM, CICA Summit, G20 Summit, the Belt and Road International Cooperation Forum and BRICS Summit, China has used theseplatforms to elaborate the Asia-Pacific Dream for the first time to the world, expressing China’s views on Asian security and global economic governance, discussing with the countries concerned with the Belt and Road about the synergy of their future development strategies and setting off the “BRICS plus” capacity expansion mechanism, in which China not only contributes its solution and shows its style, but also participates in the shaping of international principles through practice. On promoting the resolution of hot international issues, China abides by the norms governing international relations based on the purposes and principles of the UN Charter, and insists on justice, playing a constructive role as a responsible major power in actively promoting the political accommodation in Afghanistan, mediating the Djibouti-Eritrea dispute, promoting peace talks in the Middle East, devoting itself to the peaceful resolution of the South China Sea dispute through negotiations. In addition, China’s responsibility and quick response to international crises have gained widespread praises, as seen in such cases as assisting Africa in its fight against the Ebola epidemic, sending emergency fresh water to the capital of Maldives and buying rice from Cambodia to help relieve its financial squeeze, which has shown the simple feelings of the Chinese people to share the same breath and fate with the people of other countries. D. To Support the Increase of the Developing Countries’ Voice. The developing countries, especially the emerging powers, are not only the important participants of the globalization process, but also the important direction to which the international power system is transferring. With the accelerating shift of global economic center to emerging markets and developing economies, the will and ability of the developing countries to participate in global governance have been correspondingly strengthened. As the biggest developing country and fast growing major power, China has the same appeal and proposal for governance as other developing countries and already began policy coordination with them, as China should comply with historical tide and continue to support the increase of the developing countries’ voice in the global governance system. To this end, China has pursued the policy of “dialog but not confrontation, partnership but not alliance”, attaching importance to the construction of new type of major power relationship and global partnership network, while making a series proposals in the practice of global governance that could represent the legitimate interests of the developing countries and be conducive to safeguarding global justice, including supporting an open, inclusive, universal, balanced and win-win economic globalization; promoting the reforms on share and voting mechanism of IMF to increase the voting rights and representation of the emerging market economies; financing the infrastructure construction and industrial upgrading of other developing countries through various bilateral or regional funds; and helping other developing countries to respond to such challenges as famine, refugees, climate change and public hygiene by debt forgiveness and assistance.

## case

### Vaccine Apartheid

#### Covid-19 is being brought under control now—vaccination efforts, immunity, etc

Byjillian **Kramer,** 8-06-20**21**,

"How will the pandemic end? The science of past outbreaks offers clues.," Science, <https://www.nationalgeographic.com/science/article/how-will-the-pandemic-end-the-science-of-past-outbreaks-offers-clues>

When the worldwide spread of a disease is brought under control in a localized area, it’s no longer a pandemic but an epidemic, according to the WHO. If COVID-19 persists globally at what the WHO judges to be “expected or normal levels,” the organization will then re-designate the disease “endemic.” At that stage, SARS-CoV-2 will become a circulating virus that’s “less consequential as we build immunity,” says [Saad Omer](https://medicine.yale.edu/yigh/profile/saad_omer/), an epidemiologist and director of the Yale Institute for Global Health. ([Read more about how we’ll live with COVID-19 as an endemic disease](https://www.nationalgeographic.com/science/article/covid-19-will-likely-be-with-us-forever-heres-how-well-live-with-it).) Only [two diseases](https://asm.org/Articles/2020/March/Disease-Eradication-What-Does-It-Take-to-Wipe-out) in recorded history that affect humans or other animals have ever been eradicated: smallpox, a life-threatening disease for people that covers bodies in painful blisters, and rinderpest, a viral malady that infected and killed cattle. In both instances, intensive global vaccination campaigns brought new infections to a halt. The [last confirmed case of rinderpest](https://www.theguardian.com/science/2010/oct/14/rinderpest-virus-eradicated) was detected in Kenya in 2001, while the [last known smallpox case](https://www.cdc.gov/smallpox/history/history.html) occurred in the U.K. in 1978. [Joshua Epstein](https://publichealth.nyu.edu/faculty/joshua-epstein), professor of epidemiology in the New York University School of Global Public Health and founding director of its Agent-Based Modeling Laboratory, argues that eradication is so rare that the word should be wiped from our disease vocabulary. Diseases “retreat to their animal reservoirs, or they mutate at low levels,” he says. “But they don’t typically literally disappear from the global biome.” There is no one definition of what the end of a pandemic means. RACHAEL PILTCH-LOEBHARVARD T.H. CHAN SCHOOL OF PUBLIC HEALTH Most causes of past pandemics are still with us today. More than [3,000 people caught the bacteria that cause both bubonic and pneumonic plague](https://www.who.int/en/news-room/fact-sheets/detail/plague) between 2010 and 2015, according to the WHO. And the virus behind the 1918 flu pandemic that ravaged the globe, killing at least 50 million people, ultimately morphed into less lethal variants, with its [descendants becoming strains of the seasonal flu](https://www.nejm.org/doi/full/10.1056/nejmp0904819). As with the 1918 flu, it’s likely the SARS-CoV-2 virus will continue to mutate, and the human immune system would eventually adapt to fend it off without shots—but not before many people fell ill and died. “Developing immunity the hard way is not a solution that we should be aspiring to,” Omer says. Finding ways to slow the spread of a disease and manage its effects is by far the safer path, experts say. Today, for instance, pest control and advanced hygiene keep the plague at bay, while any new cases can be treated with antibiotics. For other diseases, such as the flu, vaccines can also make a difference. The available COVID-19 vaccines are highly safe and effective, which means getting enough people vaccinated can end this pandemic faster and with lower mortality than natural infections alone. Why we need vaccines for all WHO Director Tedros Adhanom Ghebreyesus last week reinstated a goal of vaccinating at least 10 percent of every nation’s population by September, with the loftier goal of reaching 40 percent global inoculation by year’s end and 70 percent by mid-2022.

### Solvency

**Recut of Public Citizen shows that IP is not sufficient to solve; tech transfer and trade secrets still stand in the way (rehighlight in green)**

**Public Citizen 3/29 -** Public Citizen [“Public Citizen is a nonprofit consumer advocacy organization that champions the public interest in the halls of power. We defend democracy, resist corporate power and work to ensure that government works for the people – not for big corporations. Founded in 1971, we now have 500,000 members and supporters throughout the country. We don’t participate in partisan political activities or endorse any candidates for elected office. We take no government or corporate money, which enables us to remain fiercely independent and call out bad actors – no matter who they are or how much power and money they have.”], “Waiver of the WTO’s Intellectual Property Rules: Facts vs. Common Myths,” *Public Citizen Global Trade Watch Series*. March 29, 2021. Accessed Aug. 10, 2021. <https://www.citizen.org/article/waiver-of-the-wtos-intellectual-property-rules-myths-vs-facts/> AT

In the press and on Capitol Hill, Big Pharma is pushing a Big Lie. The claim is that a lack of manufacturing capacity, not pharmaceutical corporation’s monopoly intellectual property (IP) protections, are thwarting greater production of COVID-19 vaccines. A related argument, with decidedly racist overtones, is that COVID-19 vaccines are too complicated for producers in developing countries to make successfully. The reality is that in every region of the world, there are multiple producers that could be greatly increasing global vaccine supplies if the technology and know-how were shared.¶ Just in Africa, “Biovac and Aspen in South Africa, Institute Pasteur in Senegal, and Vacsera in Egypt could rapidly retool factories to make mRNA vaccines,” notes a group of medicine-production experts in a recent Foreign Policy article. Indeed, a former Moderna director of chemistry revealed that with enough technology transfer and know- how-sharing, a modern factory should be able to get mRNA vaccine production online in, at most, three to four months. The Serum Institute in India already is slated to produce the AstraZeneca and Novavax vaccines, while Moderna declined to partner with a qualified Bangladeshi vaccine maker, claiming its engineers were too busy to focus beyond U.S. and EU production. In Latin America, existing facilities in Brazil, Argentina and Mexico under contract to monopoly holders are already pumping out vials, and in countries like Chile and Colombia, the pharmaceutical industry has expressed willingness to kickstart vaccine production.¶ Existing and planned contract manufacturing arrangements prove facilities in developing countries certainly can produce COVID-19 vaccines. But unless technology and know-how are shared more openly, the monopoly holders maintain absolute control over how much can be produced, what the price is and where it will be sold. So, 91% of the Johnson & Johnson vaccine that South African firm Aspen will manufacture must be shipped for sale outside South Africa, according to South Africa’s WTO Counselor. And the Serum Institute is barred from supplying upper- middle-income and high-income countries with the AstraZeneca vaccines it makes, meaning AstraZeneca can artificially segment the global market and ensure that it is the only supplier of the Oxford vaccine in the most profitable national markets, according to Doctors Without Borders.¶ Most critically, there simply is not enough supply to go around now or for every year in the future during which the whole world will need regular COVID vaccination to keep the virus under control. Thankfully, scores of countries are ready to invest in building new or repurposing existing production capacity. That is why more than 100 countries support a waiver of the WTO’s Agreement on Trade-Related Aspects of Intellectual Property (TRIPS). These countries seek certainty that if they adjust their domestic laws and practices to support that investment by providing access to the necessary technology, they will not get dragged into expansive WTO litigation or face retaliatory sanctions from countries claiming WTO violations. The waiver will also serve as a worldwide buffer against the political pressure and legal harassment to which Big Pharma subjects countries that seek to promote affordable access to medicines.¶ In many countries, the regulatory authorities that had to approve domestic use of various vaccines and other COVID-related medical products have significant information from the firms that they could share with skilled teams from local universities, government agencies and pharmaceutical manufacturers — if they were not obliged by WTO rules to guarantee monopoly control of it. And world-class pharmaceutical firms already are making generic versions of new cutting-edge HIV-AIDS medicines and pumping out vaccines based on the platform that, for instance, the Johnson & Johnson vaccine uses.

#### Tech Transfer is distinct from IP and requires significantly different action than the plan – IP is relevant but not synonymous

TWI 02/21

The Welding Institute, (assists companies with tech transfer) 02-05-21 (Visible by doing inspect element), "Joining Innovation with Expertise," The Welding Institute, [https://www.twi-global.com/technical-knowledge/faqs/what-is-technology-transfer //](https://www.twi-global.com/technical-knowledge/faqs/what-is-technology-transfer%20//) AW

Technology transfer is the movement of data, designs, inventions, materials, software, technical knowledge or trade secrets from one organisation to another or from one purpose to another. The technology transfer process is guided by the policies, procedures and values of each organisation involved in the process. Also known as transfer of technology (ToT), technology transfer can take place between universities, businesses and governments, either formally or informally, to share skills, knowledge, technologies, manufacturing methods, and more. This form of knowledge transfer helps ensure that scientific and technological developments are available to a wider range of users who can then help develop or exploit it. This transfer can occur horizontally across different areas or vertically by moving technologies, for example, from research centres to research and development teams. Tech transfer is promoted at conferences organised by groups like the Association of University Technology Managers, so that investors can assess the prospect of commercialisation for a ground breaking new product or service. This commercialisation can involve the creation of joint ventures, licensing agreements and partnerships to share the risks and rewards. This can also be coupled with the raising of venture capital, which is generally more common in the United States than in Europe, for example. Research institutions, governments and businesses may also use the services of technology transfer offices to help with the process. These offices may include economists, engineers, lawyers, marketing experts and scientists. An important part of tech transfer is the protection of intellectual property (IP) associated with innovations developed at research institutions. This can mean licensing patented intellectual property to outside businesses or the creation of start-up companies to license the IP. However, before innovations can be brought to market they need to be developed through [technology readiness levels (TRL)](https://www.twi-global.com/technical-knowledge/faqs/technology-readiness-levels). TRLs 1-3 focus on research while levels 6-7 and higher sees a product move towards production. Bridging the gap between these different levels can be complex and time-consuming, as it requires the development of research into prototypes and then to fully tested and reliable finished products.

#### Tech transfer is key and not included under IP

Smith 05/05

(Laura Smith-Spark; Newsdesk Editor, CNN Digital; (05-05-21) Rich nations urged to share vaccine knowledge while WTO debates waiving patents; CNN; <https://www.cnn.com/2021/05/05/world/covid-19-vaccine-patents-wto-intl/index.html>; CKD)

Thomas Bollyky, director of the Global Health Program at the Council on Foreign Relations, told CNN on Friday that what's really needed to scale up global manufacturing of vaccines is technology transfer. "It's not just a matter of intellectual property. It's also the transfer of know-how," he said. "I don't think there's clear evidence that a waiver of an intellectual property is going to be the best way for that technology transfer to occur." Waiving patents will not work in the same way for vaccines as it has for drugs, Bollyky said. For HIV drugs, for example, manufacturers were more or less able to reverse engineer them without much help from the original developer. "It's very different for vaccines, where it's really a biological process as much as a product. It's hard to scale up manufacturing in this process for the original company, let alone another manufacturer trying to figure this out without assistance," he said. "It requires a lot of knowledge that's not part of the IP." The deal between AstraZeneca and the Serum Institute of India is a successful example of such technology transfer, Bollyky said, where the licensing of IP happened voluntarily. "The question is what can we do to facilitate more deals like the one between AstraZeneca and the Serum Institute of India to have this transfer," he said. Michael Head, senior research fellow in global health at the University of Southampton, in England, told CNN that increasing regional manufacturing capacity, particularly in the global south, was key -- and should be a focus between pandemics. "Sharing intellectual property during the pandemic is something that should happen but that doesn't resolve the issues," he said. "Manufacturing vaccines is hard. It's hard to rapidly set up a new site with all the equipment, infrastructure, all the vaccine ingredients, with suitable staff to produce a large number of high quality vaccine products." Philanthropist Bill Gates, a major supporter of [global Covid-19 vaccine equity](https://www.cnn.com/2021/02/05/world/covax-explainer-intl/index.html) through the Bill & Melinda Gates Foundation, also [told Sky News](https://news.sky.com/story/covid-19-bill-gates-hopeful-world-completely-back-to-normal-by-end-of-2022-and-vaccine-sharing-to-ramp-up-12285840) last month that he did not believe overriding IP rules was the answer. "There's only so many vaccine factories in the world and people are very serious about the safety of vaccines," he said. "The thing that's holding things back in this case is not intellectual property. There's not, like, some idle vaccine factory with regulatory approval that makes magically safe vaccines. You've got to do the trials on these things and every manufacturing process has to be looked at in a very careful way."

#### Aff doesn’t attack all of the root causes of disease spread- lack of materials, equipment, and facilities when faced with skyrocketed demands means solving IP protections alone isnt enough

Brant & Burns 7-29-21 [Jennifer Brant, CEO and Founder of Innovation Insights, and Thaddeus Burns, Head of Life Science Government & Public Affairs at Merck and served in senior positions at the US Department of Commerce and the White House Office of the US Trade Representative, served as a member of the National Academy of Sciences Committee charged with preparing a report on the science and technology capabilities of the U.S. Department of State. “Trade restrictions are delaying the COVID response. The WTO must act.” July 29, 2021. <https://www.weforum.org/agenda/2021/07/wto-members-must-launch-new-work-to-reinforce-the-covid-response-in-november/>] AL

The COVID-19 pandemic hit at a time when bio-manufacturing was undergoing a process of democratization. Technological progress had enabled growing capacity in many countries including Brazil, Indonesia, South Africa, Tunisia, Argentina, and Egypt. By 2020, the business model for bio-manufacturing had fundamentally changed and it was becoming the norm for companies to distribute research, development and manufacturing across geographies and work with partners. As recently as 15 years ago, building a facility to produce biologics such as monoclonal antibodies or vaccines could require an investment of as much as €500m, and it would take up to 3 years to bring that facility online. New manufacturing technologies have made it cheaper and easier to build new facilities and to scale up existing ones. Today, an investment of €20m can get a bio-manufacturing plant up and running. Such changes are part of the reason the global community was able to launch production of new COVID-19 vaccines so quickly. The urgency of COVID-19 accelerated further innovations in bio-manufacturing equipment and processes, and compressed production time in a way that will have positive impacts in the future. But the pandemic also revealed major weaknesses in global value chains. It was difficult for manufacturers to keep up with the sudden surge for demand for raw materials and equipment, as many new research and development and manufacturing partnerships rapidly took off. To extend capacity, new employees, intensive training and collaboration, and more infrastructure were needed. The global community was faced with the reality that facilities cannot be built everywhere in an instant, and that there are bottlenecks in the supply chain. Government action in some cases made things worse. Some countries enacted export restrictions on COVID-related products, which made it extremely difficult to run a global supply chain. Another difficult issue has been the tariffs applied on biologics and the products needed for their manufacture. Eighteen months into the pandemic, biologics manufacturers are still trying to cope with a range of challenges. There is still surging demand for equipment and raw materials. In some cases, they have expanded manufacturing capacity to produce more equipment such as filters and bioreactors. This continues to require time and significant investments.

#### The TRIPS agreement and cheap vaccines in the squo solve the aff--independently, lack of manufacturing power and licensing transparency deck solvency.

Mercurio 21 (Bryan Mercurio [Simon F.S. Li Professor of Law at The Chinese University of Hong Kong], WTO WAIVER FROM INTELLECTUAL PROPERTY PROTECTION FOR COVID19 VACCINES AND TREATMENTS: A CRITICAL REVIEW, Virginia Journal of International Law, <https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3789820>, 2/12/2021) hwof

A WTO waiver is an extreme measure which should only be used when existing WTO obligations prove inadequate. This was the case in relation to the compulsory licencing provisions under Article 31 of the TRIPS Agreement, which essentially precluded Members with no or inadequate manufacturing capabilities from making use of the flexibility granted in the TRIPS Agreement. 25 This was also the case with the Kimberley Process, which attempts to eliminate trade in “conflict diamonds”. 26 Although the IP waiver proposal states that “there are several reports about intellectual property rights hindering or potentially hindering timely provisioning of affordable medical products to the patients”, 27 the sponsors did not provide further elaboration or evidence to support their declaration that “many countries especially developing countries may face institutional and legal difficulties when using flexibilities available [under the TRIPS Agreement]”. 28 Instead, many of the examples used by India and South Africa point to problems not with the TRIPS Agreement but rather to failures at the domestic level. As mentioned above, the WTO allowed for the importation of medicines under a compulsory licence in 2003, and yet many developing countries have yet to put in place any framework to allow their country to make use of the flexibility. 29 This is not an institutional problem of the international system but rather a problem at the country level. Two additional factors which make the proposed waiver unnecessary and potentially harmful. First, pharmaceutical companies are selling the vaccine at extremely reasonable rates and several announced plans for extensive not-for-profit sales.30 Although agreements between the pharmaceutical companies and governments are not publicly disclosed, the Belgian Secretary of State Eva De Bleeker temporarily made publicly available in a tweet the prices the EU is being charged by each manufacturer. The De Bleeker tweet indicated the European Commission negotiated price arrangements with six companies, with the range of spending between €1.78 and €18 per coronavirus vaccine dosage. Specific price per dose listed for each of the six vaccines was as follows: Oxford/AstraZeneca: (€1.78), Johnson & Johnson (€8.50), Sanofi/GSK (€7.56), CureVac (€10), BioNTech/Pfizer (€12) and Moderna (€18).31 While much as been made of the fact that South Africa agreed to purchase 1.5 million doses of the Oxford/AstraZeneca from the Serum Institute of India (SII) at a cost of €4.321 per dose,32 these criticisms are directed at the lack of transparency in pharmaceutical licenses and production contracts – an issue which would be wholly unaddressed by a waiver

of IPRs. Moreover, while the disparity in pricing is concerning the overall per dosage rate South Africa is paying nevertheless represents value for money given the expected health and economic returns on investment. Despite the disparity in pricing between nations, the larger point remains that the industry has not only rapidly produced vaccines for the novel coronavirus but is making them available at unquestionably reasonable prices. Second, the proposed waiver will do nothing to address the problem of lack of capacity or the transfer of technology and goodwill. Pharmaceutical companies have not applied for patents in the majority of developing countries – in such countries, any manufacturer is free to produce and market the vaccine inside the territory of that country or to export the vaccine to other countries where patents have not been filed.33 Patents cannot be the problem in the countries where no patent applications have been filed, but the lack of production in such countries points to the real problem – these countries lack manufacturing capacity and capability.

**No solvency and reject "empirical" claims -- vaccines require complex infrastructure to manufacture, not just patents**

**Hotez 5/10** [Peter J. Hotez, Maria Elena Bottazzi, and Prashant Yadav. "Producing a Vaccine Requires More Than a Patent," Foreign Affairs, 5-10-2021, accessed 8-8-2021, https://www.foreignaffairs.com/articles/united-states/2021-05-10/producing-vaccine-requires-more-patent] HWIC

On May 5, President Joe Biden announced that the United States would support an international bid to waive intellectual property rights to vaccines for the duration of the coronavirus pandemic, thereby ostensibly allowing other countries to ramp up production even of the sophisticated technology behind the Pfizer-BioNTech and Moderna vaccines against COVID-19. Many in the global health community and developing world welcomed the decision as a victory for greater equity in vaccine distribution, in which middle- and low-income countries are lagging far behind wealthy ones. But the jubilation may be premature. The drive for intellectual property waivers originates in part from the world’s experience fighting the last war, against HIV/AIDS. Patent pools, intellectual property waivers, and other liberalizing mechanisms were urgent in assuring equity of access to lifesaving drugs during that epidemic. But these tools are better suited to medicines and other pharmaceuticals than to vaccines. Producing vaccines—particularly those as technologically complex as the messenger RNA (mRNA) inoculations against COVID-19—requires not only patents but an entire infrastructure that cannot be transferred overnight. The sharing of patents is an important and welcome development for the long term, but it may not even be the most pressing first step. JUST OPEN THE SPIGOT At the turn of the millennium, multinational pharmaceutical companies were charging $10,000 per patient for a daily drug regimen that could keep those infected with HIV/AIDS alive. Those in low- and middle-income countries in Africa and elsewhere could access this cocktail only under limited circumstances. Then, in 2001, the Indian drug manufacturer Cipla Limited began producing versions of a triple antiretroviral drug cocktail for a mere $350. Cipla, in collaboration with Médecins Sans Frontières (Doctors Without Borders), helped usher in a new era of global access to essential medicines—one that justified relaxing or even ignoring international patents and other property rights to produce and distribute an important and lifesaving drug as a generic. Since that time, global health advocacy organizations have found increasingly sophisticated ways to work with multinationals in ensuring access to essential medicines for low- and middle-income countries. In the 2010s, the global health initiative Unitaid helped create a Medicines Patent Pool, in which pharmaceutical companies from all over the world offered antiretroviral drug licenses, thereby creating a path for developing generic versions so long as the patent holders received royalties. The mechanism supplied voluntary licenses to new producers even while protecting the legal rights of the drugs’ original manufacturers. Companies such as Gilead, for example, have supplied voluntary licenses for their antivirals directly to generic manufacturers, allowing for tiered pricing across countries. Barely any COVID-19 vaccines have been administered in the African continent or in low- or middle-income countries in Asia and Latin America. Global health professionals have understandably sought to ascertain whether a similar approach could help make the distribution of COVID-19 vaccines less lopsided. More than one billion vaccine doses have now been administered—but overwhelmingly to people living in just a few countries. More than half have been administered in the United States (250 million) and China (290 million) alone, followed by India (160 million), the United Kingdom (51 million), and Germany (32 million). In contrast, for all practical purposes, barely any COVID-19 vaccines have been [administered](https://www.nytimes.com/interactive/2021/world/covid-vaccinations-tracker.html) in the African continent or in low- or middle-income countries in Asia and Latin America. Global health advocates have responded to this inequity by seeking to apply the lessons they learned from antiretroviral drugs and demanding patent pools or other intellectual property waivers for COVID-19 vaccines. In March 2021, Médecins Sans Frontières organized protests at the World Trade Organization (WTO) headquarters in Geneva, unfurling a banner that read, “No COVID Monopolies—Wealthy Countries Stop Blocking TRIPS Waiver,” referring to the organization’s Agreement on Trade-Related Aspects of Intellectual Property Rights. The assumption underlying such demands is that intellectual property is a crucial barrier blocking vaccine developers, especially in low- and middle-income countries, from producing COVID-19 vaccines to scale—particularly the high-performing mRNA vaccines that Pfizer-BioNTech and Moderna currently produce. These vaccines elicit more than 90 percent protective immunity against both symptomatic illness and documented infection, including asymptomatic infection, with COVID-19. They are successfully driving the recovery of the United States, Israel, and other nations. But so far, mRNA vaccines are mostly invisible to Africa, Latin America, and low- and middle-income countries in other regions. The hope of those pushing for TRIPS waivers and patent pools is that these will unleash the technology to make the recovery global. IT TAKES A WHOLE ECOSYSTEM Intellectual property sharing may be helpful in the long term. But producing complicated biologics, especially innovative ones such as mRNA or adenovirus-vectored vaccines, is not solely a matter of patent access.

Small-molecule antiviral drugs are comparatively straightforward: the multistep chemical processes through which they are synthesized are often fully detailed in published patents or scientific papers. Chemists and formulation experts can often synthesize and scale up production just from knowing the drug structure. But vaccines are different. Producing and manufacturing lipid-encased mRNA molecules, recombinant adenoviruses, or even the proteins or whole inactivated viruses used in older-generation vaccines requires a far higher level of sophistication than is needed for producing small-molecule drugs. Moreover, vaccine production must meet stringent requirements for quality control, quality assurance, and regulatory oversight. The **effective transfer of such complex technology requires a receiving ecosystem that can take years, sometimes decades, to build**. Countries seeking to ramp up vaccine production will need to train staff scientists and technicians. They will also need scientific administrators versed not only in basic research and development but also in detailed record keeping, including specific documentation practices such as batch production records. Moreover, they will need strong quality control systems and regulatory guardrails. Building such an infrastructure requires intensive training and often considerable financial investment and risk. It also takes time—by some estimates, vaccine development requires at least 11 years, and even then the probability that such efforts will result in bringing a vaccine to market is less than ten percent. Consider that the COVID-19 vaccines were themselves the outcome of decades of research and development. Few nations are prepared to take such risks. Only a handful of low- or middle-income countries currently have the capacity to produce new vaccines. Only a handful of low- or middle-income countries currently have the capacity to produce new vaccines. The most notable and largest is India, which currently makes the adenovirus-vectored vaccines developed by Janssen and by Oxford and AstraZeneca, as well as an older-technology recombinant protein vaccine and a whole inactivated virus vaccine. Manufacturers in Brazil, Cuba, and some Southeast Asian countries have experience producing childhood vaccines and may be able to develop the capacity to make COVID-19 vaccines as well. Other possibilities may develop elsewhere, including in the Middle East and Africa. But in the near term, such manufacturers will require financing, access to very large amounts of raw materials and supplies (possibly including relaxation of export controls), and some technical expertise in manufacturing and quality control if they are to produce the existing vaccines against COVID-19. Vaccinating India alone will require almost two billion doses, and more than 12 billion doses will be required to vaccinate the world. The emergence of new variants and the need for booster doses may increase demand even further. Whether mRNA vaccine technology can be scaled to produce billions of doses in 2021, or even by early 2022, remains entirely unknown, but the goal is worth pursuing. To this end, some kind of patent relaxation may be necessary, but far from sufficient. Would-be producers will need technical know-how, regulatory controls, and components that are currently in very short supply, such as nucleotides and lipids.

#### Equitable distribution of vaccines can’t combat disease spread because of other barriers like vaccine uptake, effectiveness, durability, eligibility factors, logistical problems, and mutations- ignore aff’s myopic promotions

MacLeod 2-10 [Iain MacLeod, co-founder and CEO of Aldatu Biosciences of Watertown, Massachusetts, which develops novel viral diagnostics, including those for pathogens such as SARS-CoV-2, and a research associate at the Harvard T.H. Chan School of Public Health. “Do the math: Vaccines alone won’t get us out of this pandemic.” February 10, 2021. <https://www.statnews.com/2021/02/10/vaccines-alone-wont-end-pandemic/>] AL

But it seems as if there is light at the end of the tunnel. As long as we maintain social distancing, keep wearing masks, and washing our hands, it feels to many as though we can hold on until we get vaccinated. I’m sorry to be writing the words that follow, but here they are: We can’t vaccinate our way out of this pandemic. And the myopic focus on achieving herd immunity through mass vaccination may even make it tougher for America — and the world — to defeat Covid-19. Don’t get me wrong: Mass vaccination is essential. But herd immunity is a numbers game. It is defined as the point at which community spread of a disease stops because unprotected individuals are surrounded by a “herd” of people who are immune to infection, making it difficult, if not impossible, for infected people to pass on the disease. Many experts have said we will achieve herd immunity when about 70% of the population is immune to SARS-CoV-2, the virus that causes Covid-19, either through vaccination or by having had Covid-19. How do we reach that number? It’s harder than it seems. For starters, while the Pfizer/BioNTech and Moderna vaccines showed about 95% efficacy in the clinical trials, **vaccine effectiveness** — how well a vaccine performs under real-world conditions — is likely to be lower for several reasons. One is that the people who participate in clinical trials are an imperfect representation of the whole population. They tend to be healthier, and younger. Real-world factors such as vaccine transportation and storage can also reduce vaccine effectiveness. Say the Moderna and Pfizer vaccines now being given across the country achieve 90% effectiveness. Vaccinating 70% of U.S. residents puts us at 63% immunity. So, we’ll need to vaccinate a full 80% of the population to reach the herd immunity threshold. **Additional vaccines are starting to be approved. Some of them have lower efficacy.** For instance, the AstraZeneca vaccine has about 70% efficacy, and Johnson & Johnson has reported that its one-dose vaccine has 66% efficacy. Their real-world performance could be lower still. If these vaccines become part of the mix in the U.S., actual protection will be lower than the estimated 90% we’d get from just the Moderna and Pfizer vaccines. There are other barriers to achieving herd immunity. Vaccine uptake — how many people actually get vaccinated — is far below the level we need, in part because Covid-19 beliefs have been politicized in the U.S. and a percentage of the population doesn’t even believe the disease is real. In a Kaiser Health News survey released near the end of January, 13% of Americans said they would “definitely not” get vaccinated, 7% would take the vaccine only if it was “required,” and another 31% would “wait and see how it’s working” before getting vaccinated. Not encouraging numbers for those hoping for a quick journey to herd immunity. Even when ample vaccine supplies are restored — perhaps by President Biden invoking the Defense Production Act — other factors will further drive down the number of people who get vaccinated. Eligibility factors currently exclude approximately 25% of U.S. residents from Covid-19 vaccination. The Pfizer vaccine can be administered only to those age 16 and up; for the Moderna vaccine, it’s those 18 and up. This represents approximately 20% of the population. Furthermore, although the CDC says that pregnant people may get vaccinated, it stops short of a clear recommendation. The decision is a “personal choice” left up to individuals and their health care providers. Excluding those currently ineligible for vaccination against SARS-CoV-2 due to age or other conditions leaves 75% of Americans with no restrictions on vaccination. Factoring in the 13% of Americans who definitely don’t want the vaccine and the 7% who would get it only if it was required means just 49.5% of Americans would have immunity in the near future. If half of those who are in a wait-and-see mode don’t get vaccinated — another 15% of the population — then we are looking at just 40% vaccine coverage of the currently eligible population, far below the 70% needed for herd immunity. And that’s even before considering that real-world vaccine effectiveness will be below clinical trial levels. The young people who aren’t cleared to get the Moderna and Pfizer vaccines have proven to be highly efficient asymptomatic spreaders of Covid-19. Leaving this population unprotected will enable the disease to continue to spread widely. Finally, we don’t yet know the durability of the immune response to the various vaccines. It may persist. Or it may wear off, leaving people vulnerable after they’ve been vaccinated and creating conditions for new outbreaks. If my years of global health work on the HIV/AIDS epidemic has taught me anything, it’s that even the best laid plans can’t anticipate every challenge. To vaccinate 75% of the U.S. population, approximately 248 million people — that’s nearly 500 million doses — are needed. And it means we need to be vaccinating nearly 2 million people a day so all of them are immune by the fall of 2021. As I write this, we’re vaccinating only about 1 million people a day. At that pace, Reuters estimates it would take until April 2022 for 75% of Americans to receive at least their first vaccine dose. And that’s only if everything goes well logistically (it won’t) and if there are no further mutations in SARS-CoV-2 that make combating it more difficult (there will be). It’s time to stop promoting the myopic belief that the unrealistic goal of herd immunity can be achieved in 2021 and start looking to reinforcing all aspects of the health care response as we start to concede that Covid-19 will become an endemic disease that will continue to lurk in the population. For the foreseeable future, that means continued physical distancing; occupancy limits in restaurants and other retail establishments; replacement of physical menus with smart phone-based menus to prevent surface spread of the virus, and more. We’ll also need to monitor people who have been vaccinated to gauge the durability of the immune system’s response and whether booster shots are necessary, as they are for tetanus and diphtheria. Finally, our nation’s public health infrastructure will need to be bolstered, putting in place new protocols to monitor for new variants of the virus as soon as they emerge. Can we defeat Covid-19? We can and we will. But setting sights on a near-term goal of achieving herd immunity ignores the math that governs the spread of disease. That approach is going to take a while. To get past Covid-19, we need to use all the tools available.

#### Weakening IP is insufficient- multiple other barriers to equity

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(Enrico, Reader in Intellectual Property Law, City, University of London, Dhanay M. Cadillo, Postdoctoral research fellow, University of Turku, https://theconversation.com/intellectual-property-and-covid-19-medicines-why-a-wto-waiver-may-not-be-enough-155920)

One argument against the waiver is that the TRIPS Agreement already contains flexibilities. These include the freedom to use parallel imports and compulsory licences that help countries get access to medicines. Yet such flexibilities are not always easy to use. Take compulsory licences. Since 2003 a mechanism has been made available which in principle allows countries with no manufacturing capacity in the pharmaceutical field to use and benefit from compulsory licences. But the system is riddled with levels of complexity that render it useless and not fit for purpose. It’s only been used once in 17 years – in 2007, when Canada issued a compulsory licence to meet Rwanda’s need for AIDS drugs. Other arguments against the waiver are that it would not alleviate the burden of access to effective and affordable medicines and vaccines because of poor healthcare provision and infrastructure in some countries. And that it could potentially hamper R&D and innovation in the pharmaceutical sector. There are other barriers that the waiver wouldn’t address. One is that some developing countries have entered into bilateral agreements, especially with the US, the EU and other industrialised nations. These have limited the ability of generics producers to manufacture and distribute cheap medicines. One example is that this has limited the freedom to rely on parallel imports. These usually guarantee the importation of cheaper medicines purchased in countries where the drugs are sold at a lower price. Also, certain free trade agreements have introduced provisions which prevent national drug regulatory authorities from registering and allowing the sale of generics if the medicine is still patented. This is the so-called “patent linkage”. Among the countries that have signed these agreements are those who are part of the Comprehensive and Progressive Agreement for Trans-Pacific Partnership. They include Brunei, Chile, Malaysia, Mexico, Peru and Vietnam. Other trade and partnership agreements have also obliged certain developing countries to provide an absolute protection of clinical test data submitted to regulatory agencies to demonstrate the quality, safety and efficacy of new medicines. This strong exclusivity stops the manufacturers of generics from using such data while applying for their own marketing authorisation. This inevitably slows down the availability of cheaper drugs. Countries like Morocco, Jordan, El Salvador, Guatemala, Honduras and Nicaragua do protect such data as a consequence of trade agreements concluded with the US. French President Emmanuel Macron and British Prime Minister Boris Johnson have recently pushed for plans to share vaccines instead.