# 1NC Trips Grapevine

## 1

### T

#### Interp: Precluding a future increase is not a reduction

Melinda **Harmon 12**, Judge, United States District Court for the Southern District of Texas, Houston Division, 3/6/12, Zieche v. Burlington Res., Inc., 2012 U.S. Dist. LEXIS 30134, p. lexis

Zieche contends that the Court erred when it concluded that "there was no reduction in Zieche's salary or bonus percentage" that would constitute "good reason" for his resignation. Doc. 70 at 8, 9. The Court relied on the fact that Zieche received "his full 2006 performance bonus" after he began working at ConocoPhillips and that the bonus percentage increased from 30% in 2005 to 40% in 2006 as proof that Zieche did not suffer a reduction in salary.

Zieche contends that an increase in his bonus is irrelevant to a determination of whether his salary was reduced because a "bonus is not part of the salary," but is instead [\*12] "something in addition to what is expected or strictly due." Doc. 72 at 4. Additionally, Zieche alleges that "the [C]ourt's analysis ignores the specific provisions of the retention agreement," which defines "good reason" to include "any reduction from your annual rate of base salary." Id.

Initially, although Zieche alleges that ConocoPhillips reduced his salary, he introduced no summary judgment **ev**idence to support this contention. In his Response to ConocoPhillip's Motion for Summary Judgment, Zeiche repeatedly asserts that, in his new position at ConocoPhillips, he would "**not be eligible for annual merit salary *increases***" as he had previously received at Burlington. Doc. 54 at 4 (emph. added). The summary judgment evidence before the Court included Zieche's deposition, in which he admitted that his salary "remained the same . . . up to the time [he] resigned from ConocoPhillips." Doc. 48-1 at 50 (emph. added). Nevertheless, Zieche argues that the Court unnaturally should read the word "reduce" in the retention agreement to mean "**not increase**," rather than interpreting the word according to its plain meaning. **The Court does not agree with this reasoning**, and Zieche has introduced [\*13] no evidence to convince the Court otherwise.

#### Violation: the affirmative prevents a future increase in patents by eliminating beyond the first patent

#### Negate:

#### 1] Limits and ground—they allow the aff to monopolize prep by precluding a future increase anytime from now allowing affs to no link from uniqueness scenarios, delay CPs, etc which kills engageability—leads to unpredictable affs that skew the debate away from whether IP is good/bad to when a reduction should occur.

#### 2] Precision o/w – anything else justifies the aff jettisoning which decks ground and prep because the aff isn’t in the rez – non-jurisdictional cuz you can’t affirm if they haven’t affirmed.

#### 3] TVA – defend the advantage to an aff about reducing patents forever – they would still apply and allows for negative disads to link.

#### Fairness – debate is a competitive activity that requires fairness for objective evaluation.

#### Drop the debater to deter future abuse and set better norms.

#### Competing interps – reasonability is arbitrary and encourages judge intervention – competing interps creates a race to the top where we create the best norms.

#### No RVIs – you don’t win for being fair and incentivizes baiting theory which leads to maximally abusive practices

## 2

### CP

#### CP text: States should add more stringent requirements for filing patents for medicines.

Newsome 17, A [(JD candidate George Washington School of Law). (2017). Side effects of evergreening may include decreased competition & increased prices in the pharmaceutical industry. AIPLA Quarterly Journal, 45(4), 791-822] Justin

The current framework for evaluating a patent application, particularly the requirements of utility and nonobviousness, is insufficient for evaluating whether a secondary patent should be issued for a drug. Given that courts are tied to the low bar for utility and inconsistent with their application of nonobviousness,1 04 it is necessary to pass legislation creating a new utility requirement tailored to secondary pharmaceutical patents. This Note's Author proposes legislation language as follows: 35 U.S.C. § 106: Patentable Pharmaceutical Inventions

(a) Utility requirement for secondary patent: In the case of a pharmaceutical invention claiming an improvement on a patented invention, the applicant shall demonstrate through clear and convincing evidence in the written description that such invention has increased efficacy as compared to the original.

(b) Increased efficacy defined: As used in part (a), "increased efficacy" refers to a proven improvement in the mechanism of action, as disclosed in the patent claims. 0 5

(c) Mechanism of action defined: As used in part (b), "mechanism of action" refers to the process by which a drug functions to produce a therapeutic effect, as disclosed in the patent claims. 06

Under this legislation, the USPTO could grant a secondary patent only if the new formula's mechanism of action, or production of the intended pharmacological effect, in fact improves upon the patented drug's mechanism of action. For example, because VidaDrug is a chemotherapy drug, the new formula must include a change in the mechanism of action which causes an improvement in the efficacy of the drug's tumor-shrinking abilities to be eligible for a secondary patent. A formula tweak that reduces side effects is insufficient, because the underlying purpose of the drug - to treat cancer - remains unaffected.

#### Solves best.

Newsome 17, A [(JD candidate George Washington School of Law). (2017). Side effects of evergreening may include decreased competition & increased prices in the pharmaceutical industry. AIPLA Quarterly Journal, 45(4), 791-822] Justin

Pharmaceutical patents are inherently different from software or manufacturing patents. 144 Pharmaceutical companies create life-saving drugs that carry a very serious benefit for a vulnerable group of consumers - patients. Because of this, the pharmaceutical industry should be held to a higher standard if its companies seek to prohibit affordable generic drugs from coming to the marketplace.

1. An Efficacy-Focused Standard Will Motivate Pharmaceutical Companies to Channel Resources to Creating Real Innovation Pharmaceutical companies argue that patent-life-cycle-management strategies (their preferred name for those tactics described herein as evergreening) are essential to ensuring they recoup R&D costs. 145 However, creation of a standard such as the one proposed here would ensure that pharmaceutical companies are properly incentivized to channel R&D resources to creating measurable change in the drugs, rather than creating minor changes that prolong the time they can profit off of monopolies at the expense of patients. For those industries in which R&D is more productive, like the pharmaceutical industry, "patent procedures should be refined to tighten the relationship between patents and the underlying inventions."14 6
2. A Higher Standard for Secondary Pharmaceutical Patents Will Increase Competition & Lead to Lower Prices The patent system enables pharmaceutical companies to retain market exclusivity for their drugs, allowing them to set high prices without an eye toward competition.1 47 The companies cite the need to recoup R&D costs as the driving factor for their pricing decisions,148 but critics say their main motivation is making a profit.'49 While the pharmaceutical companies' argument may hold weight, high prices for drugs have a negative impact on those patients who need those drugs, but cannot afford them.150 Tightening patent laws to prevent pharmaceutical companies from retaining patent protection for minor changes in their patented drugs will allow other companies to enter the marketplace sooner and drive prices down through competition. 5

## 3

### CP

#### Text: A nation appointed international panel of scientists including National Academies and corresponding organizations should [reduce intellectual property protections for medicine] and manage similar conflicts of interest between intellectual property.

#### International panel of science diplomats can rule over IP---that’s key to science diplomacy.

Hajjar and Greenbaum 18 [David; Dean Emeritus and University Distinguished Professor, and Professor of Biochemistry and Pathology at Weill Cornell Medicine, Cornell University. He is a Fellow of the American Academy of Arts and Sciences, Fellow of the American Association for the Advancement of Sciences, a Jefferson Science Fellow of the National Academies at the U.S. Department of State, and a recent Senior Fellow in Science Policy at the Brookings Institute; Steven; Professor and Chair of the Department of Physics and Astronomy at Hunter College of the City University of New York and a Fellow of the American Physical Society. He was a Jefferson Science Fellow of the National Academies at the U.S. Department of State; “Leveraging Diplomacy for Managing Scientific Challenges,” American Diplomacy; September 18; <https://americandiplomacy.web.unc.edu/2018/09/leveraging-diplomacy-for-managing-scientific-challenges-an-opportunity-to-navigate-the-future-of-science/>] Justin

At the global level, science diplomacy is defined as cooperation among countries in order to solve complex problems through scientific research and education (1). For example, science diplomacy plays an important role in resolving global issues related to the ecosystem (such as clean water, food safety, energy conservation, and preservation of the environment). It also addresses problems related to the healthcare industry. For example, scientists have served at the international level to forge the Middle Eastern Cancer Consortium a decade ago to facilitate better healthcare and improve cancer research in the region. Whether one considers science for diplomacy or diplomacy for science, international science collaborations benefit from allowing science diplomats (broadly defined as science envoys, science attaches, embassy fellows) to help establish positive international relationships between the U.S., Europe, Latin America, Africa or Asia, particularly when proprietary disputes arise (2, 3). These various types of science diplomats already exist; some, like embassy fellows and science envoys, have one-year appointments so their role may be limited, while attaches usually have two or three year appointments that may allow them to be more successful in long, protracted negotiations. In any event, we believe that scientists can play more of a role in advancing international scientific cooperation. A key point addressed here is how to balance security concerns against the need for free exchange of information needed for innovation and growth.

Both the National Science Foundation and the National Institutes of Health are already engaged in supporting American science and strengthening collaborations abroad. Such efforts take advantage of international expertise, facilities, and equipment. Here, we provide a rationale for the use of diplomacy to address scientific challenges. This approach allows some scientists working as diplomats to help manage complex and potentially conflicting situations that arise between scientific communities and their governments. Such issues include managing disputes such as licensing agreements for intellectual property (IP) and providing protection of IP.

International collaborations can not only support but also accelerate the advancement of science. However, collaborations may carry risk if IP is misappropriated for other purposes. International collaborations should have a basis in strategy and specific goals (for example, drug discovery) in order to justify the use of government and/or corporate funds.

About a decade ago, a group of academics from the University of Manchester in the United Kingdom assembled the “Manchester Manifesto,” subtitled “Who Owns Science” (6). This document addressed the lack of alignment between commercial interests, intellectual rights, and credit to the researcher. In our (and commonly held) view, the groups representing these disparate values could benefit from diplomatic mediation. More recently, it has become increasing apparent that managing China as a science and technology superpower represents another challenge for the U.S. Resolution of issues such as ownership of IP, rights to reagents, or use of skilled laboratory personnel from international collaborations may require the efforts of science diplomats. There are few international offices or “guardians” to protect junior and senior scientists in corporate or academic sectors from misuse of reagents or piracy.

China’s failure to respect IP rights, and the resulting piracy, has drawn much attention. The media have also focused on the failure of watchdog government agencies to detect and manage these unwanted activities. Industrial espionage compromises U.S. interests. Moreover, Chinese and Russian hackers have cyberattacked U.S. technology companies, financial institutions, media groups, and defense contractors. In 2018, industrial spying was even reported in a major medical school in New York City where scientists were alleged to have illegally shared research findings with Chinese companies.

The U.S. has a long history of hiring research personnel from other countries to staff its laboratories and industrial R&D centers. These scientists and engineers have made critical contributions to our nation’s well-being and security. These young Chinese and South Asian graduates of U.S. programs a generation ago now staff our research enterprise. However, recent trends in U.S. graduate school applications in science, technology, engineering and mathematics (STEM) reflect a downturn in foreign applicants, particularly from China. It is becoming increasingly apparent that the number of American-born students seeking STEM degrees is not sufficient to satisfy future demands of our high-tech workforce. While our own educational reforms must be augmented, we cannot ignore the need to continue to recruit overseas talent.

We believe that foreign scientists can continue to make critical discoveries in the U. S. provided that their talent is nurtured, developed, and harnessed for the common good. At the same time, American companies cannot hire foreign scientists if they take the ideas they generate in U.S. laboratories back to their home countries without proper credit or permission. If the advancement of science is to succeed, greater diplomatic cooperation is needed to solve and manage proprietary issues for the benefit of all (5, 6).

So, how does one strike the proper balance between security and growth? Science is a universal social enterprise; international conferences lead to friendships and productive collaborations between nations. Given that the U.S. and Chinese governments recognize the need for international communication and collaboration then surely there should be a mechanism for adjudicating anticipated conflicts. One approach would be for government, industrial, and academic stakeholders to form an international panel of scientists and engineers to manage any conflicts of interest between the need to protect proprietary information crucial to a company’s competitive edge, and the need for students and young faculty members to publish their findings. Smaller scale efforts along these lines have recently given rise to unique global partnerships, such as fellowship support by major pharmaceutical companies, which aim to address these conflicts to the benefit of both parties. An added feature of such arrangements is that they often provide corporate financing for research (9). Can this corporate-academic partnership model be adapted to multinational joint R&D efforts while protecting IP? This question falls squarely within the purview of international science diplomacy, whereby science diplomats can establish rules of conduct governing joint global technology development with proper IP protection.

Despite the highly publicized and legitimate piracy allegations against China, at least some data indicates that the Chinese legal system is responding positively to worldwide pressure to honor foreign IP. A 2016 study by Love, Helmers, and Eberhardt, for example, found that between 2006 and 2011, foreign companies brought over 10 percent of patent infringement cases in China, and won over 70 percent of those cases (10). Today, “win rates” average around 80 percent, and “injunction rates,” around 98 percent (10). As Chinese scientists and engineers increasingly enter the top tier of the innovation space, their growing awareness of their own need for IP protection could be a powerful motivating force for the protection of all IP. As stated earlier, science diplomats could catalyze this progress even further by direct negotiations with those parties involved in the conflicts. An obvious flaw in this optimistic outlook is that scientists in the U.S. wield more influence with their government than scientists in China wield with theirs. And to the extent that the Chinese government could be encouraging IP theft, this must be addressed first by those international companies/firms who want to do business with the Chinese. Chinese investments, as well as tech incubators and targeted acquisitions, can enable access to U.S. technologies for commercial development. Although this conveys a level of risk to the developers, it may provide valuable opportunities for U.S. companies as well. In many respects, the extensive engagement and collaboration in innovation between the U.S. and China, often characterized by open exchanges of ideas, talent, and technologies, can be mutually beneficial in enriching and accelerating innovation in both countries.

In summary, we believe that science diplomats could help address the increasingly complex issues that arise between accelerating scientific and engineering advances, and the need to protect national security and corporate IP. We also propose that this might be accomplished by asking the National Academies to **recommend** academic, corporate, and government scientific leaders to serve on an international scientific advisory board, and for the corresponding organizations in other countries to do the same. Access to the free flow of information promotes new knowledge and innovation. A return to a more restrictive intellectual environment is not only harmful to progress, but also nearly impossible to manage in the current internet age. A good place to start would be to engage the newly appointed head of the White House Office of Science and Technology Policy (the Science Advisor to the President of the United States), and working groups within established organizations. These organizations include the American Association for the Advancement of Science (AAAS) or the National Academies of Science, Engineering and Medicine, and corresponding international organizations. What incentive is there for a busy and successful scientist to serve in such capacity? It is the same altruism that motivates us to accept assignments as journal editors, manuscript reviewers, or funding agency panelists for the advancement of science toward the greater good.

#### Solves every existential threat.

Haynes 18—research associate in the Neurobiology Department at Harvard Medical School (Trevor, “Science Diplomacy: Collaboration in a rapidly changing world,” <http://sitn.hms.harvard.edu/flash/2018/science-diplomacy-collaboration-rapidly-changing-world/>, dml) // Re-Cut Justin

Today’s world is extremely interconnected. Most of us take this fact for granted, but its implications cannot be overstated. The rate at which information, resources, and people are able to move from one part of the world to another continues to accelerate at an alarming rate. Undoubtedly, this development has done society immense good. In the last century, global life expectancy has doubled, the percentage of people living in extreme poverty has dropped by about 60%, and world literacy rates have increased by a similar margin. But while these statistics paint a promising picture of human civilization, human progress rests on a fragile foundation of international cooperation; the challenges presented by an interconnected world are immense. War, natural disasters, and economic collapse now exert their effects globally, creating economic and ecological disasters and mass human migrations on an unprecedented scale. And with the US pulling out of major multilateral agreements on trade, climate change mitigation, and denuclearization, you might wonder if our ability to collaborate across borders productively is really up to the task.

Global challenges require global solutions, and global solutions require collaboration between countries both big and small, rich and poor, authoritative and democratic. There are few human enterprises capable of providing continuity across these differences, and as technological solutions are becoming available to some of our most pressing issues, two in particular will be necessary to getting the job done: science and diplomacy. While science has long been utilized as a means to reach political ends—think of British explorer James Cook’s mapping of unexplored continents or the United States’ Manhattan Project—a more formal integration of scientists into the diplomatic process is being undertaken. This effort, which has led to scientists and academics playing a direct role in foreign policy development and international relations, has given birth of a new branch of diplomacy: science diplomacy.

What is science diplomacy?

As both the term and concept of science diplomacy have only recently gained traction in scientific and diplomatic circles, it’s been given a variety of definitions. But common to them all is the focus on applying scientific expertise to an international effort. The focus of these efforts is to solve international problems collaboratively while balancing economic prosperity, environmental protection, and societal wellbeing. The challenge of reaching this balance in the face of a booming global population cannot be understated, but this new branch of diplomacy is already at work and is producing results. International agreements such as the Paris Climate Agreement and the Iran Nuclear Deal are two famous examples, and science diplomacy is also establishing international collaboration in many other important arenas. While these lesser known efforts may not dominate the headlines, they are quietly tackling the global issues of today and preparing us for those of tomorrow.

Natural disasters don’t respect national boundaries (and neither does the aftermath)

In 2013, the number of refugees displaced by natural disasters—hurricanes, droughts, earthquakes—outnumbered those displaced by war. Current projections estimate as many as 1 billion people may be displaced by natural disasters by the year 2050. That would mean 1 in 9 people on the planet displaced and looking for a home. Compare this to the estimated 12 million refugees displaced by the war in Syria, and a frightening picture begins to form. As natural disasters continue to increase in both their frequency and intensity, solutions for mitigating the risk of total catastrophe will be underpinned by science, technology, and the ability of the international community to collaborate. Many organizations are starting to tackle these problems through the use of science diplomacy. The center for Integrated Research on Disaster Risk (IRDR) is composed of ten national committees—a network of government sponsored research institutions across the world in countries ranging the political and economic scale. These working groups have committed to improving disaster-risk-reduction science and technology while providing guidance to policy makers charged with implementing disaster prevention and mitigation strategies.

IRDR is governed by a committee comprising experienced scientists and natural disaster experts. Its members come from all over the world—the US, China, Uganda, Norway, Mexico, Venezuela, and more. The diversity of this organization starts at the top and is crucial to developing comprehensive risk-reduction strategies. Data and insights from countries with varying areas of expertise are being shared and built upon, facilitating more accurate natural disaster forecasting and better strategies for mitigating their destructive power. And by including representatives from countries of varying political and economic power in its leadership, IRDR ensures that its work will consider the needs of the global community at large, rather than just nations with considerable wealth and political standing.

The results of this type of international collaboration speak for themselves. Although humanity is grappling with more natural disasters than ever before, deaths related to these incidents continue to trend downward. Operating outside of the typical political framework that dominates foreign relations, IRDR provides a model for effective collaboration across the geopolitical spectrum in the face of a major global issue.

Explore or Exploit? Managing international spaces

Over the last few decades the polar ice cap that covers much of the Arctic Ocean has been shrinking. So much so, that during the warm season vast areas of previously solid ice have become open waters, creating opportunities for new trade routes and exposing the Arctic’s enormous reserves of oil and natural gas. Depending on your values, this will sound either like an opportunity for huge economic development of the region or the inevitable exploitation of one of the last untouched natural territories on the planet. And if you live there, like the half a million indigenous people who currently do, how this territory is managed will determine where you can live, how (and if) you can make a living, and what the health of the ecosystems that have supported Arctic life for millennia will look like.

Luckily, such a scenario was predicted decades ago. In 1987, Mikhail Gorbachev, then leader of the then Soviet Union, delivered a speech outlining his aspirations for the arctic to be explored rather than exploited—to radically reduce military presence, create a collaborative multinational research effort, cooperate on matters of environmental security, and open up the Northern Sea Route for trade. This speech laid the foundation for the Arctic Council (Figure 1), which is one of the most successful examples of science diplomacy at work. Composed of the eight Arctic nations, including geopolitical rivals US and Russia, and numerous groups of indigenous peoples, the Arctic Council was established to maintain Gorbachev’s vision for the region while giving the indigenous peoples a seat at the negotiating table. The council’s activities are conducted by six scientific and technology-based working groups who conduct research in the area and provide knowledge and recommendations to the council members. As a result of this research, and allowing scientists to take part in the negotiations, the Arctic council has enacted several legally binding agreements regarding the sustainable development and environmental protection of the Arctic Ocean. These agreements have facilitated cooperation on a number of important issues including search and rescue operations, prevention and containment of maritime oil pollution, and, most recently, enhanced data sharing and scientific research collaborations. Against a backdrop of rapidly deteriorating diplomatic relations, the US and Russia have co-chaired task forces that laid the foundation for these agreements, proving to the world that meaningful results can be achieved through the avenue of science diplomacy, regardless of geopolitics.

Science diplomacy going forward

The technical expertise that characterizes science diplomacy will continue to be in demand across many realms of foreign policy. For example, synthetic biology and gene-editing technology continue to factor into matters regarding agriculture and trade. Also, digital currencies, such as bitcoin, have changed the way economists and businesses are approaching markets. Finally, machine learning and artificial intelligence are being used by governments as a means for population control, giving rise to a new type of governance—digital authoritarianism.

While this expertise will be necessary for managing such issues, building international coalitions can’t be done through a purely scientific and technical lens. Convincing others to cooperate means providing them with a convincing argument to do so, and in terms they understand and find compelling. To achieve this, scientists must be trained to communicate their expertise in a way that moves stakeholders in policy discussions to act. This means appealing to motivations they have been largely taught to put to the side—whether they be political, economic, or emotional in nature—without obscuring the data and insights they have to offer.

For our leaders, policy makers, and diplomats to effectively understand issues underpinned by science and technology, experts in these fields must continue to be integrated into the mechanisms of governance. With scientists in the US running for elections in numbers like never before, we can expect this trend to continue. And in the face of a rising wave of nationalism across the world, it is crucial that we do everything we can to foster collaboration. The future of human civilization depends on it.

## 4

### DA

#### Pharma innovation high now – monetary incentive is the biggest factor.

**Swagel 21** Phillip L. Swagel, Director of the Congressional budget office 4-xx-2021, "Research and Development in the Pharmaceutical Industry," Congressional Budget Office, <https://www.cbo.goc/publication/57126#_idTextAnchor020> SJ//DA

**Every year, the U.S. pharmaceutical industry develops a variety of new drugs that provide valuable medical benefits. Many of those drugs are expensive and contribute to rising health care costs for the private sector and the federal government. Policymakers have considered policies that would lower drug prices and reduce federal drug expenditures. Such policies would probably reduce the industry’s incentive to develop new drugs.** In this report, the Congressional Budget Office assesses trends in spending for drug research and development (R&D) and the introduction of new drugs. CBO also examines factors that determine how much drug companies spend on R&D: expected global revenues from a new drug; cost to develop a new drug; and federal policies that affect the demand for drug therapies, the supply of new drugs, or both. What Are Recent Trends in Pharmaceutical R&D and New Drug Approvals? T**he pharmaceutical industry devoted $83 billion to R&D expenditures in 2019. Those expenditures covered a variety of activities, including discovering and testing new drugs, developing incremental innovations such as product extensions, and clinical testing for safety-monitoring or marketing purposes. That amount is about 10 times what the industry spent per year in the 1980s, after adjusting for the effects of inflation.** The share of revenues that drug companies devote to R&D has also grown: **On average, pharmaceutical companies spent about one-quarter of their revenues (net of expenses and buyer rebates) on R&D expenses** in 2019, which is **almost twice as large a share of revenues as they spent in 2000.** That revenue share is larger than that for other knowledge-based industries, such as semiconductors, technology hardware, and software. The number of new drugs approved each year has also grown over the past decade. On averace, the Food and Drug Administration (FDA) approved 38 new drugs per year from 2010 through 2019 (with a peak of 59 in 2018), which is 60 percent more than the yearly average over the previous decade. **Many of the drugs that have been approved in recent years are “specialty drugs.” Specialty drugs generally treat chronic, complex, or rare conditions, and they may also require special handling or monitoring of patients**. Many specialty drugs are biologics (large-molecule drugs based on living cell lines), **which are costly to develop, hard to imitate, and frequently have high prices.** Previously, most drugs were small-molecule drugs based on chemical compounds. Even while they were under patent, those drugs had lower prices than recent specialty drugs have. Information about the kinds of drugs in current clinical trials indicates that much of the industry’s innovative activity is focused on specialty drugs that would provide new cancer therapies and treatments for nervous-system disorders, such as Alzheimer’s disease and Parkinson’s disease. **What Factors Influence Spending for R&D?** Drug companies’ R&D spending decisions depend on three main factors: Anticipated lifetime global revenues from a new drug, **Expected costs to develop a new drug**, and Policies and programs that influence the supply of and demand for prescription drugs. Various considerations inform companies’ expectations about a drug’s revenue stream, including the anticipated prices it could command in different markets around the world and the expected global sales volume at those prices (given the number of people who might use the drug). The prices and sales volumes of existing drugs provide information about consumers’ and insurance plans’ willingness to pay for drug treatments. Importantly, when drug companies set the prices of a new drug, they do so to maximize future revenues net of manufacturing and distribution costs. A drug’s sunk R&D costs—that is, the costs already incurred in developing that drug—do not influence its price. **Developing new drugs is a costly and uncertain process, and many potential drugs never make it to market. Only about 12 percent of drugs entering clinical trials are ultimately approved for introduction by the FDA. In recent studies, estimates of the average R&D cost per new drug range from less than $1 billion to more than $2 billion per drug**. Those estimates include the costs of both laboratory research and clinical trials of successful new drugs as well as expenditures on drugs that do not make it past the laboratory-development stage, that enter clinical trials but fail in those trials or are withdrawn by the drugmaker for business reasons, or that are not approved by the FDA. Those estimates also include the company’s capital costs—the value of other forgone investments—incurred during the R&D process. Such costs can make up a substantial share of the average total cost of developing a new drug. The development process often takes a decade or more, and during that time the company does not receive a financial return on its investment in developing that drug. The federal government affects R&D decisions in three ways. First, it increases demand for prescription drugs, which encourages new drug development, by fully or partially subsidizing the purchase of prescription drugs through a variety of federal programs (including Medicare and Medicaid) and by providing tax preferences for employment-based health insurance. Second, the federal government increases the supply of new drugs. It funds basic biomedical research that provides a scientific foundation for the development of new drugs by private industry. Additionally, tax credits—both those available to all types of companies and those available to drug companies for developing treatmentscof uncommon diseases—provide incentives to invest in R&D. Similarly, deductions for R&D investment can be used to reduce tax liabilities immediately rather than over the life of that investment. Finally, the patent system and certain statutory provisions that delay FDA approval of generic drugs provide pharmaceutical companies with a period of market exclusivity, when competition is legally restricted. During that time, they can maintain higher prices on a patented product than they otherwise could, which makes new drugs more profitable and thereby increases drug companies’ incentives to invest in R&D. Third, some federal policies affect the number of new drugs by influencing both demand and supply. For example, federal recommendations for specific vaccines increase the demand for those vaccines and provide an incentive for drug companies to develop new ones. Additionally, federal regulatory policies that influence returns on drug R&D can bring about increases or decreases in both the supply of and demand for new drugs. Trends in R&D Spending and New Drug Development Private spending on pharmaceutical R&D and the approval of new drugs have both increased markedly in recent years, resuming a decades-long trend that was interrupted in 2008 as generic versions of some top-selling drugs became available and as the 2007–2009 recession occurred. **In particular, spending on drug R&D increased by nearly 50 percent between 2015 and 2019.** Many of the drugs approved in recent years are high-priced specialty drugs for relatively small numbers of potential patients. By contrast, the top-selling drugs of the 1990s were lower-cost drugs with large patient populations. R&D Spending R&D spending in the pharmaceutical industry covers a variety of activities, including the following: Invention, or research and discovery of new drugs; Development, or clinical testing, preparation and submission of applications for FDA approval, and design of production processes for new drugs; Incremental innovation, including the development of new dosages and delivery mechanisms for existing drugs and the testing of those drugs for additional indications; Product differentiation, or the clinical testing of a new drug against an existing rival drug to show that the new drug is superior; and Safety monitoring, or clinical trials (conducted after a drug has reached the market) that the FDA may require to detect side effects that may not have been observed in shorter trials when the drug was in development. In real terms**, private investment in drug R&D among member firms of the Pharmaceutical Research and Manufacturers of America (PhRMA), an industry trade association, was about $83 billion in 2019, up from about $5 billion in 1980 and $38 billion in 2000**.1 Although those spending totals do not include spending by many smaller drug companies that do not belong to PhRMA, the trend is broadly representative of R&D spending by the industry as a whole.2 A survey of all U.S. pharmaceutical R&D spending (including that of smaller firms) by the National Science Foundation (NSF) reveals similar trends.3 Although total R&D spending by all drug companies has trended upward, small and large firms generally focus on different R&D activities. **Small companies not in PhRMA devote a greater share of their research to developing and testing new drugs,** many of which are ultimately sold to larger firms (see Box 1). By contrast, a greater portion of the R&D spending of larger drug companies (including those in PhRMA) is devoted to conducting clinical trials, developing incremental “line extension” improvements (such as new dosages or delivery systems, or new combinations of two or more existing drugs), and conducting postapproval testing for safety-monitoring or marketing purposes.

#### The affs wholesale attack on secondary patents ruins innovation---prefer contingencies that solve evergreening.

Holman 18 [Christopher; 9/21/18; Professor at the University of Missouri-Kansas City School of Law, where his primary research focus lies at the intersection of intellectual property and biotechnology; “*Why Follow-On Pharmaceutical Innovations Should Be Eligible For Patent Protection*,” Intellectual property watch, <https://www.ip-watch.org/2018/09/21/follow-pharmaceutical-innovations-eligible-patent-protection/>] Justin

Why Protect Follow-On Innovation? The attack on secondary pharmaceutical patents is based in part on the flawed premise that follow-on innovation is of marginal value at best, and thus less deserving of protection than the primary inventive act of identifying and validating a new drug active ingredient. In fact, follow-on innovation can play a critical role in transforming an interesting drug candidate into a safe and effective treatment option for patients. A good example can be seen in the case of AZT (zidovudine), a drug ironically described in the Guidelines as the “first breakthrough in AIDS therapy.” AZT began its life as a failed attempt at a cancer drug, and it was only years later that its potential application in the fight against AIDS was realized. Follow-on research resulted in a method-of-use patent directed towards the use of AZT in the treatment of AIDS, and it was this patent that incentivized the investment necessary to bridge the gap between a promising drug candidate and a safe, effective, and FDA-approved pharmaceutical. Significantly, because of the long lag time between the first public disclosure of AZT and the discovery of its use in the treatment of AIDS, patent protection for the molecule per se was unavailable. In a world where follow-on innovation is unpatentable, there would have been no patent incentive to invest in the development of the drug, and without that incentive AZT might have languished on the shelf as simply one more failed drug candidate. Other examples of important drugs that likely never would have been made available to patients without the availability of a “secondary” patent include Evista (raloxifene, used in the treatment of osteoporosis and to reduce the risk of invasive breast cancer), Zyprexa (olanzapine, used in the treatment of schizophrenia), and an orally-administrable formulation of the antibiotic cefuroxime. Pharmaceutical development is prolonged and unpredictable, and frequently a safe and effective drug occurs only as a result of follow-on innovation occurring long after the initial synthesis and characterization of a pharmaceutically interesting chemical compound. The inventions protected by secondary patents can be just as critical to the development of drugs as a patent on the active ingredient itself. The Benefits of Follow-On Innovation The criticism of patents on follow-on pharmaceutical innovation rests on an assumption that follow-on innovation provides little if any benefit to patients, and merely serves as a pretense for extending patent protection on an existing drug. In fact, there are many examples of follow-on products that represent significant improvements in the safety-efficacy profile. For example, the original formulation of Lumigan (used to treat glaucoma) had an unfortunate tendency to cause severe hyperemia (i.e., redeye), and this adverse event often lead patients to stop using the drug, at times resulting in blindness. Subsequent research led to a new formulation which largely alleviated the problem of hyperemia, an example of the type of follow-on innovation that significantly benefits patients but that which would be discouraged by a patent regime that does not reward follow-on innovation. Follow-on pharmaceutical innovation can come in the form of an extended-release formulation that permits the drug to be administered at less frequent intervals than the original formulation. Critics of secondary patents downplay the significance of extended-release formulations, claiming that they represent nothing more than a ploy to extend patent protection without providing any real benefit to patients. In fact, the availability of a drug that can be taken once a day has been shown to improve patient compliance, a significant issue with many drugs, particularly in the case of drugs taken by patients with dementia or other cognitive impairments. Extended-release formulations can also provide a more consistent dosing throughout the day, avoiding the peaks and valleys in blood levels experienced by patients forced to take an immediate-release drug multiple times a day. Other examples of improved formulations that provide real benefits to patients are orally administrable formulations of drugs that could previously only be administered by more invasive intravenous or intramuscular injection, combination products that combine two or more active pharmaceutical agents in a single formulation (resulting in improved patient compliance), and a heat-stable formulation of a lifesaving drug used to treat HIV infection and AIDS (an important characteristic for use in developing countries with a hot climate). “Evergreening” – an Incoherent Concept Drug innovators are often accused of using secondary patents to “evergreen” the patent protection of existing drugs, based on an assumption that a secondary patent somehow extends the patent protection of a drug after the primary patent on the active ingredient is expired. As a general matter, this is a false assumption — a patent on an improved formulation, for example, is limited to that improvement and does not extend patent protection for the original formulation. Once the patents covering the original formulation have expired, generic companies are free to market a generic version of the original product, and patients willing to forgo the benefits of the improved formulation can choose to purchase the generic product, free of any constraints imposed by the patent on the improvement. Of course, drug innovators hope that doctors and their patients will see the benefits of the improved formulation and be willing to pay a premium for it, but it is important to bear in mind that ultimately it is patients, doctors, and third-party payers who determine whether the value of the improvement justifies the costs. Of course, this assumes a reasonably well-functioning pharmaceutical market. If that market breaks down in a manner that forces patients to pay higher prices for a patented new version of a drug that provides little real improvement over the original formulation, then it is the deficiency in the market which should be addressed, rather than the patent system itself. For example, if a drug company is found to have engaged in some anticompetitive activity to block generic competition in the market for the original product once it has gone off patent, then antitrust and competition laws should be invoked to address that problem. If doctors are prescribing an expensive new formulation of a drug that provides little benefit compared to a cheaper, unpatented original product, then that is a deficiency in the market that should be addressed directly, rather than through a broadside attack on follow-on innovation. In short, if is found that secondary patents are being used in a manner that creates an unwarranted extension of patent protection, it is that misuse of the patent system which should be addressed directly, rather than through what amounts to an attack on the patent system itself.

## 5

### DA

#### WTO consensus on fishing subsidies likely now but requires negotiations- consensus is key to solving overfishing- the brink is now.

Koop 21 [Fermin; Argentine journalist specializing in the environment with experience across diverse publications; “WTO Inches Towards a Deal to End Harmful Fishing Subsidies,” Maritime-Executive; 7/30/21; <https://www.maritime-executive.com/editorials/wto-inches-towards-a-deal-to-end-harmful-fishing-subsidies>] Justin

After more than 20 years of negotiations, the World Trade Organization (WTO) has moved a step closer to an agreement on ending harmful fishing subsidies. The deal would set new rules for the global fishing industry and limit government funding that contributes to unsustainable fishing and the depletion of global fish stocks. In a meeting with government ministers and heads of national delegations, WTO members vowed to finish the negotiations before the WTO’s Twelfth Ministerial Conference (MC12) in late November, and to empower their delegations in Geneva to do so. Members also said the negotiating text currently on the table can be used as the basis to strike a final agreement. “It’s been a successful day,” WTO chief Ngozi Okonjo-Iweala told reporters at the close of the meeting. “In 20 years of negotiations, this is the closest we have ever come towards reaching an outcome – a high-quality outcome that would contribute to building a sustainable blue economy. I feel new hope.” The talks’ chair, Santiago Wills, was also upbeat: “I believe that the answers today have given us the ingredients to reach a successful conclusion. Members now want to move to text-based negotiations. Twenty years has been long enough. If we continue [negotiating] for another 20 years, there won’t be any fish left.” Negotiators at the WTO had been tasked with eliminating subsidies for illegal, unreported and unregulated (IUU) fishing and prohibiting certain subsidies that contribute to overcapacity and overfishing. Talks have been going on since 2001 but differences between governments have hindered progress. 2020 had been set as a deadline to strike an agreement, but talks were delayed due to Covid-19 restrictions and the US presidential elections. A deadline was then set for this July, which was again missed. Now, Okonjo-Iweala, appointed as head of the WTO in March, aims to reach an agreement by year-end in what will be a key test for the organization’s credibility, with members deadlocked on other fronts. “In international negotiations of this type only two things are relevant. The nitty-gritty to make sure everybody is on the same page, and the spirit that prevails. If Ngozi and Wills reflected correctly what happened in the meeting, we can say there’s cautious optimism over an agreement,” Remi Parmentier, director of environmental consultancy The Varda Group, told China Dialogue Ocean. A potential agreement At the meeting, ministers discussed an eight-page draft agreement, which lists a range of subsidy bans and some conditions for exemptions for poorer countries, all of which are yet to be finalised. While some delegations like the EU were positive, several ministers expressed reservations over the content of the text. “Clearly, it will lead to capacity constraints for developing countries, while advanced nations will continue to grant subsidies,” Indian trade minister Piyush Goyal said at the meeting, regarding one part of the text. Pakistan described the draft as “regressive and unbalanced,” while the African coalition said “significant gaps” remain. Countries’ differences were acknowledged by Ngozi and Wills at the meeting. Nevertheless, they remain optimistic and said the issues would be resolved once countries move into text-based negotiations. The agreement on fishing subsidies will require a consensus among all member states, according to WTO rules. The draft deal essentially proposes three categories of prohibited subsidies; those that support IUU fishing, affect overfished stocks, or lead to overcapacity and overfishing. While this may sound simple, the political, economic and cultural complexities represent real challenges. One of the main issues has been the demand for developing countries and the poorest nations to receive so-called special and differential treatment. While this is widely accepted for the poorest countries, demands from self-identified developing countries to be exempt from subsidy constraints has proven to be difficult to accept. Many of the major fishing nations are considered developing countries by the WTO, including China, which has one of the world’s biggest fishing fleets. China’s minister of commerce, Wang Wentao, expressed China’s “support for the conclusion of [fishing subsidies] negotiations before the end of MC12.” Speaking at the meeting on 15 July, Wang stressed that concluding the negotiations would represent a major contribution from the WTO to the United Nations’ 2030 Sustainable Development Goals. “As a developing country and a major fishing power, China will take on obligations commensurate with our level of development," he said. At the meeting, Wang also introduced China’s emphasis on green development in future policies on fishing subsidies and its “zero-tolerance” policy towards IUU. Isabel Jarrett, manager of The Pew Charitable Trusts’ project to end harmful fisheries subsidies, told China Dialogue Ocean that an agreement “with too many loopholes” would undermine the WTO’s sustainability goals. The final text has to ensure that governments aren’t allowed to subsidize “irresponsible practices that can hurt fish populations,” she added. The scale of the problem Subsidies paid to the global fishing industry amount to around $35 billion per year (228 billion yuan). Of this, $20 billion is given in forms that enhance the capacity of large fishing fleets, such as fuel subsidies and tax exemption programmes, according to the European Parliament’s Committee on Fisheries. In 2018, the world’s top 10 providers of harmful fisheries subsidies gave out $15.4 billion in total, according to a report by Oceana. The EU, as a bloc, provided $2 billion, ranking third behind China and Japan. Research by Pew has found that eliminating all harmful subsidies could help fish populations recover. Specifically, it would result in an increase of 12.5 percent in global fish biomass by 2050, which translates into nearly 35 million metric tonnes of fish – almost three times Africa’s entire fish consumption in a single year. The need for progress on an agreement has gained new urgency during the last few years, as the world’s fish populations have continued to fall below sustainable levels. Around 60 percent of assessed stocks are fully exploited and 30 percent are overexploited, according to the latest figures from the UN Food and Agriculture Organization. The termination of harmful subsidies, which is embedded in the UN Sustainable Development Goals (SDGs), would be seen as key progress on ocean sustainability ahead of this year’s UN biodiversity conference in Kunming, scheduled for October, and the COP26 climate summit in Glasgow in November. “This is the year that the agreement has to be delivered. The WTO chief has made positive pronouncements of an agreement this year. There’s light at the end of this 20-year tunnel. The alternative of being in the tunnel shadows is a depressing prospect at the time ocean life is declining,” Peter Thomson,?UN special envoy for the ocean, said in a recent webinar.

#### Plan requires TRIPs negotiations.

Holman 18 [Christopher; 9/21/18; Professor at the University of Missouri-Kansas City School of Law, where his primary research focus lies at the intersection of intellectual property and biotechnology; “*Why Follow-On Pharmaceutical Innovations Should Be Eligible For Patent Protection*,” Intellectual property watch, <https://www.ip-watch.org/2018/09/21/follow-pharmaceutical-innovations-eligible-patent-protection/>] Justin

Compatibility with TRIPS The heightened requirements of patentability proposed in the Guidelines not only pose a threat to important follow-on pharmaceutical innovation, but if they were to be adopted could constitute noncompliance with certain international treaties, including in particular the Agreement on Trade-Related Aspects of Intellectual Property Rights (“TRIPS Agreement”), which the 164 Members of the World Trade Organization (WTO) have agreed to abide by. The TRIPS Agreement requires WTO Members to provide certain minimum levels of protection for patentable inventions, thus placing substantive limitations on the ability of WTO Members to raise the bar for patentability. The TRIPS Agreement in no way sanctions subject matter-specific heightened requirements of patentability; to the contrary, the antidiscrimination provision in the TRIPS Agreement affirmatively precludes such measures. Unfortunately, this point is all too often lost in discussions of international and domestic patent policy.

#### Negotiations on IPR require tradeoffs- empirics prove.

DC = DEVELOPING COUNTRY

NET = NET EXPORTER OF TECH (advanced countries)

TNC = Trade Negotiations Committee

Anell = Lars Anell the Chair of the TRIPS negotiations

Marcellin 16 Marcellin, Sherry (Professor, London School of Economics). The political economy of pharmaceutical patents: US sectional interests and the African Group at the WTO. Routledge, 2016. SJMS

Regarding the provisions in the section on patents, including that on exclusions from patentability, another DC negotiator maintained that the stipulations should reflect ‘a well-balanced system’ (ibid: 3). Ironically however, he proceeded to categorise the texts as ‘reasonably satisfactory’, contending that a positive attitude of his delegation towards them would depend to a large extent on progress in other areas of the negotiation (ibid). This was the second time in the negotiations that a DC delegate made such an obvious attempt to concede in TRIPS while seeking bargains in other negotiating areas, suggesting that the real access-to-medicines implications of patents were not fully appreciated by all such participants (Abbott 2002: 43–4); and that such participants may have understood that the negotiations would not have culminated in their favour. Immediately after the April TNC of 1989 a similarly affiliated participant had also affirmed that if some participants were to be required to make sacrifices in the area of IPRs, there should be a readiness to make such sacrifices for their benefit in agriculture, natural resources or other negotiating groups (MTN.GNG/NG11/13: 5).10 This first declaration could be construed as a signal of a prejudged outcome that disfavoured DCs. Towards the end of this session another DC participant, supported by several others, pointed out that some other delegations had very high ambitions in the area of TRIPS and that the time had come to review the subject matter in the context of the Uruguay Round negotiations as a whole, particularly in relation to what was being offered in the more traditional areas of the GATT (ibid: 12). At these final stages in the negotiations, DCs were actively seeking trade-offs in other areas in return for agreeing to IPRs in the manner in which the NETs had anticipated (Adede 2003: 30 and Matthews 2002: 109). Anell’s informal consultations and his proposed bilateral bargaining strategies worked in tandem to consolidate the weakening position of DCs propagated during the April TNC meeting in 1989. Anell ended this final session by sharing concerns expressed about the need for results in all areas of the UR, explicitly urging delegations to manufacture consensus through concessionary bargaining. The effects would later be seen in Dunkel’s ‘Draft Final Acts Embodying the Results of the Uruguay Round of Multilateral Trade Negotiations’.11

#### That collapses biodiversity.

Osmanski 20 [Stephanie; Freelance Journaler, Writer at GreenMatters; “How Does Overfishing Affect Biodiversity? Let's Do a Deep Dive,” GreenMatters; 12/29/20; <https://www.greenmatters.com/p/how-overfishing-affects-biodiversity>] Justin

Three out of seven people — about 260 million worldwide — rely on seafood as their primary source of protein, which means the environmental and health impacts of fishing are more relevant than ever. In fact, overfishing is becoming a huge problem; Conservation.org reports that one-third of the world’s wild-caught fisheries are depleted as a direct result of overfishing, pollution, and climate change. As fish populations decline, farmed fisheries have started supplying most of our seafood, which is often plagued with additives, growth hormones, genetically modified organisms, and even food dye. However, overfishing results in other issues, too — mainly, environmental issues. Overfishing significantly affects biodiversity, which in turn, changes the ecosystem. Keep reading to find out more on how overfishing contributes to biodiversity. What is overfishing? Overfishing refers to non-sustainable practices of fishing that result in the depletion of fish species. In layman’s terms, overfishing happens when fishermen catch fish faster than the fish can reproduce. Long ago, when fishing relied on more natural methods (instinct, word-of-mouth, and guesswork), fishing practices were more natural and therefore, sustainable. But due to modern technology, fishermen now get significant help from high-tech machinery that can detect and track schools of fish, enable fishermen to explore new areas of water they had not been able to access before, and also embark in deeper waters. According to the United Nations Food and Agricultural Organization (FAO), over 70 percent of the world’s fisheries are “fully exploited,” “over exploited,” or “significantly depleted” as a direct result of overfishing. What is biodiversity? Biodiversity refers to the variety of life on Earth, referring to our planet’s vast number of biological species and organisms. It's heavily impacted when certain species cease to exist, or become threatened at a rate that is faster than that species can reproduce. Ultimately, the number of plants, animals, and microorganism species on Earth determines biodiversity. According to Global Issues, varying genes in each of these species also contributes to more biodiversity. If ecosystems or species become threatened or cease to exist, biodiversity decreases — and ultimately, all walks of life are impacted — because of the degrading food chain and other necessary biological processes. How does overfishing affect biodiversity? Overfishing impacts biodiversity in more ways than one — per Marine Science Today, overfishing alters the food chain. If a certain species is wiped out due to overfishing, the animals that rely on that species as a food source could starve, or might resort to eating other species of fish, thus altering the ecosystem and food chain as a whole. On the other end of the spectrum, the population generally consumed by the extinct species would grow disproportionately, often making way for an influx of pests. Overfishing creates a domino effect that impacts all living organisms, therefore significantly affecting biodiversity. Why is biodiversity important? Biodiversity is necessary, because every organism plays a role in the eco-system. If one species is compromised, biodiversity becomes compromised as a whole: the food chain, ecosystems, and more. The more biodiversity there is on this planet, the more productive ecosystems are, contributing to a greater availability of biological resources. Apart from food, biodiversity impacts medicinal resources, wood products, and ornamental plants. Biodiversity also helps ecosystems recover in cases of disaster. If a weather event threatens natural disasters, healthy, biodiverse ecosystems have a better chance of bouncing back. It also ensures protection of water resources, soil formation, nutrient storage and recycling, and the necessary breakdown of pollution. Why is marine biodiversity is important to humans? Aside from assuring food security, marine biodiversity also provides social and socioeconomic benefits. Socioeconomically, many areas of the world rely on fisheries to survive. If fishermen cannot sell seafood, fisheries cannot purchase fish, and these ways of life are forced out of business. A side effect of that would be that so many populations that rely on fisheries would be out of their main source of protein. Biodiversity also brings many social benefits to human populations: the opportunities to research and educate about fisheries, natural habitats, ecosystems, and various species. It also increases tourism and recreational activities, while having a lasting cultural impact, too — if specific populations rely on a species for food, loss of that population would affect that population’s culture and food supply. Marine biodiversity is incredibly important — let's take a stand against overfishing to ensure it doesn't plague eco-systems and human populations alike. TBH, might be best to go fish-free. instead.

#### Biodiversity loss causes extinction.

Torres 19[Phil; Affiliate Scholar at the Institute for Ethics and Emerging Technologies, Founder of the X-Risks Institute, Writer Appearing in Skeptic, Free Inquiry, Bulletin of the Atomic Scientists, Salon, Truthout, Erkenntnis, Metaphilosophy; “Biodiversity Loss: An Existential Risk Comparable To Climate Change,” Bulletin of the Atomic Scientists; 4/11/16; <https://thebulletin.org/2016/04/biodiversity-loss-an-existential-risk-comparable-to-climate-change/>] Justin

Catastrophic consequences for civilization. The consequences of this rapid pruning of the evolutionary tree of life extend beyond the obvious. There could be surprising effects of biodiversity loss that scientists are unable to fully anticipate in advance. For example, prior research has shown that localized ecosystems can undergo abrupt and irreversible shifts when they reach a tipping point. According to a 2012 paper published in Nature, there are reasons for thinking that we may be approaching a tipping point of this sort in the global ecosystem, beyond which the consequences could be catastrophic for civilization.

As the authors write, a planetary-scale transition could precipitate “substantial losses of ecosystem services required to sustain the human population.” An ecosystem service is any ecological process that benefits humanity, such as food production and crop pollination. If the global ecosystem were to cross a tipping point and substantial ecosystem services were lost, the results could be “widespread social unrest, economic instability, and loss of human life.” According to Missouri Botanical Garden ecologist Adam Smith, one of the paper’s co-authors, this could occur in a matter of decades—far more quickly than most of the expected consequences of climate change, yet equally destructive.

Biodiversity loss is a “threat multiplier” that, by pushing societies to the brink of collapse, will exacerbate existing conflicts and introduce entirely new struggles between state and non-state actors. Indeed, it could even fuel the rise of terrorism. (After all, climate change has been linked to the emergence of ISIS in Syria, and multiple high-ranking US officials, such as former US Defense Secretary Chuck Hagel and CIA director John Brennan, have affirmed that climate change and terrorism are connected.)

The reality is that we are entering the sixth mass extinction in the 3.8-billion-year history of life on Earth, and the impact of this event could be felt by civilization “in as little as three human lifetimes,” as the aforementioned 2012 Nature paper notes. Furthermore, the widespread decline of biological populations could plausibly initiate a dramatic transformation of the global ecosystem on an even faster timescale: perhaps a single human lifetime.

The unavoidable conclusion is that biodiversity loss constitutes an existential threat in its own right. As such, it ought to be considered alongside climate change and nuclear weapons as one of the most significant contemporary risks to human prosperity and survival.

## 6

### DA

#### Liquidity stays robust in 2021 despite challenges – status-quo ensures declines are controlled.

Lokeshwarri 21 [SK; Chief of Research Bureau; “3 reasons why market liquidity will stay robust in 2021,” BusinessLine; 1/3/21; <https://www.thehindubusinessline.com/data-stories/deep-dive/3-reasons-why-market-liquidity-will-stay-robust-in-2021/article33487346.ece>] Justin

As we step into 2021, investors in Indian equity market have much to be thankful for. While the deep cut in March 2020 — that made the Nifty50 and the Sensex lose almost 40 per cent from the January peak — had everyone losing their head in worry, all the losses were recouped in the following months. The benchmark indices have gained a whopping 79 per cent from the March lows and ended the year with gains of over 15 per cent.

It’s clear that investors are chasing growth, making valuation pricey in select pockets, even as value continues to exist in cyclical stocks. The question that begs an answer now is: will this rally continue in 2021? That depends, to a large extent, on the demand for stocks, also called market liquidity. There are three main reasons why liquidity will remain robust in 2021 as well. While market corrections and sporadic volatility cannot be ruled out, these factors will ensure that the declines do not get too serious.

Interest rates at rock bottom

One of the principal reasons why investors flocked to equity markets after March 2020 was due to the large interest rate cuts by all central banks including the RBI to stimulate the economy. The RBI slashed the repo rate from 5.15 per cent towards the beginning of 2020 to 4 per cent by May; the lowest level in two decades. This made banks lower their deposit rates making fixed income investments unattractive. It needs to be noted the Indian central bank has been consistently lowering rates since 2012, when the repo rate was 8.5 per cent, in a bid to boost growth. This has been one of the drivers of the structural bull-run since 2013.

Other central banks including the US Federal Reserve also similarly slashed rates in March and April. As the accompanying table shows, policy rates of countries such as the US, UK, Canada, Australia, Norway, etc are close to zero; while countries such as Switzerland, Denmark, Japan and the Euro zone have negative policy rates. Maximum global wealth lies in the US and Europe with most FPIs originating from these regions. It is, therefore, not surprising that the hunt for higher returns attracted these investors to Indian stocks.

With global monetary policy expected to be dovish through 2021, the FPI flows in to India equity is likely to be supportive this year.

Dollar movement and global central bank stimulus

Another factor that needs to be tracked closely to gauge liquidity in stock market is the movement of the US dollar. Dollar along with gold is a safe haven with value increasing in times of extreme risk-off sentiments, due to money flowing in to US treasury instruments.

If we track the long-term movement of the dollar index, it can be noted that the index consistently moved lower from 116 in 2002 to 73 in 2008. This was the period of an unbridled bull-run in most equity markets. The period from 2014 to 2016, when the dollar index rallied was accompanied by volatility in global stocks.

The dollar index is once again weak. The weakness is partly on account of the Federal Reserve’s next tranche of stimulus announced recently and the unlimited dollar printing. But it also signifies that there is certain degree of complacency in financial markets regarding the ability of the central banks to keep economies afloat. This is making money move out of the haven of dollar-denominated securities. Continued dollar weakness in 2021 will keep the bias of FPIs tilted towards equities in emerging markets such as India.

The other factor that is supplying liquidity to markets is the stimulus funding being unleashed by Advanced Economies. Some of this money tends to move in to risky assets as the flood of money coupled with lows interest rates in these economies boosts currency carry trades.

Vaccine roll-out, normalisation of economic activity

As far as domestic liquidity goes, there isn’t much to worry about. Though equity oriented mutual funds have witnessed outflows over the last five months, there are other indications that domestic investors have enough liquidity on their hands. One, turnover on domestic stock exchanges has been booming with cash volumes almost doubling since April 2020. Two, the massive over-subscription in IPOs shows that people have surplus on their hands which they are willing to deploy in to stocks.

Also, the Covid-led job losses has not really affected the upper and upper-middle class much. A survey by UBS of 1,508 consumers aged between 18 and 54 found that while 47 per cent of the respondents saw a decline in income in 2020, 49 per cent witnessed stable income or an increase. Also, close to two-thirds of respondents expect income to increase in 2021.

While economic growth is largely expected to contract in the 8-10 per cent range in FY21, most research houses think that growth in FY22 in India will be the fastest globally, around 8 per cent. Revival in activity, of course, hinges on the vaccine roll-out and people getting the confidence to resume activities at pre-Covid levels. With over 56 per cent of the country’s GDP being derived by consumption, success of the vaccine and elimination of the Covid virus would be the key to sustained earnings growth in companies.

One negative fall-out of easing of movement restriction and end of work-from-home would be the inability of the people to trade from offices due to the restrictions in office Wi-Fi and other protocols. This could dampen trading turnover to some extent, though it won’t have a material affect on investing behaviour.

#### The plan collapses market liquidity – our evidence is super recent and really good.

* DiD- Difference in Difference

Dass et al 21 [Nishant Dass, Vikram Nanda, Steven Xiao; Scheller College of Business, Georgia Institute of Technology Rutgers Business School; “Intellectual Property Protection and Financial Markets: Patenting versus Secrecy,” 4/22/21 (**The download site says 4/22/21 but the pdf says 11/20/20 so I just put the former – correct if wrong**); <https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2648770&download=yes>] Justin

5.2.1 TRIPS and Patents

First, we test Hypothesis H1 for the effect of TRIPS on patenting. Our prediction is that stronger international patent protection will encourage firms in patent–reliant industries to use patents over trade secrecy to protect their IPs. We formally test the effect of TRIPS on patenting and stock liquidity (H1) using the following DiD model:

Patentsi,t = α1 + β1Post–TRIPSi,t × Treatedj + γ 0 1CONT ROLi,t−1 + φi + ψt + i,t. (4)

We estimate Model (4) over a five–year window, [t−2, t+ 2], around the implementation of TRIPS. Patents are counted based on the timing of either applications or issuances. Since the implementation of TRIPS in the United States was enforced by the passage of URAA on December 8, 1994, and it became effective on January 1, 1995, we define 1995 as the event year and test the DiD model in a five–year window centered on 1995.20 Post–TRIPSi,t is a binary variable that equals one if the observation is in or after 1995, and equals zero otherwise. We consider industries that are reliant on patents as the treated group. Following Delgado, Kyle, and McGahan (2013), we categorize four–digit NAICS industries as patent–reliant or not based on a 2012 report by the Economics and Statistics Administration (ESA) and the USPTO. Our prediction based on H1 is that the estimate of β1 on the interaction term should be significantly positive.

Since our analysis focuses on firms’ patenting decisions and stock liquidity, we follow the literature and control for a set of firm and industry characteristics that are likely related to firms’ patenting activities and/or stock liquidity. We include firm size and age because older and larger firms tend to generate more patents (Atanassov, 2015). We include asset characteristics for cash holding and tangibility, because asset liquidity is correlated with stock liquidity (Gopalan, Kadan, and Pevzner, 2012). We include firm performance using Tobin’s Q and return on assets (ROA) because firms with better performance tend to be more innovative and have higher stock liquidity. We include industry concentration using the Herfindahl–Hirschman index at four–digit NAICS industry level because corporate innovation is related to the level of product market competition (Aghion et al., 2005). We include the number of analysts following the stock, which is related to higher stock liquidity (Balakrishnan et al., 2014). Standard errors are estimated with clustering at the four–digit NAICS industry level to account for within–industry correlation in patenting activity.21

We estimate this model in four different forms to account for the fact that the number of patent applications and the number of patent grants are count variables with high skewness (see Table 1). The first one is a linear regression with log one plus the number of patent applications or patent grants as the dependent variable. The second one is a negative binomial regression with the number of patent applications or patent grants as the dependent variable. The third one is a Poisson regression with the number of patent applications or patent grants as the dependent variable. The fourth one is a logit regression in which the dependent variable is a binary variable that equals one if a firm has any patent applications or patent grants in a year. Across all forms of regressions, we control for firm fixed effects and year fixed effects, and, thus, the stand–alone variables Post–TRIPS and Treated are absorbed by the fixed effects and cannot be estimated.22

Table 3 reports the coefficient estimates of Model (4). The estimates in columns 1 to 3 and 5 to 7 show that the number of both patent applications and patent grants for firms in patent– reliant industries significantly increased after the implementation of TRIPS. These increases are also economically significant. For example, the linear regression estimates in column 1 (5) suggest that the number of patent applications (patent grants) increased by 10.2% (7.7%) in the post–TRIPS period. Based on Lemley’s (1994) estimate that the average patentee received 253 additional days of protection with the new term conferred by the URAA, our estimates suggest that firms in patent– reliant industries increase the number of patent applications (patent grants) by 0.04% (0.03%) for every additional day of patent protection. In columns 2, 3, 6, and 7, where we present estimates of negative binomial regressions and Poisson regressions, the sample size falls by more than half. This is because firms with zero patents throughout the sample period are dropped from the regression as the outcome variables are perfectly explained by firm fixed effects. Nevertheless, the DiD estimates remain robustly positive in these regressions.23

In columns 4 and 8, where we present estimates of logit regressions, the sample size is even smaller because firms that have non–zero patents every year in the sample period are also dropped from the regression. In the logit regressions, the DiD estimates are insignificant. These results suggest that the increase in the number of patents is not driven by the extensive margin, which would be the case if firms that did not patents prior to TRIPS started patenting afterward. Instead, the results are driven by the intensive margin, whereby firms that patented prior to TRIPS increased their patenting activity after TRIPS. A plausible explanation is that the marginal benefits of a longer patent term and the international enforcement of patent protection conferred by TRIPS may not be sufficient to offset the fixed costs of starting to patent, such as the cost of hiring legal experts and developing the institutional knowledge about the patenting procedure. In our sample, 69% of firms in patent–reliant industries (i.e., the treated group) had at least one patent application in the pre–TRIPS period, whereas only 21% of firms in the control group did so. Hence, the treated group is more likely to increase patenting along the intensive margin. This is consistent with our assumption that firms in patent–reliant industries benefit more from a marginal improvement in the strength of patent protection.

We test the parallel–trend assumption for Model (4) by estimating a dynamic version of the model. We estimate the dynamic DiD model using the quarterly number of patents so that we have more data points when observing the pre–trends. Figure 4 reports the estimates of the dynamic DiD model. The sample includes 20 quarters for the same five–year period used in Table 3, with 1993Q1 as the base level (and hence not estimated) and 1995Q1 as quarter 0. The figure shows that the pre–trends appear parallel until quarter 0, after which the number of patent applications by the treated group sharply spikes in quarter 1 (1995Q2). As Abrams (2008) points out, the enforcement of the patent term extension of the URAA likely drives this spike. The new patent term, which is 20 years from the application date, applies to patents that are filed on and after June 8, 1995. However, subsection (c)(1) of URAA (1994) implicitly allows patents that were filed before June 8, 1995, to receive the longer of the old term and the new term. This provision incentivizes firms to rush their patent applications before June 8 to maximize the patent term. After the spike in patent filings in quarter 1, the number of patent applications by the treated group gradually but significantly increase. Overall, the parallel trend in patenting activity appears to hold in the pre–TRIPS period, supporting the validity of our DiD design.

5.2.2 TRIPS and Stock Liquidity

Given the results that firms in patent–reliant industries increase patenting more than other firms after the implementation of TRIPS, we expect these firms to also experience a greater improvement in stock liquidity post–TRIPS. We test our prediction using the following model:

Stock Illiquidityi,t = α1 + β1Post-TRIPSi,t × Treatedj + γ 0 1CONT ROLi,t−1 + φi + ψt + i,t. (5)

We measure stock illiquidity using Amihud’s measure and the annual average of daily closing bid– ask spread, because the high–frequency data used for relative effective spread are not available before 1993 and have limited coverage for the first few years. We control for the same set of control variables used in Model (4) and include firm and year fixed effects to account for time–invariant unobservable firm characteristics and the macroeconomic conditions, respectively. Standard errors are estimated with clustering at the four–digit NAICS industry level to account for within–industry correlation in stock liquidity. Based on H1, we predict the estimated β1 on the interaction term to be significantly negative, since we expect firms in patent–reliant industries to experience a greater reduction in stock illiquidity after the implementation of TRIPS relative to other firms.

Table 4 presents the estimates of Model (5). The results show that the DiD estimator is significantly negative for both measures of stock illiquidity. The effect is also economically significant: in the five–year period surrounding the implementation of TRIPS in the United States, the bid– ask spread (Amihud’s illiquidity) of treated firms decreased by 14.0% (27.1%) more than that of the control firms. Based on Lemley’s (1994) estimate of the average number of additional days of patent protection with the new term conferred by the URAA, our estimates suggest that the bid– ask spread (Amihud’s illiquidity) of firms in patent–reliant industries decreases by 0.06% (0.11%) for every additional day of patent protection. This is consistent with our prediction that the stock liquidity of firms in patent–reliant industries significantly improved more than that of other firms after the implementation of TRIPS.

Similar to Figure 4, here we also examine the pre–trends in stock illiquidity by estimating a dynamic version of Model (5) using quarterly data. Figures 5 and 6 present the estimates of the dynamic DiD models for the two measures of stock illiquidity. The figures show that the stock illiquidity of the treated firms does not exhibit a significant downward trend relative to the control firms until quarter 0, when TRIPS became effective. These results again support the parallel trends assumption of our DiD models.

#### Statistics prove liquidity is key to long-term growth.

Abdul-Khaliq 13 [Shatha; Assistant Professor, AlBlqa Applied University, Jordan; “The Impact of Stock Market Liquidity on Economic Growth in Jordan,” European Journal of Business and Management [www.iiste.org](http://www.iiste.org); 2013; <https://iiste.org/Journals/index.php/EJBM/article/viewFile/9456/9661#:~:text=Focusing%20on%20liquidity%2C%20Bencivenga%2C%20et,key%20role%20in%20economic%20growth.&text=By%20facilitating%20longer%20term%2C%20more,for%20long%20term%20economic%20growth>.] Justin

5. Data and Methodology

Generally, previous research using cross-country data supports the hypothesis that financial development leads to economic growth. Levine and Zervos (1996), use the regression equation: where X is a set of control variables, GROWTH is the real GDP growth rate and STOCK represents measurements of the stock market. So relationship of the form is :

GROWTH = β0 + β1 MC + β2MTR + e3

Where

MC = market capitalization as percentage of GDP

MTR = market turnover ratio as measure of stock market liquidity

The 20-year time-series (1991-2011) data used for this study was collected from Amman Stock Exchange Annual Reports and Accounts, Central Bank of Jordan Statistical Bulletin, various issues.

The summary descriptive statistics of the variables used (Table 1) show the mean, standard deviation and minimum and maximum value of the data. It is obvious from the table that GDP growth in Jordan ranges from 2% to 14% with an average of 5%. The average market capitalization as percentage of GDP has remained on 1.47 and its ranking continuously rise from 0.49 to 3.6 in the year 2005. The market turnover ratio is averaged at 51.9 starting from its minimum value of 11.59 in year 2000 to 102.1 in 2010.

5.1 Stationary Test: table 2 shows the unit root test using the augmented Dickey - Fuller (ADF). The objective of the unit root test is to empirically examine whether series contains a unit root or not. If the series contains a unit root, this means that the series is non-stationary. Otherwise, the series will be categorized as stationary. The unit root tests show that Economic growth, market capitalization as percentage of GDP and market turnover ratio are not stationary at the zero order both with constant and constant and trend terms. Hence, we move ahead to conduct the ADF test at first difference to further ascertain the stationary of the series. The unit root results at first difference rejects the null hypothesis of non-stationary at both 1 and 5 percent levels for Economic growth, market capitalization as percentage of GDP and market turnover ratio.

6.Results and discussions:

The methodology of the series of the regression using the Ordinary Least Squares (OLS) model to prove a significant correlation between market liquidity and economic growth. The Table 3 shows the regression results for the impact of Stock Market Liquidity on Economic Growth in Jordan. It shows that over 28 percent of the total changes in economic growth rate are explained by the included exogenous variables. The adjusted R-square result explains over 20 systemic changes in the model. The Durbin Watson Statistics indicates insignificant autocorrelation in the model represented above. The F-statistics is statistically significant at the 5 percent level The coefficient of market capitalization as percentage of GDP (MC) is negative but it is statistically insignificant. The coefficient of market turnover ratio (MTR) is significant at the 5% level and the sign is positive indicating that 1% increase in market turnover ratio will increase the growth rate of GDP by 0.06%. This means that market turnover ratio has more positive influence on economic growth in Jordan.

7. Conclusion

This study investigates the relationship of stock market liquidity and economic growth by taking market capitalization to GDP and turnover ratio as independent variables. The impact of these variables is empirically tested on economic growth as a dependant variable for the period of 1991 to 2011 using ADF unit root testing methodology and OLS regression. We find that the market turnover ratio has a stronger influence on economic growth than the of market capitalization to GDP

Finally,, governments should promote stock market liquidity by for instance propagating knowledge to the public of the benefits of investing in stock markets and to ensure higher liquidity on stock markets. These incentives would promote both domestic and foreign investments to penetrate the domestic economies, and thus help to increase economic growth.

#### Growth solves extinction.

Aschenbrenner 20 [Leopold Aschenbrenner; Student in economics at Columbia University and research affiliate at the University of Oxford’s Global Priorities Institute; "Securing posterity," Works in Progress; 10/19/20; <https://worksinprogress.co/issue/securing-posterity/>] julian // Re-Cut Justin

I argue that the opposite is the case. It is not safe stagnation and risky growth that we must choose between; rather, it is stagnation that is risky and it is growth that leads to safety. We might indeed be in “time of perils”: we might be advanced enough to have developed the means for our destruction, but not advanced enough to care sufficiently about safety. But stagnation does not solve the problem: we would simply stagnate at this high level of risk. Eventually, a nuclear war or environmental catastrophe would doom humanity regardless. Faster economic growth could initially increase risk, as feared. But it will also help us get past this time of perils more quickly. When people are poor, they can’t focus on much beyond ensuring their own livelihoods. But as people grow richer, they start caring more about things like the environment and protecting against risks to life. And so, as economic growth makes people richer, they will invest more in safety, protecting against existential catastrophes. As technological innovation and our growing wealth has allowed us to conquer past threats to human life like smallpox, so can faster economic growth, in the long run, increase the overall chances of humanity’s survival. This argument is based on a recent paper of mine, in which I use the tools of economic theory—in particular, the standard models economists use to analyze economic growth—to examine the interaction between economic growth and the risks engendered by human activity. In this model, society must choose how much of its resources to allocate to consumption and how much to safety efforts. Consumption makes us happy, but also creates risks of catastrophe. Investing in safety can in turn help mitigate that risk. For example, consuming fossil fuels can engender great prosperity, but also increases the risk of tail-end climate change. We can spend money on carbon abatement to reduce this risk. Or consider air travel. It’s very useful as well, but also facilitates the spread of infectious diseases, including potentially a pandemic that could wipe out the human race. We can spend money on pandemic preparedness to mitigate that risk. Crucially, society is impatient; it discounts the future. People generally care most about their more immediate well-being. Although they may care about their kids and grandkids, they are certainly not particularly concerned about the trillions of potential lives billions of years in the future that the aforementioned philosophers appeal to. However, an impatient society does care about not getting wiped out. Therefore, what fraction of its resources this impatient society will allocate to safety depends on how much the people in this society value their own lives. As it turns out, under the standard preferences used in economic theory, people value life more and more as they grow richer. This is because of the diminishing marginal returns of consumption. As you grow richer, using an extra dollar to purchase more consumption goods gives you less and less additional utility; meanwhile, as your life becomes better and better, you stand to lose more and more if you die. As a result, the richer people are, the greater the fraction of their income they are willing to sacrifice to protect their lives. Comparing the current pandemic to the 1918 pandemic illustrates this phenomenon. Today, we are putting much of life on hold to minimize deaths. By contrast, in 1918, nonpharmaceutical interventions were milder and went on only for a month on average in the U.S., even though the Spanish Flu was arguably deadlier and claimed younger victims. We are willing to sacrifice much more today than a hundred years ago to prevent deaths because we are richer and thus value life much more. What does this mean for our model? Initially, a poor society will start out by allocating nearly all of its resources to consumption. And so as the economy grows, so does risk. However, as people grow richer, they start valuing life more. They start investing in safety to mitigate risk, shifting more and more resources from consumption to safety. At this point, as the economy grows, risk begins to fall. The risk of a existential catastrophe then looks like an inverted U-shape over time: The dot represents where we might be right now. Over the past centuries, as we have grown out of poverty, we have overwhelmingly focused on consumption. As a result, risk is growing. But as we are growing richer, we are beginning to value life more, and are slowly investing more in safety. Eventually, we will have shifted enough resources to safety such that risk begins to fall—fall exponentially to zero, in fact, such that there is a positive probability of humanity surviving to reach a grand future. And all of this occurs despite our society’s impatience. There is an analog to this in environmental economics, called the “environmental Kuznets curve.” It was theorized that pollution initially rises as countries develop, but, as people grow richer and begin to value a clean environment more, they will work to reduce pollution again. That theory has arguably been vindicated by the path that Western countries have taken with regard to water and air pollution, for example, over the past century. The idea that we are in a unique time in history in which we are facing an elevated risk of existential catastrophe is not new either. Carl Sagan was the one who coined the term “time of perils.” Derek Parfit called it the “hinge of history.” They argue that the discoveries of the last centuries have granted humanity immense power, and so we are in a most “dangerous and decisive” period. But if we manage to survive, our descendants will be able to spread throughout the galaxy, making us much less vulnerable. They will have mastered new technologies that make us immune to bioengineered pathogens, neutralize the threat from atomic bombs, provide plentiful energy without destroying the environment, and keep artificial intelligence in check so it faithfully serves human needs. With their technology and wisdom, our descendants will be able to secure a long and safe future. Our challenge, then, is to make it through this unique perilous period. Seeing the rising levels of existential risk over the past centuries, some might call for an end to economic growth. They might argue, rightfully so, that economic growth has only led to rising risk in the past. Indeed, a period of accelerated economic growth would initially also accelerate the rise in risk. The level of risk might look something like this, where the lighter line is the path with accelerated growth: Even a few hundred years later, the critics of growth would seem to be vindicated! Faster growth just increased the risk! Except that they are missing the whole picture: The accelerated economic growth also accelerated our path along the inverted-U shape of risk. Faster growth means people are richer sooner, so they value life more sooner, so society shifts resources to safety sooner—and ultimately we will begin the decline in risk sooner. As a result, the overall probability of an existential catastrophe—the area under the risk curve—declines! Faster growth means we get through the “time of perils” more quickly. Indeed, stagnation would be the most dangerous choice of all: we would be stuck at an elevated level of risk, meaning an eventual existential catastrophe would be inevitable.

# Case

## 1NC – Solvency

### 1NC – AT: WTO Jurisdiction

#### The WTO can’t enforce the aff- causes circumvention.

Lamp 19 [Nicholas; Assistant Professor of Law at Queen’s University; “What Just Happened at the WTO? Everything You Need to Know, Brink News,” 12/16/19; <https://www.brinknews.com/what-just-happened-at-the-wto-everything-you-need-to-know/>] Justin

Nicolas Lamp: For the first time since the establishment of the WTO in 1995, the Appellate Body cannot accept any new appeals, and that has knock-on effects on the whole global trade dispute settlement system. When a member appeals a WTO panel report, it goes to the Appellate Body, but if there is no Appellate Body, it means that that panel report will not become binding and will not attain legal force.

The absence of the Appellate Body means that members can now effectively block the dispute settlement proceedings by what has been called appealing panel reports “into the void.”

The WTO panels will continue to function as normal. When a panel issues a report, it will normally be automatically adopted — unless it is appealed. And so, even though the panel is working, the respondent in a dispute now has the option of blocking the adoption of the panel’s report. It can, thereby, shield itself from the legal consequences of a report that finds that the member has acted inconsistently with its WTO obligations.

### 1NC – Diff Sectors

#### Companies will just obtain a patent in a different sector.

Thomas 15 [John R; Visiting Scholar, CRS; “Tailoring the Patent System for Specific Industries, Congressional Research Service,” CRS; 2015; <https://crsreports.congress.gov/product/pdf/R/R43264/7>] Justin

In view of the concerns noted above, commentators have gone so far to say that “it has become increasingly difficult to believe that a one-size-fits-all approach to patent law can survive.”75 To the extent the current patent system creates a blanket set of rules that apply comparably to distinct industries, it likely over-encourages innovation in some contexts and under-incentivizes it in others.76 Further, some observers have asserted that the need of firms to identify and access the patented inventions of others may differ among industries.77 As a result, the case can be made that distinct industrial, technological, and market characteristics that exist across the breadth of the U.S. economy compel industry-specific patent statutes. However, others have questioned the wisdom and practicality of such line-drawing.78 The following concerns, among others, have been identified:

• Over its long history, the U.S. patent system has flexibly adapted to new technologies such as biotechnology and computer software. Legislative adoption of technology-specific categories may leave unanticipated, cutting-edge technologies outside the patent system.79

• Defining a specific industry or category of technologies may prove to be a contested proposition.

80 • Over time, new industries may emerge and old industries may consolidate. The dynamic nature of the U.S. economy suggests greater need for legislative oversight within a differentiated patent regime.

81 • Even if an industry or technology remains relatively stable, the innovation environment within it might change. For example, technological or scientific advances might open new possibilities for research and development within hidebound industries—but also increase expense and risk for those firms.

82 • Distinct patent rights among industries or technologies may lead to strategic behavior on behalf of patent applicants. For example, a computer program that controls a fuel injector within an automobile could possibly be identified as either an automobile-related or a computer-related invention.

83 •The legislative effort to enact sector-specific patent laws may provide an opportunity for politically savvy firms to exert more lobbying and political power, at the possible expense of less sophisticated firms.

## 1NC – Advantage

### 1NC – AT: Evergreening

#### Prefer legal studies.

Parker and Mooney 7 [Scott and Kevin; “Is ‘evergreening’ a cause for concern? A legal perspective,” Journal of Commercial Biotechnology; 2007; <https://link.springer.com/article/10.1057/palgrave.jcb.3050066>] Justin

THE LEGAL BACKGROUND The patent system provides an incentive for companies to incur the cost and risk of research by providing the time-limited exclusive right to commercialise a patented product. At the heart of the patent system in the UK (and all other fully TRIPs compliant countries) is the requirement that to qualify for the monopoly right that the patent confers (20 years from the date of filing the patent application) the invention covered by the patent must be novel, non-obvious (ie it involves an inventive step) and capable of industrial application (‘utility’ or ‘usefulness’ in the US). The novelty and inventiveness of the patent is evaluated against the ‘state of the art’, which consists in general of every item of information which has ever been made available to the public by any kind of publication, or by use, anywhere in the world, at any point in time before the first filing date of the patent. It is a basic principle of patent law that once details of a product have entered the public domain (by being published anywhere without patent protection, or when any patents for the product or proposal expire or lapse), then everyone has freedom to use that information and any obvious developments of it. So before assuming that any new development relating to a known compound can be patented, we have to ask: 1 Is this new? Any previous publication or use, no matter how obscure, of the same invention destroys novelty and prevents a patent being issued or, if issued in ignorance of such a publication, this will subsequently cause the patent to be declared invalid if sought to be enforced. 2 Is there an inventive step? A patent cannot be granted for anything which is simply an obvious development or variant on any individual piece of information which is part of the state of the art. It is no answer that the piece of information in question may never have come to the attention of the fictitious ‘person skilled in the art’ who is central to any determination of ‘obviousness’. 3 Is there a proposed industrial application for the invention (in the broad sense of having some useful purpose)? The invention does not have to demonstrate an improvement on what is already known, but it cannot be speculative. It must have a use. For example, a DNA sequence for a recombinant gene fragment with a well-defined function is a patentable invention whereas a DNA sequence alone without any indication of function or of its useful attributes is not. 4 Does the patent describe how to put the invention into effect? The patent must be ‘enabling’; it must add to public knowledge, and contribute in its own right to the state of the art. In this way each new patent moves the frontier of the state of the art forward and makes it more difficult to find improvements which are neither old nor obvious. This disclosure enables third parties to implement the invention once the patent has expired and, is the consideration (in the legal sense) for the monopoly right granted by a patent. HOW THE PATENT SYSTEM DEALS WITH ‘EVERGREENING’ The criteria of patentability set out above apply equally to all inventions from the most basic mechanical patent to the most complex microelectronic or biotechnological invention. Similarly patent law does not distinguish between the invention of a wholly new product and inventions relating to improvements upon an existing product. The same criteria for patentability apply. ‘Double patenting’ is prohibited. That is to say the same invention cannot be covered by more than one patent. Thus for an improvement upon an existing pharmaceutical product to be patentable in its own right it will need to satisfy the criteria of novelty and non-obviousness taking into account the earlier product and all that is known about it in the public domain at the time that the second patent is applied for. If a patent is granted in respect of this improvement it will only cover the improvement to which it relates and will not extend to the originator product. That is to say a patent for a new product in a class will always be broader than any subsequent patent covering an improvement, modification or derivative of that product and so the exclusivity granted is in broad terms commensurate with the scope of the scientific advance that it reflects. An important corollary to the prohibition on ‘double patenting’ is that a patent covering an improved version of a pharmaceutical (or any other) product does not preclude a generic company from copying all forms of the originator product once the patents protecting these forms have expired. For example, if a company selling a patented pharmaceutical reformulates that product as a syrup for paediatric administration and then patents the new formulation, generic competition to the original adult formulation will be possible once the patents covering it expire or are invalidated. The existence of the patent on the paediatric formulation will not delay or prevent generic competition on the original formulation. The innovator company will, however, continue to have the exclusive right to sell the paediatric formulation for the remainder of the life of the patent covering this specific improvement. If in the above example the improvement made is not a paediatric formulation but a slow release formulation that allows once daily dosing and so improves patient compliance as a result of increased convenience, doctors and patients will have a choice between generic versions of the original formulation or the new once-daily product once any patent on the original formulation expires. The patents on the slow release formulation will not delay or prevent marketing of the original formulation. The market will then decide whether the benefits offered by the improved formulation make it worth paying for in the face of cheaper versions of the original product. The answer to this question will inevitably vary from market to market and between different patient populations. Either way the patient would appear to benefit from the increased choice available. A simple and further example of this is ibuprofen. The supermarket shelf carries premium-priced ibuprofen formulations which typically are quicker acting or easier to take than the traditional tablet. These formulations may be patent protected. Customers can, however, decide for themselves whether the added benefit is worth the extra cost. The patents do not prevent anybody from buying the ordinary, cheapest kind of tablet. Reference to patents covering the colour and scoring of tablets has been made in several articles criticising the pharmaceutical industry (without the specific patents that are complained of being identified).4 It is informative to consider how the patent system would apply to such ‘developments’. To the best of the authors’ knowledge no patents have ever been granted for the colour of pharmaceutical products. In fact, since UK patent law (and most others) expressly excludes the patenting of ‘aesthetic creations’ the colour of a pharmaceutical product could only ever be patentable if either: (a) it could be established that the colour itself produces a technical effect, such as a therapeutic benefit caused by increased compliance, that is novel and not obvious; or (b) that the means of obtaining that colour, the manufacturing process of colouring the tablet, is itself novel and not obvious. It goes without saying that for a ‘pink pill’ patent application the technical effect, novelty and inventiveness would be scrutinised carefully. Nevertheless, the application would be looked at on its own facts and applying the patentability criteria described above. Similarly, as regards the scoring of tablets, the same standard of patentability and scrutiny must be satisfied. It would need to be established that tablets had never been scored in this way before and that to do so was not an obvious departure from what has gone before. Without further investigation it should not be assumed that such an invention would be of no value to patients (eg it could be that compliance among children would be improved if the tablet is more cleanly cut as a result of the means of scoring employed). There are plenty of examples of developments (reformulations, new salts, combinations and the like) that have real therapeutic benefit but which at first blush may seem trivial. Again, the more minor that a variation is (eg a pink tablet or means of scoring the tablet) the more narrow the relevant patent protection will be and the easier it should be for a competitor to design around the patent without needing to seek to invalidate it. For example, if a patent is (or has been) granted that covers a particular colour of tablet or a particular means of scoring such tablet then such a patent would not stop a competitor from marketing (respectively) a different colour tablet or a tablet that is not scored or that is scored in a different way. In summary, therefore, the patent system is inherently adapted to reflect how much innovation in fact takes place (by way of improvements to existing technology) and to prevent ‘evergreening’. It allows the use of ‘old’ technology while protecting (and thus providing incentives for) improvements to that technology. Another factor to be taken into account in any debate on the patenting of ‘minor variations’ is that it is not only the company that owns the patents covering the originator product that can patent improvements thereto. Other companies (including generics) can (and do) do this, with the consequence that there may be a number of companies having similar products (some of which may for a variety of reasons be better suited to particular patients) and healthy competition in the marketplace. ‘STRATEGIC PATENTING’ A related charge that is sometimes made against innovator companies is that they file numerous patents on multiple attributes of a single product so as to create a ‘patent thicket’ that so complicates third-party research that it strangles innovation, or that they are guilty of what is sometimes referred to as ‘strategic patenting’.5 Implicit in these charges is that the only reason for filing these patents is maintenance of market share for as long as possible after the expiry of the patents covering the originator product itself. This is a serious charge that deserves to be looked at in more detail. Of course, pharmaceutical and biotechnology companies (like companies in all other R&D-based industries) have patenting strategies. In no other industry is there any suggestion that companies should restrict themselves to patenting inventions that meet some higher standard over and above the basic criteria for patentability or that companies should not seek protection for certain types of technological advance or that exceeding a certain number of patents in a technical area is per se reprehensible. When one considers that intellectual property rights are the life-blood that propels pharmaceutical advances in the private sector (and to an increasing extent in the public sector as well) and takes into account the sums that are typically spent on a new product during the 10–15-year-period from discovery through pre-clinical and clinical trials to regulatory approval and market launch, any company that did not do all that it could to protect its inventions would be acting negligently towards its shareholders. On the subject of patenting strategies in the pharmaceutical industry the UK Patents Court judge Mr Justice Jacob (now Lord Justice Jacob) said in the case of Synthon v SmithKline Beecham ‘I ask myself whether SB have done anything blameworthy…and I cannot see that they have. On the contrary, so far as I can see, they have employed competent and careful patent agents to obtain for them the best patent position which they think they can get. It may be good, it may be bad, but they are doing their job and I see no criticism whatever in the conduct of SB’.6 If one accepts that the nature of pharmaceutical and biotechnological innovation (as with other R&D based industries) is most often incremental and cumulative then it follows that the patent system should reflect this reality. This is indeed the case. As we have seen above, the patent system does not distinguish between ‘breakthroughs’ and ‘incremental improvements’ in terms of the patentability requirements that apply. At the same time a greater reward (a broader patent) is granted in respect of the ground breaking research than for inventions directed at solving further technical hurdles and optimisation of the initial invention. In the experience of the authors most of the patents that have been challenged by generic companies wishing to enter the market were applied for during the development of the originator product rather than once it has been established as a commercial success. This reflects the organic process of drug discovery and development and the time lag between drug discovery development, clinical testing and regulatory approval (ie that inventions are made in overcoming the various technical challenges faced during drug development). Nevertheless, some innovations are made at a later stage. For example, it may be that it is only after the product has been prescribed to a population of patients post-launch that it will become evident that further improvements need to be made to improve efficacy, deal with a compliance (or other) problem or expand the target patient population or disease indications. Such improvements may stem from greater experience of the product, problems unexpectedly encountered in particular patient populations or other advances made in the field. Given that the purpose of the patent system is to encourage innovation and (in the pharmaceutical sector) to lead to better medicines, it would be strange indeed if this incentive was removed or diminished once the first product of a particular type has been launched.

#### Evergreening is good---your authors misunderstand it.

Banana 19 [BananaIP; “DEMYSTIFYING THE EVERGREEN MYTH,” Executive Office of the President of the United States; 7/19/19—originally appeared 5/19/14; [https://www.bananaip.com/ip-news-center/chapter-iii-demystifying-evergreen-myth-comprehending-apprehension-apprehending-comprehension/]](https://www.bananaip.com/ip-news-center/chapter-iii-demystifying-evergreen-myth-comprehending-apprehension-apprehending-comprehension/%5d) Justin

Evergreening is like any other business strategy that market players would adopt to seek a competitive edge in the market. It doesn’t stop anyone from making the product claimed in the expired patent, but only makes sure that they can differentiate themselves from the other generic products through incremental inventions. More often than not, the R&D efforts and investments that go into the making of these incremental inventions can be very high and their results invaluable for treatment.

One of the rationales of the patent system is to incentivize innovation which is believed to lead to the progress in technology. A patent application is published 18 months after it is filed so as to ensure that the knowledge in the patent is made public for aspiring inventors to design around and build on it. Anyone, including the owner of an existing patent and their competitors, is free to invest in research in this direction as early as 18 months from the filing of such a patent. If a competitor files for an incremental patent, it is branded as innovation, but when a patent holder files for an incremental patent, it is looked upon as innovation leading to life cycle management or Evergreening.

In most parts of the world, life cycle management is considered as positive development. However, to the frustration of many pharmaceutical companies, symbolically represented by Bayer, life cycle management is quite a tricky business in India, thanks to the infamous Section 3(d) of the Indian Patent Act, often alluded to as the anti-evergreening law, which bears the burden of keeping a check on incremental pharmaceutical inventions that add no therapeutic value. Section 3(d) states that “the mere discovery of a new form of a known substance which does not result in the enhancement of the known efficacy of that substance, or the mere discovery of any new property or new use for a known substance or of the mere use of a known process, machine or apparatus, unless such known process results in a new product or employs at least one new reactant” is not patentable.

### 1NC – AT: Pandemics

#### Disease doesn’t cause extinction

Adalja 16 [Amesh Adalja is an infectious-disease physician at the University of Pittsburgh. Why Hasn't Disease Wiped out the Human Race? June 17, 2016. https://www.theatlantic.com/health/archive/2016/06/infectious-diseases-extinction/487514/]

But when people ask me if I’m worried about infectious diseases, they’re often not asking about the threat to human lives; they’re asking about the threat to human life. With each outbreak of a headline-grabbing emerging infectious disease comes a fear of extinction itself. The fear envisions a large proportion of humans succumbing to infection, leaving no survivors or so few that the species can’t be sustained.

I’m not afraid of this apocalyptic scenario, but I do understand the impulse. Worry about the end is a quintessentially human trait. Thankfully, so is our resilience.

For most of mankind’s history, infectious diseases were the existential threat to humanity—and for good reason. They were quite successful at killing people: The 6th century’s Plague of Justinian knocked out an estimated 17 percent of the world’s population; the 14th century Black Death decimated a third of Europe; the 1918 influenza pandemic killed 5 percent of the world; malaria is estimated to have killed half of all humans who have ever lived.

Any yet, of course, humanity continued to flourish. Our species’ recent explosion in lifespan is almost exclusively the result of the control of infectious diseases through sanitation, vaccination, and antimicrobial therapies. Only in the modern era, in which many infectious diseases have been tamed in the industrial world, do people have the luxury of death from cancer, heart disease, or stroke in the 8th decade of life. Childhoods are free from watching siblings and friends die from outbreaks of typhoid, scarlet fever, smallpox, measles, and the like.

So what would it take for a disease to wipe out humanity now?

In Michael Crichton’s The Andromeda Strain, the canonical book in the disease-outbreak genre, an alien microbe threatens the human race with extinction, and humanity’s best minds are marshaled to combat the enemy organism. Fortunately, outside of fiction, there’s no reason to expect alien pathogens to wage war on the human race any time soon, and my analysis suggests that any real-life domestic microbe reaching an extinction level of threat probably is just as unlikely.

Any apocalyptic pathogen would need to possess a very special combination of two attributes. First, it would have to be so unfamiliar that no existing therapy or vaccine could be applied to it. Second, it would need to have a high and surreptitious transmissibility before symptoms occur. The first is essential because any microbe from a known class of pathogens would, by definition, have family members that could serve as models for containment and countermeasures. The second would allow the hypothetical disease to spread without being detected by even the most astute clinicians.

The three infectious diseases most likely to be considered extinction-level threats in the world today—influenza, HIV, and Ebola—don’t meet these two requirements. Influenza, for instance, despite its well-established ability to kill on a large scale, its contagiousness, and its unrivaled ability to shift and drift away from our vaccines, is still what I would call a “known unknown.” While there are many mysteries about how new flu strains emerge, from at least the time of Hippocrates, humans have been attuned to its risk. And in the modern era, a full-fledged industry of influenza preparedness exists, with effective vaccine strategies and antiviral therapies.

HIV, which has killed 39 million people over several decades, is similarly limited due to several factors. Most importantly, HIV’s dependency on blood and body fluid for transmission (similar to Ebola) requires intimate human-to-human contact, which limits contagion. Highly potent antiviral therapy allows most people to live normally with the disease, and a substantial group of the population has genetic mutations that render them impervious to infection in the first place. Lastly, simple prevention strategies such as needle exchange for injection drug users and barrier contraceptives—when available—can curtail transmission risk.

Ebola, for many of the same reasons as HIV as well as several others, also falls short of the mark. This is especially due to the fact that it spreads almost exclusively through people with easily recognizable symptoms, plus the taming of its once unfathomable 90 percent mortality rate by simple supportive care.

Beyond those three, every other known disease falls short of what seems required to wipe out humans—which is, of course, why we’re still here. And it’s not that diseases are ineffective. On the contrary, diseases’ failure to knock us out is a testament to just how resilient humans are. Part of our evolutionary heritage is our immune system, one of the most complex on the planet, even without the benefit of vaccines or the helping hand of antimicrobial drugs. This system, when viewed at a species level, can adapt to almost any enemy imaginable. Coupled to genetic variations amongst humans—which open up the possibility for a range of advantages, from imperviousness to infection to a tendency for mild symptoms—this adaptability ensures that almost any infectious disease onslaught will leave a large proportion of the population alive to rebuild, in contrast to the fictional Hollywood versions.

### 1NC – AT: Econ Decline

#### Austerity – decreased military funding and conciliatory pressures

Christopher Clary 15. PhD in Political Science from MIT, M.A. in National Security Affairs, Postdoctoral Fellow, Watson Institute for International Studies, Brown University. “Economic Stress and International Cooperation: Evidence from International Rivalries,” April 25th, Available Online via SSRN Subscription // Re-Cut Justin

Do economic downturns generate pressure for diversionary conflict? Or might downturns encourage austerity and economizing behavior in foreign policy? This paper provides new evidence that economic stress is associated with conciliatory policies between strategic rivals. For states that view each other as military threats, the biggest step possible toward bilateral cooperation is to terminate the rivalry by taking political steps to manage the competition. Drawing on data from 109 distinct rival dyads since 19i9 50, 67 of which terminated, the evidence suggests rivalries were approximately twice as likely to terminate during economic downturns than they were during periods of economic normalcy. This is true controlling for all of the main alternative explanations for peaceful relations between foes (democratic status, nuclear weapons possession, capability imbalance, common enemies, and international systemic changes), as well as many other possible confounding variables. This research questions existing theories claiming that economic downturns are associated with diversionary war, and instead argues that in certain circumstances peace may result from economic troubles. I define a rivalry as the perception by national elites of two states that the other state possesses conflicting interests and presents a military threat of sufficient severity that future military conflict is likely. Rivalry termination is the transition from a state of rivalry to one where conflicts of interest are not viewed as being so severe as to provoke interstate conflict and/or where a mutual recognition of the imbalance in military capabilities makes conflict-causing bargaining failures unlikely. In other words, rivalries terminate when the elites assess that the risks of military conflict between rivals has been reduced dramatically. This definition draws on a growing quantitative literature most closely associated with the research programs of William Thompson, J. Joseph Hewitt, and James P. Klein, Gary Goertz, and Paul F. Diehl.1 My definition conforms to that of William Thompson. In work with Karen Rasler, they define rivalries as situations in which “[b]oth actors view each other as a significant political-military threat and, therefore, an enemy.”2 In other work, Thompson writing with Michael Colaresi, explains further: The presumption is that decisionmakers explicitly identify who they think are their foreign enemies. They orient their military preparations and foreign policies toward meeting their threats. They assure their constituents that they will not let their adversaries take advantage. Usually, these activities are done in public. Hence, we should be able to follow the explicit cues in decisionmaker utterances and writings, as well as in the descriptive political histories written about the foreign policies of specific countries.3 Drawing from available records and histories, Thompson and David Dreyer have generated a universe of strategic rivalries from 1494 to 2010 that serves as the basis for this project’s empirical analysis.4 This project measures rivalry termination as occurring on the last year that Thompson and Dreyer record the existence of a rivalry. Economic crises lead to conciliatory behavior through five primary channels. (1) Economic crises lead to austerity pressures, which in turn incent leaders to search for ways to cut defense expenditures. (2) Economic crises also encourage strategic reassessment, so that leaders can argue to their peers and their publics that defense spending can be arrested without endangering the state. This can lead to threat deflation, where elites attempt to downplay the seriousness of the threat posed by a former rival. (3) If a state faces multiple threats, economic crises provoke elites to consider threat prioritization, a process that is postponed during periods of economic normalcy. (4) Economic crises increase the political and economic benefit from international economic cooperation. Leaders seek foreign aid, enhanced trade, and increased investment from abroad during periods of economic trouble. This search is made easier if tensions are reduced with historic rivals. (5) Finally, during crises, elites are more prone to select leaders who are perceived as capable of resolving economic difficulties, permitting the emergence of leaders who hold heterodox foreign policy views. Collectively, these mechanisms make it much more likely that a leader will prefer conciliatory policies compared to during periods of economic normalcy. This section reviews this causal logic in greater detail, while also providing historical examples that these mechanisms recur in practice.

### 1NC – AT: Famine

#### No internal link—

#### No food wars – the countries that matter their impact are resilient and institutional responses prevent escalation

Cliffe 16 [Sarah Cliffe, Director of the Center on International Cooperation at New York University, 3/29/16, “Food Security, Nutrition, and Peace,” http://cic.nyu.edu/news\_commentary/food-security-nutrition-and-peace

However, current research does not yet indicate a clear link between climate change, food insecurity and conflict, except perhaps where rapidly deteriorating water availability cuts across existing tensions and weak institutions. But a series of interlinked problems – changing global patterns of consumption of energy and scarce resources, increasing demands for food imports (which draw on land, water, and energy inputs) can create pressure on fragile situations. Food security – and food prices – are a highly political issue, being a very immediate and visible source of popular welfare or popular uncertainty. But their link to conflict (and the wider links between climate change and conflict) is indirect rather than direct. What makes some countries more resilient than others? Many countries face food price or natural resource shocks without falling into conflict. Essentially, the two important factors in determining their resilience are: First, whether food insecurity is combined with other stresses – issues such as unemployment, but most fundamentally issues such as political exclusion or human rights abuses. We sometimes read nowadays that the 2006-2009 drought was a factor in the Syrian conflict, by driving rural-urban migration that caused societal stresses. It may of course have been one factor amongst many but it would be too simplistic to suggest that it was the primary driver of the Syrian conflict. Second, whether countries have strong enough institutions to fulfill a social compact with their citizens, providing help quickly to citizens affected by food insecurity, with or without international assistance. During the 2007-2008 food crisis, developing countries with low institutional strength experienced more food price protests than those with higher institutional strengths, and more than half these protests turned violent. This for example, is the difference in the events in Haiti versus those in Mexico or the Philippines where far greater institutional strength existed to deal with the food price shocks and protests did not spur deteriorating national security or widespread violence.