# 1NC

### Disad – Hegemony

#### America’s maintaining hegemony and countering China’s rise through “counter-punching” strategies, but sustained innovation and private sector investment are key – reject “US declining now” args – the US has historically punched over its weight whenever it’s challenged

**Harr 8/3** [Scott, Army Special Forces Officer and Ph.D. Candidate at the Helms School of Government, Liberty University. He holds an undergraduate degree in Arabic Language Studies from West Point and a Master’s degree in Middle Eastern Affairs from Liberty University. A trained Arabic and Farsi speaker with over four years of cumulative deployment time in the Middle East, his work has been featured in The Diplomat, RealClearDefense, The Strategy Bridge, Modern War Institute, Military Review, The National Interest, and Joint Force Quarterly among other national security-focused venues, “By Avoiding Arms Races, America Can Counter China’s Rise”, 08-03-2021, https://nationalinterest.org/feature/avoiding-arms-races-america-can-counter-china%E2%80%99s-rise-191094]//pranav

**Rather than falling into the power projection arms race “trap“ that China desires, U.S. competitive strategies addressing China** should **adopt a framework based on “counter-punching**.” As its name suggests, the counterpunch incorporates both defensive (“counter”) and offensive (“punch”) elements. Additionally, it is an adaptive maneuver that requires disciplined understanding and controlled strength that, effectively employed, offers better alternatives towards protecting and preserving U.S. power in the face of challenges from China. The defensive element of an American counterpunch towards China involves adopting military restraint and a revamped examination of deterrence. Classic deterrence strategy involves presenting the credible threat of force to adversaries to create undesirable risks for would-be aggressors. The key to deterrence, as Kenneth Waltz famously argued, is determining how much deterrence is “enough” to dissuade aggressors. That is, deterrence does not necessarily require the presentation of power projection assets capable of completely destroying an adversary, but only enough assets to make the risks of aggressive behavior not worth the projected losses involved. Seen in this light, a strategy that diligently examines how much deterrence is “enough” potentially eliminates the impulse to sustain the ever-increasing stakes in costly arms races while, critically, **offering a chance to reinvest excess “deterrence” resources into areas that will preserve and protect U.S. power**. The national resources freed up by foregoing an arms race with China represent the potent offensive element of the counterpunch. **These resources can be reinvested in other areas such as the private sector which, besides being the hallmark of American prosperity and thus the critical reason for protecting American power in the first place, has historically played a decisive role in the United States’ successful war efforts**. **Buoyed by a strong and vibrant private sector where the United States remains a desirable global hub for innovation and technology, the needed capabilities for war (or intense competition) can be adaptively produced and rapidly called forward to tip the competitive (or combative) scales towards victory when required.** Of course, the “punch” loses its effectiveness without clearly articulated triggers for employment. If China seeks to induce the United States into an uncontrolled arms race, then the current U.S. obsession with China—which seems to interpret every Chinese action in any sphere as a threat requiring a U.S. response—must be viewed as very encouraging in Beijing. An effective U.S. counterpunch requires clearly defined red lines that regulate and set behavior expectations between great powers and indicate when a Chinese competitive action warrants a U.S. response. Detractors of the counterpunch framework will immediately note the call for military restraint and interpret it as a reactive recipe for military weakness at precisely a time requiring proactive military strength. But military restraint does not imply weakness any more than eating fewer calories implies malnutrition. It simply means making smarter decisions that play to U.S. strengths and away from Chinese strategy. It also entails properly viewing the risks inherent in competition with China. The counterpunch skeptic incorrectly perceives greater risks in short-term military restraint (traded for economic investment and fortification) than in long-term arms races (traded for potential economic collapse). The counterpunch skeptic also fails to appreciate the United States’ historic strengths in adopting this approach. In fact, **America has demonstrated exceptional skill as an adaptive counter-puncher—reacting and adapting to adversity and setbacks to rise above them and create positive effects preserving U.S. power and ideas.** U.S. institutions have counter-punched their way to success in the political (from the failed Articles of Confederation to the Constitution), social (from abhorrent slavery to civil rights), and military (from disastrous Pearl Harbor to WWII victory) arenas to produce the stable and prosperous nation that exists today. As John Mearsheimer points out, **China has the population size and economic capacity (the “sinew of power”) to pose unique and unprecedented challenges to U.S. power**. Additionally, wasteful military exploits—often employed as a means of competing with rivals—have contributed to bringing down world powers again and again throughout history. China understands this apparent axiom and has woven its truth into its competitive strategy to displace the United States as the world’s preeminent power in the twenty-first century. U.S. competitive strategy against China must, therefore, resist the powerful (but seemingly prudent) urge to continually increase the stakes projecting power against China. Rather, the United States needs to adopt a disciplined counterpunch framework focused on protecting and preserving (not projecting) power. This **framework leverages the elements of a successful counterpunch: it demonstrates a superior understanding of adversary strategy (China’s desire to economically exhaust the United States with power projection), it leverages smart defensive elements (adopting only “enough” deterrence to influence China’s actions), and it fortifies conditions of economic strength to ensure offensive actions can be brought to bear when required in competition or conflict (re-investing resources into a globally-leading private sector).** Employing a counterpunch framework asks Americans to trust its institutions—which is a difficult task in the face of a rising China. But the ask is not for blind trust. As a country with less than one-sixth of the world’s population, **the United States as a superpower has been punching above its weight for decades and has historically counter-punched successfully to muster adaptive and superlative responses whenever challenged with adversity. America must follow these historical impulses to remain a superpower in the twenty-first century**.

#### The 1AC’s reduction of IPP for [medicine] is America “handing over its crown jewels” to competing nations by disincentivizing record setting innovation that causes spillover to other fields and destroys American hegemony.

**Iancu 8/11** [Andrei, American-Romanian engineer and intellectual property attorney, who served as the Under Secretary of Commerce for Intellectual Property and Director of the United States Patent and Trademark Office from 2017 to 2021, “Biden is trying to undermine America's world-leading IP protections”, https://m.washingtontimes.com/news/2021/aug/11/biden-is-trying-to-undermine-americas-world-leadin/]//pranav

In May of this year, the Biden administration announced its support for a proposal at the World Trade Organization that would allow other countries to seize American intellectual property on COVID-19 technologies, including vaccines. On cue, those countries promptly modified their ask. **Whereas the original proposal called for the waiver to last a limited number of years, the new proposal makes the waiver effectively permanent.** And why not? **If America is willing to hand over its crown jewels, it might as well demand to keep them forever.** As a former Director of the U.S. Patent and Trademark Office, I know that America’s world-leading IP protections laid the foundation for our economic success and technological prowess. And as an immigrant from a communist nation, **I know all too well how disrespect for private property rights undermines innovation and saps economic vitality.** Since the Founding Fathers, Americans have understood that private property extends well beyond land, buildings, factories, and machines. **The real source of America’s power and promise are ideas. Walls, locks, or guards can protect physical property, but the implementation of ideas — new songs, artificial intelligence, or medicines — requires special protections and trust in the rule of law**. That’s why the Founders included intellectual property rights in the Constitution — in the form of an “exclusive right” for authors and inventors — to “promote the progress of science and useful arts.” Indeed, this is the only time the word “right” appears in the Constitution (amendments aside). The Founders knew that only the rule of law, and our respect for it, can protect and enable the development of these ideas. Yet, President Biden undermined that respect by signaling his support for the appropriation of America’s intangible assets. In doing so, he jeopardized America’s uniquely successful intellectual property system. The history of our nation — indeed, much of the history of the world — **since 1789 has been the revolution in knowledge led by American ingenuity in agriculture, industry, medicine, and information technology. Progress like this does not just happen**. Indeed, it didn’t, for the millennia of the entire human history until our nation’s founding a couple of hundred years ago! **It’s not a coincidence that the last two centuries of uninterrupted, IP-driven innovation — up to and including the miraculous creation in a record time of the Covid vaccines themselves — began when one nation finally committed itself to protect intangible assets as much as physical property.** The reason is simple: knowledge is cumulative. **Every new discovery becomes the basis for new research. The revolutionary mRNA technology behind Pfizer and Moderna’s vaccines is, in fact, an evolutionary iteration of previous — patented — breakthroughs over the last two decades.** Sen. Bernie Sanders, among others, turns up his nose at all this science, history, and progress. Like President Biden, he supports waiving vaccine patents because, he says, “We need a people’s vaccine, not a profit vaccine.” **Ignore for a moment that many companies have agreed to sell their vaccines at non-profit prices for the duration of the pandemic, or that the vaccines are completely free for all patients at pharmacies nationwide, or that the federal government pays $19.50 per Pfizer dose, about $15 per Moderna dose, and $10 for the Johnson & Johnson shot — less than the cost of a pizza for medicines that are saving millions of lives and restoring our economy.** Instead, **focus on the fact that intellectual property protections enabled the creation of “people’s vaccines” in the first place.** **The choice isn’t between cheap vaccines and even cheaper vaccines — it’s between shots that are protected by strong IP laws or no shots at all.** The same goes for every industry. **If President Biden doesn’t protect the IP behind new vaccines, investors and inventors will ask, what other technologies are next?** Will similar takings be imposed on climate change technologies, for example? Food processing? Essential semiconductor technologies? **Companies will scale back investments in medical devices, microchips, energy, and everything in between if they think the U.S. Government might waive IP protection after the fact so that others may copy their inventions with impunity.** Of immediate concern is the need for more treatments for Covid-19, especially as the pandemic keeps raging with new variants. **Knowing that their IP may be appropriated as soon as it is developed, private industry — especially start-ups and smaller businesses that depend heavily on outside capital — may not invest the resources necessary to develop these new technologies that are desperately needed right now.** Here’s the reality: **remove patents and other forms of intellectual property, and private-sector investment in innovation dries up**. The government will then try to step in to fill the gap, inefficiently as always. **Like the taking of factories to nationalize industry, this taking of intellectual property is effectively the nationalization of our innovation economy**. The result will be the same as in every other socialist regime that nationalized its industries: the kind of poverty, corruption, and misery that my family escaped from decades ago. **American innovation** has cured diseases, enabled human flight, led to the development of computers, and **made our nation the envy of the world. Waiving intellectual property rights could forfeit it all.**

#### Only U.S. hegemony prevents global instability---alternatives can't maintain peace

**Haass, 17** - President of the Council on Foreign Relations (Richard, "Who Will Fill America’s Shoes?," *Project Syndicate*, 6-24-2017, https://www.project-syndicate.org/commentary/global-leadership-successor-to-america-by-richard-n--haass-2017-06)

Still, a shift away from a US-dominated world of structured relationships and standing institutions and toward something else is under way. What this alternative will be, however, remains largely unknowable. What we do know is that **there is no alternative great power willing and able to step in and assume what had been the US role**.

China is a frequently mentioned candidate, but its leadership is focused mostly on consolidating domestic order and maintaining artificially high economic-growth rates to stave off popular unrest. China’s interest in regional and global institutions seems designed mostly to bolster its economy and geopolitical influence, rather than to help set rules and create broadly beneficial arrangements.

Likewise, Russia is a country with a narrowly-based economy led by a government focused on retaining power at home and re-establishing Russian influence in the Middle East and Europe. India is preoccupied with the challenge of economic development and is tied down by its problematic relationship with Pakistan. Japan is held back by its declining population, domestic political and economic constraints, and its neighbors’ suspicions.

Europe, for its part, is distracted by questions surrounding the relationship between member states and the European Union. As a result, the whole of the continent is less than the sum of its parts – **none** of which **is large enough to succeed America on the world stage**.

But the absence of a single successor to the US does not mean that what awaits is chaos. At least in principle, the world’s most powerful countries could come together to fill America’s shoes. In practice, though, **this will not happen**, as these countries lack the capabilities, experience, and, above all, a consensus on what needs doing and who needs to do it.

#### Goes nuclear---extinction

Thomas H. **Henricksen 17**, emeritus senior fellow at the Hoover Institution, 3/23/17, “Post-American World Order,” <http://www.hoover.org/research/post-american-world-order>

The tensions stoked by the assertive regimes in the Kremlin or Tiananmen Square could **spark a political or military incident** that might set off a chain reaction leading to a **large-scale war**. Historically, powerful rivalries nearly always lead to at least skirmishes, if not a full-blown war. The anomalous Cold War era **spared** the United States and Soviet Russia a direct conflict, largely from concerns that one would trigger a **nuclear exchange destroying** both states and much of **the world**. Such a repetition **might** reoccur in the unfolding three-cornered geopolitical world. It seems safe to acknowledge that an ascendant China and a resurgent Russia will persist in their geo-strategic ambitions.

What Is To Be Done?

The first marching order is to dodge any kind of perpetual war of the sort that George Orwell outlined in “1984,” which engulfed the three super states of Eastasia, Eurasia, and Oceania, and made possible the totalitarian Big Brother regime. A long-running Cold War-type confrontation would almost certainly take another form than the one that ran from 1945 until the downfall of the Soviet Union.

What prescriptions can be offered in the face of the escalating competition among the three global powers? First, by **staying militarily and economically strong**, the United States will have the resources to deter its peers’ hawkish behavior that might otherwise trigger a **major conflict**. Judging by the history of the Cold War, the coming strategic chess match with Russia and China will prove tense and demanding—since **all the countries boast nuclear arms** and long-range ballistic missiles. Next, the United States should widen and sustain willing coalitions of partners, something at which America excels, and at which China and Russia fail conspicuously.

There can be **little room for error** in fraught **crises among nuclear-weaponized** and **hostile powers**. Short- and long-term standoffs are likely, as they were during the Cold War. Thus, the playbook, in part, involves a **waiting game** in which each power looks to its rivals to suffer grievous internal problems which could entail a collapse, as happened to the Soviet Union.

### Disad - Biotech

#### Biopharma R&D is surging, but it’s shaky because of productivity levels – now is not a time to let up

**Adams 5/19 [Ben Adams, Ben Adams is a business, science and healthcare journalist, 5-19-2021, "Biopharma R&D 'surged' in 2020, but trial productivity levels a mixed bag: report," FierceBiotech,** [**https://www.fiercebiotech.com/biotech/biopharma-r-d-surged-2020-but-trial-productivity-levels-a-mixed-bag-report**](https://www.fiercebiotech.com/biotech/biopharma-r-d-surged-2020-but-trial-productivity-levels-a-mixed-bag-report)**] // WW LD**

A major global pandemic was not enough to stop surging rates of biopharma research and development, but trial productivity still remains below the long-term average. That is according to a new report out by CRO analytics firm IQVIA, which found that funding for early- and late-stage R&D, as well as deals, jumped last year regardless of the pandemic, while aggregate R&D spend for the top 15 companies “reached a record high.” It also found that, overall, clinical trial activity recovered from midyear 2020 to levels above 2019–even without factoring in COVID-19 trials, which clearly didn’t exist the year before. Total trials reached 4,686, more than 300 extra than 2019 and an 8% rise, with 985 in phase 3, 1,880 in midstage testing and 1,821 in phase 1. But there is more complexity here: There was an increase in the clinical trial productivity index, i.e., the way IQVIA measures how these trials are doing, but in 2020 it found this was mostly due to an improvement in phase 3 trials, widening the gap with phase 1 trials, “which score significantly lower with this index.” When it comes to midstage tests, trials “have consistently been above the overall index” as success rates have been trending up and durations have been trending down, “even as complexity has been rising in phase 2 as rising numbers of endpoints and eligibility criteria are attributes of these trials.” Overall, however, productivity “remains below historic levels,” the report found, as success rates are below the long-term average. This is because the complexity of trials is generally increasing, as are study durations in many diseases, IQVIA’s authors note. Looking at the pipeline of pharma, IQVIA saw that growth in the late-stage pipeline continued in 2020, bringing total expansion to 43% since 2015, as cancer drugs reached record-high numbers. Growth in the early-stage pipeline, including next-generation biotherapeutics, paused in 2020, however. RELATED: The top 10 pharma R&D budgets in 2020 The dismal lack of diversity in clinical trials also continued: African Americans or races identified as Black account for 13.4% of the U.S. population, while the clinical trials used to approve new medicines had a median participation of only 3% in the past six years and “were under-representative 79% of the time from 2015 to 2020,” IQVIA said. Persons of Asian descent are also estimated to comprise 6.5% of the U.S. population, but again, only in 2015 was the median above this threshold, and 52% of trials in the past six years that were used by the FDA to approve medicines had under-representative participation. “The growth in research and development driven by new oncology drugs, new funding and strategic investments is a testament to the resilience and strength of the innovative, global biopharmaceutical industry,” said Murray Aitken, executive director of the IQVIA Institute for Human Data Science, in an accompanying release. “Faced with significant disruptions and the need to reprioritize research and development, the global life sciences industry has demonstrated its ability to meet and even exceed expectations for new and better lifesaving therapies and vaccines.”

#### Patents foster pharma innovation

**Grabowski et al 15 [Henry G. Grabowski, Joseph A. DiMasi, and Genia Long, February 2015, "The Roles Of Patents And Research And Development Incentives In Biopharmaceutical Innovation," https://www.healthaffairs.org/doi/10.1377/hlthaff.2014.1047] // WW DL**

The essential rationale for patent protection for biopharmaceuticals is that long-term benefits in the form of continued future innovation by pioneer or brand-name drug manufacturers outweigh the relatively short-term restrictions on imitative cost competition associated with market exclusivity. Regardless, the entry of other branded agents remains an important source of therapeutic competition during the patent term. Several economic characteristics make patents and intellectual property protection particularly important to innovation incentives for the biopharmaceutical industry. 5 The R&D process often takes more than a decade to complete, and according to a recent analysis by Joseph DiMasi and colleagues, per new drug approval (including failed attempts), it involves more than a billion dollars in out-of-pocket costs. 6 Only approximately one in eight drug candidates survive clinical testing. 6 As a result of the high risks of failure and the high costs, research and development must be funded by the few successful, on-market products (the top quintile of marketed products provide the dominant share of R&D returns). 7,8 Once a new drug’s patent term and any regulatory exclusivity provisions have expired, competing manufacturers are allowed to sell generic equivalents that require the investment of only several million dollars and that have a high likelihood of commercial success. Absent intellectual property protections that allow marketing exclusivity, innovative firms would be unlikely to make the costly and risky investments needed to bring a new drug to market. Patents confer the right to exclude competitors for a limited time within a given scope, as defined by patent claims. However, they do not guarantee demand, nor do they prevent competition from nonidentical drugs that treat the same diseases and fall outside the protection of the patents. New products may enter the same therapeutic class with common mechanisms of action but different molecular structures (for example, different statins) or with differing mechanisms of action (such as calcium channel blockers and angiotensin receptor blockers). 9 Joseph DiMasi and Laura Faden have found that the time between a first-in-class new drug and subsequent new drugs in the same therapeutic class has been dramatically reduced, from a median of 10.2 years in the 1970s to 2.5 years in the early 2000s. 10 Drugs in the same class compete through quality and price for preferred placement on drug formularies and physicians’ choices for patient treatment. Patents play an essential role in the economic “ecosystem” of discovery and investment that has developed since the 1980s. Hundreds of start-up firms, often backed by venture capital, have been launched, and a robust innovation market has emerged. 11 The value of these development-stage firms is largely determined by their proprietary technologies and the candidate drugs they have in development. As a result, the strength of intellectual property protection plays a key role in funding and partnership opportunities for such firms. Universities also play a key role in the R&D ecosystem because they conduct basic biomedical research supported by sponsored research grants from the National Institutes of Health (NIH) and the National Science Foundation (NSF). The Patent and Trademark Law Amendments Act of 1980 (commonly known as the Bayh-Dole Act) gave universities the right to retain title to patents and discoveries made through federally funded research. This change was designed to encourage technology transfer through industry licensing and the creation of start-up companies. Universities received only 390 patents for their discoveries in 1980, 12 compared to 4,296 in 2011, with biotechnology and pharmaceuticals being the top two technology areas (accounting for 36 percent of all university patent awards in 2012). 13 University licensing trends have generated debate. For instance, there have been recent proposals to encourage the federal government to “march in” and require a university to license a patent or enforce reduced pricing or other terms. 14 The percentage of approved drugs with public-sector patents is relatively small. 15 Nevertheless, if the government exercised its march-in rights in this way, that action could have adverse effects on technology transfer activities and early-stage company investment, particularly if it were to disrupt existing expectations of grantees, licensees, and investors. 12 There have been four petitions to the NIH requesting it to exercise march-in rights on behalf of the federal government; none has been granted. 16

#### Biotech relies on innovation from pharma

**Cooper 6** **[Garth JS Cooper, independent medical scientist at the University of Auckland, “Fates Intertwined,” March 2006,** [**https://library.wur.nl/WebQuery/file/cogem/cogem\_t4505194e\_001.pdf**](https://library.wur.nl/WebQuery/file/cogem/cogem_t4505194e_001.pdf)**] //recut WW LD**

**Biotechnology and pharmaceuticals are inextricably intertwined**. Although biotech companies often **rely upon** the resources of larger pharma companies, the converse is also true. Among other things, biotechs require funding, validation, and access to expertise and markets. Big pharma continues to need ideas and products, and places to outsource risk. The pharmaceutical industry faces uncertainties driven by falling innovation1,2, its relevance to reducing the global burden of disease , and the equity of access to its products3. If biotechs are not embraced by pharma—they cannot be copied —then as competitors they will increasingly come to dominate the industrial nexus. The **issues of both industries need to be addressed together**. Apart, biotech and pharma will continue to struggle with the self-determining issues that they currently confront. Working together, the fabric of these industries will be transformed and the world of human therapeutics will flourish.

#### Biotech is key to solving food insecurity

**Doyle 08 [Alister Doyle, Environment Correspondent, 6-3-2008, "Biotechnology seen as a key to solving food crisis," U.S.,** [**https://www.reuters.com/article/us-food-summit-biotech/biotechnology-seen-as-a-key-to-solving-food-crisis-idUSL0356693120080603**](https://www.reuters.com/article/us-food-summit-biotech/biotechnology-seen-as-a-key-to-solving-food-crisis-idUSL0356693120080603)**] // WW LD**

“Biotechnology is one of the most promising tools for improving the productivity of agriculture and increasing the incomes of the rural poor,” U.S. Agriculture Secretary Ed Schafer said. “We are convinced of the benefits it offers to developing countries and small farmers,” he told a U.S.-led briefing on the sidelines of the June 3-5 summit seeking ways to combat high food prices when climate change may aggravate shortages. Some green groups say genetically-engineered crops threaten biodiversity while many European consumers are wary of eating products dubbed by critics as “Frankenfoods”. Schafer said biotechnology, including genetically-modified organisms (GMOs), could help produce more food by raising yields and producing crops in developing nations that are resistant to disease and pests. “Genetic engineering offers long-term solutions to some of our major crop production problems,” said Philippine Agriculture Minister Arthur Yap. But he said that it was not a panacea for all of his country’s agricultural problems. ADVERTISEMENT Progress being made in the Philippines included research into rice and coconuts resistant to disease, he said. “We’re also working on virus-resistant papaya, papaya hybrids with a longer shelf life that should be ready for market in 2009,” he said. Climate change could aggravate production around the world with more droughts, floods, disruptions to monsoons and rising sea levels, says the U.N. Climate Panel. In Africa alone, 250 million people could face extra stress on water supplies by 2020. COTTON Burkina Faso Agriculture Minister Laurent Sedogo said the African country had worked with U.S. agriculture group Monsanto to battle pests that blighted the cotton crop. ADVERTISEMENT “We are about to plant 15,000 hectares” of a new crop that was resistant to pests, he said. That would also cut down on the use of pesticides that could damage the health of farmers. The World Bank and aid agencies estimate that soaring food prices could push as many as 100 million more people into hunger. About 850 million are already hungry. Bangladesh said that it was going ahead with efforts to make crops able to survive floods and more salinity in the soil. A cyclone last year “is a wake-up call for all of us”, said C.S. Karim, an adviser to Bangladesh’s agriculture ministry. “It shows the vulnerability of Bangladesh. “

#### Food wars go nuclear—multiple studies

**FDI 12** (Future Directions International - a Research institute providing strategic analysis of Australia’s global interests; citing Lindsay Falvery - PhD in Agricultural Science and former Professor at the University of Melbourne’s Institute of Land and Environment, “Food and Water Insecurity: International Conflict Triggers & Potential Conflict Points,” 5/25/12, <http://www.futuredirections.org.au/publication/international-conflict-triggers-and-potential-conflict-points-resulting-from-food-and-water-insecurity/>) // recut WW DL

There is a growing appreciation that the conflicts in the next century will most likely be fought over a lack of resources. Yet, in a sense, this is not new. Researchers point to the French and Russian revolutions as conflicts induced by a lack of food. More recently, Germany’s World War Two efforts are said to have been inspired, at least in part, by its perceived need to gain access to more food. Yet the general sense among those that attended FDI’s recent workshops, was that the scale of the problem in the future could be significantly greater as a result of population pressures, changing weather, urbanisation, migration, loss of arable land and other farm inputs, and increased affluence in the developing world. In his book, Small Farmers Secure Food, Lindsay Falvey, a participant in FDI’s March 2012 workshop on the issue of food and conflict, clearly expresses the problem and why countries across the globe are starting to take note. . He writes (p.36), “…**if people are hungry**, especially in cities, **the state is not stable – riots, violence, breakdown of law and order and migration result.”** “Hunger feeds anarchy.” This view is also shared by Julian Cribb, who in his book, The Coming Famine, writes that if “large regions of the world run short of food, land or water in the decades that lie ahead, then wholesale, **bloody wars are liable to follow.”** He continues: **“An increasingly credible scenario for World War 3 is** not so much a confrontation of super powers and their allies, as **a** festering, **self-perpetuating chain of resource conflicts.”** He also says: “The wars of the 21st Century are less likely to be global conflicts with sharply defined sides and huge armies, than a scrappy mass of failed states, rebellions, civil strife, insurgencies, terrorism and genocides, sparked by bloody competition over dwindling resources.” As another workshop participant put it, people do not go to war to kill; they go to war over resources, either to protect or to gain the resources for themselves. Another observed that hunger results in passivity not conflict. Conflict is over resources, not because people are going hungry. A study by the International Peace Research Institute indicates that where food security is an issue, it is more likely to result in some form of conflict. Darfur, Rwanda, Eritrea and the Balkans experienced such wars. Governments, especially in developed countries, are increasingly aware of this phenomenon. The UK Ministry of Defence, the CIA, the US Center for Strategic and International Studies and the Oslo Peace Research Institute, all identify **famine as a** potential **trigger for** conflicts and possibly even **nuclear war.**

#### Food insecurity cause extinction

**Cribb ‘10 [Julian, principal of JCA, fellow of the Australian Academy of Technological Sciences, “The Coming Famine: The¶ Global Food Crisis and What We Can Do to Avoid It”, pg 10] // recut WW LD/WWVL**

The character of human conflict has also changed: since the early 1990S, more wars have been triggered by disputes over food, land, and water than over mere political or ethnic differences. This should not surprise US: people have fought over the means of survival for most of history. But in the abbreviated reports on the nightly media, and even in the rarefied realms of government policy, the focus is almost invariably on the players—the warring national, ethnic, or religious factions—rather than on the play, the deeper subplots building the tensions that ignite conflict. Caught up in these are groups of ordinary, desperate people fearful that there is no longer sufficient food, land, and water to feed their children—and believing that they must fight ‘the others” to secure them. At the same time, the number of refugees in the world doubled, many of them escaping from conflicts and famines precipitated by food and resource shortages. Governments in troubled regions tottered and fell. The coming famine is planetary because it involves both the immediate effects of hunger on directly affected populations in heavily populated regions of the world in the next forty years—and also the impacts of war, government failure, refugee crises, shortages, and food price spikes that will affect all human beings, no matter who they are or where they live. It is an emergency because unless it is solved, billions will experience great hardship, and not only in the poorer regions. Mike Murphy, one of the world’s most progressive dairy farmers, with operations in Ireland, New Zealand, and North and South America, succinctly summed it all up: “Global warming gets all the publicity but the real imminent threat to the human race is starvation on a massive scale. Taking a 10—30 year view, I believe that food shortages, famine and huge social unrest are probably the greatest threat the human race has ever faced. I believe future food shortages are a far bigger world threat than global warming.”2° The coming famine is also complex, because it is driven not by one or two, or even a half dozen, factors but rather by the confluence of many large and profoundly intractable causes that tend to amplify one another. This means that it cannot easily be remedied by “silver bullets” in the form of technology, subsidies, or single-country policy changes, because of the synergetic character of the things that power it.

# AT: Manufacturing

#### No Inherency

##### **Vaccines are reaching and will reach Global South**

**Taylor 21** [Andrea Taylor, 7-2-2021, "Taking a closer look a vaccine donations," Launch and Scale Speedometer, https://launchandscalefaster.org/blog/taking-closer-look-vaccine-donations]

We are excited to release new data this week, tracking vaccine donations by donor country, recipient (cut by continent and income category), and vaccine. Our data include doses that have been pledged, regardless of whether they have already been delivered. The interactive visualizations show which countries are the big donors, which vaccines are being donated, and where they are going. Using publicly available sources, we can account for nearly 900 million doses in pledged or delivered dose donations globally. While this is a staggering amount, it is a far cry from meeting the need described by the WHO and African Union. The Sankey diagram allows you to change the variables in the dropdown menus on the right and left to cut the data different ways. No matter how you cut the data, one thing stands out: the US donations (587.5 million doses) dwarf those from all other countries. Including the US in the charts makes most other donating countries so small by comparison that they hardly show up. In the Sankey diagram, we divide the US donation total in half so that the flow of donations from other countries (all shown at 100%) can be seen and even then, it is difficult to see more than the top eight. After the US, the next largest donor is the UK with 100 million pledged doses, followed by Japan, France, Germany, and China (with), all around the 30 million dose mark. The top ten list of donors (by number of doses) include two middle-income countries. China (upper-middle income) has donated vaccine to the highest number of countries (our data shows 59, but other sources have suggested 80), primarily located in Africa and Asia. However, these tend to be small donations, with most donations around 200,000 doses per country and only three countries receiving more than 1 million doses. India (lower-middle income) has taken a similar approach, donating more than 11 million doses in relatively small numbers to 47 countries, with only a few countries receiving more than 1 million doses. High income countries have donated the vast majority of the doses, and most of that has gone to COVAX. However, aside from the US, other high-income countries have donated a total of only 254 million doses, compared with 42.5 million donated by middle income governments. To be fair, many wealthy countries have donated funding to COVAX to support the purchase of vaccines for poor countries, and that is not reflected in our donations chart. But the global purchase data indicate that a small number of wealthy countries have the lion’s share of vaccine so donating actual doses in hand (from national supplies) right now can be more helpful than donating cash to purchase doses that won’t be stocked until later in 2022. As the African Union special envoy for vaccines noted this week, no doses have actually shipped out from European manufacturing lines to Africa and, in the wake of a third wave of infections unlike anything the continent has seen, pledges no longer matter, only doses arriving at airports. Looking by region, Asia is meant to receive the highest number (58 million doses), followed by Africa (20 million doses). COVAX is receiving more doses by far than any region, at 700 million doses. The US purchase of 500 million Pfizer-BioNTech doses for donation through COVAX means that the vast majority of donated doses are Pfizer-BioNTech. But after this, the second-most donated vaccine is Oxford-AstraZeneca, followed by Sinopharm-Beijing. In the coming weeks, we plan to build out the donations data with further layers of detail, distinguishing between doses pledged and doses delivered, doses expected to ship out in 2021 versus 2022, and doses donated from COVAX country allocations. Please let us know how this data can be most useful to you and, as always, help us fill in gaps and correct mistakes.

#### No Link

##### **1] 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.

##### **2] IP protection is needed to increase vaccine production.**

Silverman ND, Rachel Silverman. [Policy Fellow, CGD.] “Would Exempting COVID-19 Vaccines from Intellectual Property Rights Improve Global Access and Equity?”, Center for Global Development, No Date. //recut WW DL

I agree that the current imperative is to scale existing vaccines as quickly as possible while maintaining strict safety and quality standards. But for the premise of this debate to be true, there would need to be additional manufacturers who could and would stand ready to manufacture additional vaccines if not thwarted by IP restrictions. I see no evidence that is currently the case—and, to the contrary, believe taking an antagonistic posture toward IP may actually slow or **compromise** **production**. Innovator companies are under enormous commercial and geopolitical pressure to scale as quickly as possible to meet enormous, immediate demand. Their profit-driven interest, in this case, is aligned with the **global imperative** to **increase production**. To do so, they are already cooperating widely with competitors and generic manufacturers, including via voluntary licenses, contracted production, and proactive technology transfer. Diluting that **commercial incentive** may reduce their interest in pursuing the **voluntary horizontal collaborations** that are already **driving scale**. It is also not clear that any additional generic manufacturers are “standing by” ready to produce. Under existing TRIPS flexibilities, countries can already issue compulsory licenses to produce vaccines without permission from the patent-holder. None have done so. Voluntary licensing and technology transfer from originator companies can help increase long-term manufacturing capacity, especially if paired with public investment; originators also have an interest in enforcing safety and quality control standards while doing so, which is especially important in the context of widespread vaccine hesitancy. Their cooperation is important for both speed and quality, and so far they seem willing to play ball. To be clear, I am not arguing that IP protections always serve the public good; nor am I necessarily ruling out a future scenario in which IP becomes a major challenge for global access. But all evidence suggests the current constraint to global access is capacity, not legal strictures.

#### No impact

##### **1] Bc of link arg, Neg loses vaccine production – global political instability only in Neg world and not Aff.**

##### **2] No terror groups in developing countries (also if this does not work - can try impact turn because developing countries focusing on manufacturing vaccines will be vulnerable to terror groups – extend Hotez card)**

Stewart M Patrick 11, senior fellow, director – program on international institutions and global governance @ CFR, 4/15/, “Why Failed States Shouldn’t Be Our Biggest National Security Fear,” <http://www.cfr.org/international-peace-and-security/why-failed-states-shouldnt-our-biggest-national-security-fear/p24689>

In truth, while failed states may be worthy of America's attention on humanitarian and development grounds, most of them are irrelevant to U.S. national security. The risks they pose are mainly to their own inhabitants. Sweeping claims to the contrary are not only inaccurate but distracting and unhelpful, providing little guidance to policymakers seeking to prioritize scarce attention and resources.¶ In 2008, I collaborated with Brookings Institution senior fellow Susan E. Rice, now President Obama's permanent representative to the United Nations, on an index of state weakness in developing countries. The study ranked all 141 developing nations on 20 indicators of state strength, such as the government's ability to provide basic services. More recently, I've examined whether these rankings reveal anything about each nation's role in major global threats: transnational terrorism, proliferation of weapons of mass destruction, international crime and infectious disease.¶ The findings are startlingly clear. Only a handful of the world's failed states pose security concerns to the United States. Far greater dangers emerge from stronger developing countries that may suffer from corruption and lack of government accountability but come nowhere near qualifying as failed states.¶ The link between failed states and transnational terrorism, for instance, is tenuous. Al-Qaeda franchises are concentrated in South Asia, North Africa, the Middle East and Southeast Asia but are markedly absent in most failed states, including in sub-Saharan Africa. Why? From a terrorist's perspective, the notion of finding haven in a failed state is an oxymoron. Al-Qaeda discovered this in the 1990s when seeking a foothold in anarchic Somalia. In intercepted cables, operatives bemoaned the insuperable difficulties of working under chaos, given their need for security and for access to the global financial and communications infrastructure. Al-Qaeda has generally found it easier to maneuver in corrupt but functional states, such as Kenya, where sovereignty provides some protection from outside interdiction.¶ Pakistan and Yemen became sanctuaries for terrorism not only because they are weak but because their governments lack the will to launch sustained counterterrorism operations against militants whom they value for other purposes. Terrorists also need support from local power brokers and populations. Along the Afghanistan-Pakistan border, al-Qaeda finds succor in the Pashtun code of pashtunwali, which requires hospitality to strangers, and in the severe brand of Sunni Islam practiced locally. Likewise in Yemen, al-Qaeda in the Arabian Peninsula has found sympathetic tribal hosts who have long welcomed mujaheddin back from jihadist struggles.¶ Al-Qaeda has met less success in northern Africa's Sahel region, where a moderate, Sufi version of Islam dominates. But as the organization evolves from a centrally directed network to a diffuse movement with autonomous cells in dozens of countries, it is as likely to find haven in the banlieues of Paris or high-rises of Minneapolis as in remote Pakistani valleys.¶ What about failed states and weapons of mass destruction? Many U.S. analysts worry that poorly governed countries will pursue nuclear, biological, chemical or radiological weapons; be unable to control existing weapons; or decide to share WMD materials.¶ These fears are misplaced. With two notable exceptions — North Korea and Pakistan — the world's weakest states pose minimal proliferation risks,since they have limited stocks of fissile or other WMD material and are unlikely to pursue them. Far more threatening are capable countries (say, Iran and Syria) intent on pursuing WMD, corrupt nations (such as Russia) that possess loosely secured nuclear arsenals and poorly policed nations (try Georgia) through which proliferators can smuggle illicit materials or weapons.¶ When it comes to crime, the story is more complex. Failed states do dominate production of some narcotics: Afghanistan cultivates the lion's share of global opium, and war-torn Colombia rules coca production. The tiny African failed state of Guinea-Bissau has become a transshipment point for cocaine bound for Europe. (At one point, the contraband transiting through the country each month was equal to the nation's gross domestic product.) And Somalia, of course, has seen an explosion of maritime piracy. Yet failed states have little or no connection with other categories of transnational crime, from human trafficking to money laundering, intellectual property theft, cyber-crime or counterfeiting of manufactured goods.¶ Criminal networks typically prefer operating in functional countries that provide baseline political order as well as opportunities to corrupt authorities.They also accept higher risks to work in nations straddling major commercial routes. Thus narco-trafficking has exploded in Mexico, which has far stronger institutions than many developing nations but borders the United States. South Africa presents its own advantages. It is a country where “the first and the developing worlds exist side by side,” author Misha Glenny writes. “The first world provides good roads, 728 airports . . . the largest cargo port in Africa, and an efficient banking system. . . . The developing world accounts for the low tax revenue, overstretched social services, high levels of corruption throughout the administration, and 7,600 kilometers of land and sea borders that have more holes than a second-hand dartboard.” Weak and failing African states, such as Niger, simply cannot compete.¶ Nor do failed states pose the greatest threats of pandemic disease. Over the past decade, outbreaks of SARS, avian influenza and swine flu have raised the specter that fast-moving pandemics could kill tens of millions worldwide. Failed states, in this regard, might seem easy incubators of deadly viruses. In fact, recent fast-onset pandemics have bypassed most failed states, which are relatively isolated from the global trade and transportation links needed to spread disease rapidly.¶ Certainly, the world's weakest states — particularly in sub-Saharan Africa — suffer disproportionately from disease, with infection rates higher than in the rest of the world. But their principal health challenges are endemic diseases with local effects, such as malaria, measles and tuberculosis. While U.S. national security officials and Hollywood screenwriters obsess over the gruesome Ebola and Marburg viruses, outbreaks of these hemorrhagic fevers are rare and self-contained.¶ I do not counsel complacency. The world's richest nations have a moral obligation to bolster health systems in Africa, as the Obama administration is doing through its Global Health Initiative. And they have a duty to ameliorate the challenges posed by HIV/AIDS, which continues to ravage many of the world's weakest states. But poor performance by developing countries in preventing, detecting and responding to infectious disease is often shaped less by budgetary and infrastructure constraints than by conscious decisions by unaccountable or unresponsive regimes. Such deliberate inaction has occurred not only in the world's weakest states but also in stronger developing countries, even in promising democracies. The list is long. It includes Nigeria's feckless response to a 2003-05 polio epidemic, China's lack of candor about the 2003 SARS outbreak, Indonesia's obstructionist attitude to addressing bird flu in 2008 and South Africa's denial for many years about the causes of HIV/AIDS.¶ Unfortunately, misperceptions about the dangers of failed states have transformed budgets and bureaucracies. U.S. intelligence agencies are mapping the world's “ungoverned spaces.” The Pentagon has turned its regional Combatant Commands into platforms to head off state failure and address its spillover effects. The new Quadrennial Diplomacy and Development Review completed by the State Department and the U.S. Agency for International Development depicts fragile and conflict-riddled states as epicenters of terrorism, proliferation, crime and disease.¶ Yet such preoccupations reflect more hype than analysis. U.S. national security officials would be better served — and would serve all of us better — if they turned their strategic lens toward stronger developing countries, from which transnational threats are more likely to emanate.

##### **3] Turn – nuke war and extinction good – read spark (or can run nukes do not lead to extinction)**