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### 1NC – Trade DA

#### The United States federal government should limit antitrust to status quo levels

#### **Antitrust expansion opens the floodgates of protectionism – that ends free trade**

Murray 19 [Allison Murray, Loyola Law, Judicial Law Clerk for U.S. Bankruptcy Courts. Edited by Loyola Law Professor David Kesselman and the ILR team of editors and staff. “Given Today’s New Wave of Protectionism, is Antitrust Law the Last Hope for Preserving a Free Global Economy or Another Nail in Free Trade’s Coffin?” 2/28/2019. https://digitalcommons.lmu.edu/cgi/viewcontent.cgi?article=1785&context=ilr]

Although a system of truly free world trade has never been perfected, past world leaders have eliminated most of the protectionist trade mechanisms that once ran rampant in the international economy. They did so by implementing multilateral and bilateral trade agreements. These webs of agreements have bolstered decades of support for free trade, or at least some version of it. By and large, tariff policies and other forms of protectionism were either eliminated or dramatically reduced. Now, as we have seen in the media, when a government imposes a tariff, it becomes a rather extreme political statement which sends a shockwave of significant global consequences.

Protectionism did not end when the age of overbearing tariff policies did, despite then-leaders’ best efforts to vilify it. Rather, the end of the tariff era forced nations to achieve protectionist goals through more subtle trade vehicles, like antitrust law.3 So, the recent resurgence of protectionist rhetoric should mean that these subtle trade vehicles, including antitrust law, will be relied on more heavily. It is a fear of many that antitrust law may become overused and inequitably applied to achieve and combat protectionist aims.

Notwithstanding the recent uptick in tariff threats, it is unlikely that all Western leaders will revamp or terminate the trade agreements set forth by their predecessors and bring back the kinds of tariff policies that once existed in their place. Although in the United States (“U.S.”), President Trump recently imposed tariffs on steel imports, it appears that his intent is to limit this behavior to a specific industry rather than institute a widespread policy favoring the use of tariffs generally.4 To remedy bad behavior in a specialized set of industries is not to instigate a global paradigm shift. This purpose is underscored by his use of the national security exemption, which is largely interpreted as being used for individual situations rather than general policy schemes.5 Many still hope that his course of action will be retracted and is merely a strong negotiation tactic. However, there is no doubt that Trump is far more comfortable than past leaders with subverting the status quo on trade relations.

Trump is not the only high-profile leader flirting with staunch protectionism. Western leaders in the E.U. appear to be growing more comfortable than their predecessors with considering similar policies. However, Western lawmakers themselves do not seem as persuaded by the statements of their leadership. The general sentiment among international policymakers is that there has been too much political wherewithal spent on loosening international trade barriers to take actions that could counteract that progress.6 Presidential actions taken because of dissatisfaction with current global trade relations aside, a complete overhaul of trade agreements may be too daunting and difficult a task, especially absent ample political support in legislative bodies.

Given the anticipated continuation of cooperative trade agreements and the proliferation of protectionist rhetoric as the new norm of public opinion, leaders will be forced to rely on existing avenues to meet protectionist aims. Again, we find ourselves relying squarely on antitrust law, the more subtle and widely accepted mechanism of restricting trade, to address perceived inequities. In the words of the World Trade Organization (“WTO”), “once formal trade barriers come down, other issues become more important.”7 Among the important issues lies antitrust law. Antitrust and competition laws can form a subtle trade barrier resulting in the imposition of tariff-like measures.

Antitrust law can be enforced to reach protectionist aims and to combat them. It is a tool that allows nations to achieve individual protectionist aims without undermining the future of trade between countries and the cooperative framework underpinning the relatively delicate global free trade enjoyed today. However, the perception of enforcement of antitrust laws as an abusive and solely protectionist mechanism may cause the death of even the smallest semblance of international free trade that remains in the international marketplace today.

#### Nuke war

Oppenheimer 21 [Dr. Michael F. Oppenheimer, Clinical Professor at the Center for Global Affairs at New York University, Senior Consulting Fellow for Scenario Planning at the International Institute for Strategic Studies, Former Executive Vice President at The Futures Group, Member of the Council on Foreign Relations, The Foreign Policy Roundtable at the Carnegie Council on Ethics and International Affairs, and The American Council on Germany, “The Turbulent Future of International Relations”, in The Future of Global Affairs: Managing Discontinuity, Disruption and Destruction, Ed. Ankersen and Sidhu, p. 23-30]

Four structural forces will shape the future of International Relations: globalization (but without liberal rules, institutions, and leadership)1; multipolarity (the end of American hegemony and wider distribution of power among states and non-states2); the strengthening of distinctive, national and subnational identities, as persistent cultural differences are accentuated by the disruptive effects of Western style globalization (what Samuel Huntington called the “non-westernization of IR”3); and secular economic stagnation, a product of longer term global decline in birth rates combined with aging populations.4 These structural forces do not determine everything. Environmental events, global health challenges, internal political developments, policy mistakes, technology breakthroughs or failures, will intersect with structure to define our future. But these four structural forces will impact the way states behave, in the capacity of great powers to manage their differences, and to act collectively to settle, rather than exploit, the inevitable shocks of the next decade.

Some of these structural forces could be managed to promote prosperity and avoid war. Multipolarity (inherently more prone to conflict than other configurations of power, given coordination problems)5 plus globalization can work in a world of prosperity, convergent values, and effective conflict management. The Congress of Vienna system achieved relative peace in Europe over a hundred-year period through informal cooperation among multiple states sharing a fear of populist revolution. It ended decisively in 1914. Contemporary neoliberal institutionalists, such as John Ikenberry, accept multipolarity as our likely future, but are confident that globalization with liberal characteristics can be sustained without American hegemony, arguing that liberal values and practices have been fully accepted by states, global institutions, and private actors as imperative for growth and political legitimacy.6 Divergent values plus multipolarity can work, though at significantly lower levels of economic growth-in an autarchic world of isolated units, a world envisioned by the advocates of decoupling, including the current American president. 7 Divergent values plus globalization can be managed by hegemonic power, exemplified by the decade of the 1990s, when the Washington Consensus, imposed by American leverage exerted through the IMF and other U.S. dominated institutions, overrode national differences, but with real costs to those states undergoing “structural adjustment programs,”8 and ultimately at the cost of global growth, as states—especially in Asia—increased their savings to self insure against future financial crises.9

But all four forces operating simultaneously will produce a future of increasing internal polarization and cross border conflict, diminished economic growth and poverty alleviation, weakened global institutions and norms of behavior, and reduced collective capacity to confront emerging challenges of global warming, accelerating technology change, nuclear weapons innovation and proliferation. As in any effective scenario, this future is clearly visible to any keen observer. We have only to abolish wishful thinking and believe our own eyes.10

Secular Stagnation

This unbrave new world has been emerging for some time, as US power has declined relative to other states, especially China, global liberalism has failed to deliver on its promises, and totalitarian capitalism has proven effective in leveraging globalization for economic growth and political legitimacy while exploiting technology and the state’s coercive powers to maintain internal political control. But this new era was jumpstarted by the world financial crisis of 2007, which revealed the bankruptcy of unregulated market capitalism, weakened faith in US leadership, exacerbated economic deprivation and inequality around the world, ignited growing populism, and undermined international liberal institutions. The skewed distribution of wealth experienced in most developed countries, politically tolerated in periods of growth, became intolerable as growth rates declined. A combination of aging populations, accelerating technology, and global populism/nationalism promises to make this growth decline very difficult to reverse. What Larry Summers and other international political economists have come to call “secular stagnation” increases the likelihood that illiberal globalization, multipolarity, and rising nationalism will define our future. Summers11 has argued that the world is entering a long period of diminishing economic growth. He suggests that secular stagnation “may be the defining macroeconomic challenge of our times.” Julius Probst, in his recent assessment of Summers’ ideas, explains:

…rich countries are ageing as birth rates decline and people live longer. This has pushed down real interest rates because investors think these trends will mean they will make lower returns from investing in future, making them more willing to accept a lower return on government debt as a result.

Other factors that make investors similarly pessimistic include rising global inequality and the slowdown in productivity growth…

This decline in real interest rates matters because economists believe that to overcome an economic downturn, a central bank must drive down the real interest rate to a certain level to encourage more spending and investment… Because real interest rates are so low, Summers and his supporters believe that the rate required to reach full employment is so far into negative territory that it is effectively impossible.

…in the long run, more immigration might be a vital part of curing secular stagnation. Summers also heavily prescribes increased government spending, arguing that it might actually be more prudent than cutting back – especially if the money is spent on infrastructure, education and research and development.

Of course, governments in Europe and the US are instead trying to shut their doors to migrants. And austerity policies have taken their toll on infrastructure and public research. This looks set to ensure that the next recession will be particularly nasty when it comes… Unless governments change course radically, we could be in for a sobering period ahead.12

The rise of nationalism/populism is both cause and effect of this economic outlook. Lower growth will make every aspect of the liberal order more difficult to resuscitate post-Trump. Domestic politics will become more polarized and dysfunctional, as competition for diminishing resources intensifies. International collaboration, ad hoc or through institutions, will become politically toxic. Protectionism, in its multiple forms, will make economic recovery from “secular stagnation” a heavy lift, and the liberal hegemonic leadership and strong institutions that limited the damage of previous downturns, will be unavailable. A clear demonstration of this negative feedback loop is the economic damage being inflicted on the world by Trump’s trade war with China, which— despite the so-called phase one agreement—has predictably escalated from negotiating tactic to imbedded reality, with no end in sight. In a world already suffering from inadequate investment, the uncertainties generated by this confrontation will further curb the investments essential for future growth. Another demonstration of the intersection of structural forces is how populist-motivated controls on immigration (always a weakness in the hyper-globalization narrative) deprives developed countries of Summers’ recommended policy response to secular stagnation, which in a more open world would be a win-win for rich and poor countries alike, increasing wage rates and remittance revenues for the developing countries, replenishing the labor supply for rich countries experiencing low birth rates.

Illiberal Globalization

Economic weakness and rising nationalism (along with multipolarity) will not end globalization, but will profoundly alter its character and greatly reduce its economic and political benefits. Liberal global institutions, under American hegemony, have served multiple purposes, enabling states to improve the quality of international relations and more fully satisfy the needs of their citizens, and provide companies with the legal and institutional stability necessary to manage the inherent risks of global investment. But under present and future conditions these institutions will become the battlegrounds—and the victims—of geopolitical competition. The Trump Administration’s frontal attack on multilateralism is but the final nail in the coffin of the Bretton Woods system in trade and finance, which has been in slow but accelerating decline since the end of the Cold War. Future American leadership may embrace renewed collaboration in global trade and finance, macroeconomic management, environmental sustainability and the like, but repairing the damage requires the heroic assumption that America’s own identity has not been fundamentally altered by the Trump era (four years or eight matters here), and by the internal and global forces that enabled his rise. The fact will remain that a sizeable portion of the American electorate, and a monolithically pro- Trump Republican Party, is committed to an illiberal future. And even if the effects are transitory, the causes of weakening global collaboration are structural, not subject to the efforts of some hypothetical future US liberal leadership. It is clear that the US has lost respect among its rivals, and trust among its allies. While its economic and military capacity is still greatly superior to all others, its political dysfunction has diminished its ability to convert this wealth into effective power.13 It will furthermore operate in a future system of diffusing material power, diverging economic and political governance approaches, and rising nationalism. Trump has promoted these forces, but did not invent them, and future US Administrations will struggle to cope with them.

What will illiberal globalization look like? Consider recent events. The instruments of globalization have been weaponized by strong states in pursuit of their geopolitical objectives. This has turned the liberal argument on behalf of globalization on its head. Instead of interdependence as an unstoppable force pushing states toward collaboration and convergence around market-friendly domestic policies, states are exploiting interdependence to inflict harm on their adversaries, and even on their allies. The increasing interaction across national boundaries that globalization entails, now produces not harmonization and cooperation, but friction and escalating trade and investment disputes.14 The Trump Administration is in the lead here, but it is not alone. Trade and investment friction with China is the most obvious and damaging example, precipitated by China’s long failure to conform to the World Trade Organization (WTO) principles, now escalated by President Trump into a trade and currency war disturbingly reminiscent of the 1930s that Bretton Woods was designed to prevent. Financial sanctions against Iran, in violation of US obligations in the Joint Comprehensive Plan Of Action (JCPOA), is another example of the rule of law succumbing to geopolitical competition. Though more mercantilist in intent than geopolitical, US tariffs on steel and aluminum, and their threatened use in automotives, aimed at the EU, Canada, and Japan,15 are equally destructive of the liberal system and of future economic growth, imposed as they are by the author of that system, and will spread to others. And indeed, Japan has used export controls in its escalating conflict with South Korea16 (as did China in imposing controls on rare earth,17 and as the US has done as part of its trade war with China). Inward foreign direct investment restrictions are spreading. The vitality of the WTO is being sapped by its inability to complete the Doha Round, by the proliferation of bilateral and regional agreements, and now by the Trump Administration’s hold on appointments to WTO judicial panels. It should not surprise anyone if, during a second term, Trump formally withdrew the US from the WTO. At a minimum it will become a “dead letter regime.”18

As such measures gain traction, it will become clear to states—and to companies—that a global trading system more responsive to raw power than to law entails escalating risk and diminishing benefits. This will be the end of economic globalization, and its many benefits, as we know it. It represents nothing less than the subordination of economic globalization, a system which many thought obeyed its own logic, to an international politics of zero-sum power competition among multiple actors with divergent interests and values. The costs will be significant: Bloomberg Economics estimates that the cost in lost US GDP in 2019- dollar terms from the trade war with China has reached $134 billion to date and will rise to a total of $316 billion by the end of 2020.19 Economically, the just-in-time, maximally efficient world of global supply chains, driving down costs, incentivizing innovation, spreading investment, integrating new countries and populations into the global system, is being Balkanized. Bilateral and regional deals are proliferating, while global, nondiscriminatory trade agreements are at an end.

Economies of scale will shrink, incentivizing less investment, increasing costs and prices, compromising growth, marginalizing countries whose growth and poverty reduction depended on participation in global supply chains. A world already suffering from excess savings (in the corporate sector, among mostly Asian countries) will respond to heightened risk and uncertainty with further retrenchment. The problem is perfectly captured by Tim Boyle, CEO of Columbia Sportswear, whose supply chain runs through China, reacting to yet another ratcheting up of US tariffs on Chinese imports, most recently on consumer goods:

We move stuff around to take advantage of inexpensive labor. That’s why we’re in Bangladesh. That’s why we’re looking at Africa. We’re putting investment capital to work, to get a return for our shareholders. So, when we make a wager on investment, this is not Vegas. We have to have a reasonable expectation we can get a return. That’s predicated on the rule of law: where can we expect the laws to be enforced, and for the foreseeable future, the rules will be in place? That’s what America used to be.20

The international political effects will be equally damaging. The four structural forces act on each other to produce the more dangerous, less prosperous world projected here. Illiberal globalization represents geopolitical conflict by (at first) physically non-kinetic means. It arises from intensifying competition among powerful states with divergent interests and identities, but in its effects drives down growth and fuels increased nationalism/populism, which further contributes to conflict. Twenty-first-century protectionism represents bottom-up forces arising from economic disruption. But it is also a top-down phenomenon, representing a strategic effort by political leadership to reduce the constraints of interdependence on freedom of geopolitical action, in effect a precursor and enabler of war. This is the disturbing hypothesis of Daniel Drezner, argued in an important May 2019 piece in Reason, titled “Will Today’s Global Trade Wars Lead to World War Three,”21 which examines the pre- World War I period of heightened trade conflict, its contribution to the disaster that followed, and its parallels to the present:

Before the First World War started, powers great and small took a variety of steps to thwart the globalization of the 19th century. Each of these steps made it easier for the key combatants to conceive of a general war. We are beginning to see a similar approach to the globalization of the 21st century. One by one, the economic constraints on military aggression are eroding. And too many have forgotten—or never knew—how this played out a century ago.

…In many ways, 19th century globalization was a victim of its own success. Reduced tariffs and transport costs flooded Europe with inexpensive grains from Russia and the United States. The incomes of landowners in these countries suffered a serious hit, and the Long Depression that ran from 1873 until 1896 generated pressure on European governments to protect against cheap imports.

…The primary lesson to draw from the years before 1914 is not that economic interdependence was a weak constraint on military conflict. It is that, even in a globalized economy, governments can take protectionist actions to reduce their interdependence in anticipation of future wars. In retrospect, the 30 years of tariff hikes, trade wars, and currency conflicts that preceded 1914 were harbingers of the devastation to come. European governments did not necessarily want to ignite a war among the great powers. By reducing their interdependence, however, they made that option conceivable.

…the backlash to globalization that preceded the Great War seems to be reprised in the current moment. Indeed, there are ways in which the current moment is scarier than the pre-1914 era. Back then, the world’s hegemon, the United Kingdom, acted as a brake on economic closure. In 2019, the United States is the protectionist with its foot on the accelerator. The constraints of Sino-American interdependence—what economist Larry Summers once called “the financial balance of terror”—no longer look so binding. And there are far too many hot spots—the Korean peninsula, the South China Sea, Taiwan—where the kindling seems awfully dry.

### 1NC – States CP

#### The 50 states and relevant sub-federal entities should

* substantially increase prohibitions on private sector conduct that is more restrictive of competition than reasonably necessary to enable creation of information technology standards
* hold monetary incentives in binding escrow for Standard Essential Patent holders and release them if and only if they license their patents on terms that are not more restrictive of competition than reasonably necessary to enable creation of information technology standards
* require that all standard essential patent licensing contracts and terms between licensees and licensers be put on file with state regulatory agencies for review

#### The United States federal government should do the last two planks.

#### It solves AND is binding and verifiable.

Escrow ‘6 [Escrow; carbon dated to March 15; Third-party service mediating financial transactions; Escrow, “What is Escrow? How Does Escrow Work?” <https://www.escrow.com/what-is-escrow>; RP]

What is Escrow?

An escrow is a financial arrangement where a third party holds and regulates payment of the funds required for two parties involved in a given transaction. It helps make transactions more secure by keeping the payment in a secure escrow account which is only released when all of the terms of an agreement are met as overseen by the escrow company.

Escrows are very useful in the case of a transaction where a large amount money is involved and a certain number of obligations need to be fulfilled before a payment is released like in the case of a website being built where the buyer might want confirmation of the quality of work being done before making a full payment, and the seller doesn’t want to extend a massive amount of work without any assurance that he or she will receive payment. While traditional escrow service is quite difficult and must be obtained through banks and lawyers, Escrow.com provides online escrow services at affordable rates. While the payment is 'In Escrow' the transaction can be safely carried out without risk of losing money or merchandise due to fraud. This eliminates all legal jargon and allows for secure transactions and confident buyers and sellers.

### 1NC – Biz Con DA

#### Growth is up – businesses are confident

Hilsenrath 2/28 [Jon, senior writer for The Wall Street Journal, where he has written about economics and finance since 1997. “U.S. Positioned to Withstand Economic Shock From Ukraine Crisis”. 2/28/22. https://www.wsj.com/articles/u-s-positioned-to-withstand-economic-shock-from-ukraine-crisis-11646083994]

As Russian President Vladimir Putin launched a war against Ukraine, half a world away the U.S. economy appeared to be rebounding from a winter surge of Covid-19 infections.

A range of U.S. data suggests U.S. economic activity picked up in recent weeks. Many Wall Street analysts expect the Labor Department on Friday to report large job gains in February and a further decline in unemployment.

These developments suggest that the U.S. is in a position to withstand the economic shock that might emanate from battlegrounds in Ukraine. Those effects could push U.S. inflation higher from already elevated levels, but the economic expansion appears to be on solid ground.

“It looks like the U.S. has gotten through the Omicron variant and weathered that storm and the economy is growing solidly,” said Mickey Levy, chief U.S. economist at Berenberg Capital Markets LLC, the securities arm of a German bank.

Much could change in the days or weeks ahead. If fighting intensifies or spreads to other countries, or if sanctions and Russian reprisals to sanctions deepen, the effects could hit the U.S. economy harder.

But for now, Mr. Levy has been watching weekly signs of rising U.S. consumer spending and output in February. OpenTable Inc., the online restaurant reservation business, reports that U.S. restaurant seating broke 6% above pre-pandemic levels in February after slumping earlier this year.

STR LLC, a research firm that tracks hotel trends, said occupancy at U.S. lodgings hit 59% in mid-February, up from 50% early in the month and 45% during the same period a year earlier.

Meantime, the Transportation Security Administration said airport checkpoint counts hit 2.15 million in late February, compared with 1.54 million at the end of January and 1.19 million at the same time a year earlier.

Mr. Levy said these are important developments because they suggest resurging life in the services side of the economy, which has been hit hardest by pandemic-driven disruptions.

U.S. Covid-19 cases and hospitalizations dropped substantially in February and deaths have fallen in recent weeks with a lag.

In all, consumer spending in the first half of February was up 7.2% from a year earlier, compared with a 2.7% increase in the first two weeks of January, according to data from Earnest Research, which tracks credit- and debit-card purchases.

Economists at Citigroup estimate the Labor Department will report Friday that U.S. payrolls grew by more than 500,000 in February and the jobless rate fell to 3.8%. Morgan Stanley estimates payrolls grew 730,000 in February and the jobless rate dropped to 3.7%. In 2021, monthly payroll increases averaged 555,000. In the decade before the pandemic, monthly increases of around 150,000 to 200,000 were more normal.

Swift Sanctions: How Cutting Off Banks Pressures Russia

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A powerful coalition of democracies announced it would cut off some Russian banks from the global payment system Swift. Here’s how Swift works, and how the move could ramp up pressure on Russian President Putin. Photo: Anton Vaganov/Reuters

The U.S. economy is exposed to Russia and Ukraine mostly through energy channels. Russia is a major supplier of oil and gas supplies to the globe—especially Europe—and also supplies commodities such as potash and palladium that are important components of goods including fertilizer and catalytic converters for cars. The war and the Western financial sanctions resulting from it have disrupted supplies and pushed up prices for these and other commodities, worsening global inflation.

However analysts so far aren’t forecasting a big hit to U.S. economic growth from these effects. Chris Varvares, head of U.S. economics at IHS Markit, an economic advisory firm, estimates higher oil prices will shave 0.4% percentage point from the U.S. growth rate in 2022, to 2.5% for 2022 from its prewar forecast of 2.9%, and have almost no effect in 2023 and 2024.

Moody’s Analytics, another economic advisory firm, estimates a sustained move of oil prices up to $100 a barrel would slightly sap U.S. consumer spending in other markets, but not in a highly disruptive way. It estimates a shock of this kind would shave just 0.2 percentage point off the U.S. growth rate in 2022. The firm has already lowered its growth forecast to 3.5% this year, from its forecast of 3.7% before the war, said Mark Zandi, its chief economist.

‘The impact of the Russian invasion on the U.S. economy will be on the margins.’

— Mark Zandi, chief economist of Moody’s Analytics

“The impact of the Russian invasion on the U.S. economy will be on the margins,” Mr. Zandi said in a written assessment of the impact of an oil price spike.

#### The plan spills over, decimating business confidence and overall economic recovery

Trace Mitchell 21, Policy Counsel at NetChoice, JD from the George Mason University, Antonin Scalia Law School, Former Research Associate at the Mercatus Center at George Mason University, BA in Political Science and Government from Florida Gulf Coast University, “Weaponizing Antitrust to Attack Big Tech Is a Bad Idea”, Morning Consult, 3/3/2021, https://morningconsult.com/opinions/weaponizing-antitrust-to-attack-big-tech-is-a-bad-idea/

From the House Judiciary report calling for dramatic antitrust reform to federal antitrust regulators and state attorneys general initiating lawsuits against Facebook and Google, government officials are once again calling for more aggressive antitrust enforcement to go after America’s tech businesses.

And while critics from all sides are reaching for any and all tools to go after “Big Tech,” weaponizing antitrust will only end up harming American consumers and the American economy at a time when we’re still trying to keep our heads above water.

Using antitrust to go after American tech won’t stop at Silicon Valley. Every sector of our economy will be at risk of politically motivated antitrust enforcement. And that won’t just hurt consumers searching for information on Google or shopping for products on Amazon — America’s economy could lose its global competitiveness amid a global pandemic.

In fact, the recent cases against Google from the Department of Justice and state attorneys general are a great example of just how this misuse of antitrust could harm Americans across the country and halt innovation in its tracks.

These suits conveniently forget how consumers benefit from Google’s suite of products in attempts to claim that Google unfairly monopolized the search and search advertising markets. Even worse, by claiming consumer harm, the government fails to truly grasp what consumers actually want.

You see, under the consumer welfare standard, antitrust enforcement is built to focus on what consumers want and whether consumers benefit. When the government argues Google is harming Americans because its products are preinstalled and even the default search engine on Apple, the government forgets that American consumers don’t think this is a problem.

The vast majority of search users prefer Google to its competitors. And through preinstallation, we get free-to-use products, quick searches and near-limitless information in an integrated system with the click of a mouse. It isn’t a problem; it’s a time saver. Further, because Google can reinvest in developing more user-friendly tech in a preinstalled ecosystem, we get interoperable apps that make our experience that much more convenient and intuitive. And even if consumers do want a different app, they can fix this problem with no heavy leg work or travel — just the swipe of a finger.

But if the government gets its way, the message could be disastrous for innovation: Even if your business benefits Americans and improves the user experience, the government can still put a target on your back. Not to mention, the government would be more likely to put a target on your back if you’re large and politically disfavored. Consumers across the internet and the American economy would be hurt and left without more accessible and more affordable technology as options.

We should be working to reward, not punish, innovation. Otherwise, the next Google may just decide it isn’t worth the time and effort.

Similarly, the Federal Trade Commission’s recent case against Facebook also puts the wants of policymakers above the actual interests of consumers.

Here, the government claims that Facebook harms consumers by acquiring and then integrating services like Instagram and WhatsApp. So harmful, the Federal Trade Commission says, that Facebook must divest from these services, even if that would harm American consumers, innovation and entrepreneurship for decades to come.

But this is not a case of consumer harm or bad behavior — Facebook’s acquisition of Instagram and WhatsApp helped ensure that consumers’ desires were prioritized. Through millions of investment dollars into research and development, Facebook turned good services into great services that consumers actively keep coming back to.

Through relentless product improvement, WhatsApp became a free-to-use platform and Instagram became one of the most successful photo-sharing social media apps in the world. In both cases, consumers benefited from convenient and state-of-the-art advancements. No longer do we have to pay to use messaging or search through multiple results to shop our influencer feed.

As it stands, the Federal Trade Commission case could splinter one successful tech company into multiple, less efficient organizations, setting a precedent that could affect every American industry. Consumers would not only lose Facebook’s free-to-use services but also potentially the next big clothing brand or the next hit microbrewed beer.

By impeding mergers, the sheer fear of potential antitrust enforcement would shutter the doors on small businesses from all sectors of the economy. So much investment in innovation is built on the possibility of being acquired by a larger player. Entrepreneurs and innovators from manufacturing, automotive and tech alike would be left with an unfortunate takeaway — succeed and benefit consumers, but not too much.

And with an economy still struggling to recover, the absolute last thing we need is to leave consumers without innovative and affordable choices, small businesses without key investment opportunities and our economy without a competitive edge globally.

But by weaponizing antitrust, we’ll get neither thoughtful intervention nor consumer benefits. Instead, the United States will lose ground to foreign competitors and American consumers will ultimately pay the price.

#### Decline cascades---nuclear war

Dr. Mathew Maavak 21, PhD in Risk Foresight from the Universiti Teknologi Malaysia, External Researcher (PLATBIDAFO) at the Kazimieras Simonavicius University, Expert and Regular Commentator on Risk-Related Geostrategic Issues at the Russian International Affairs Council, “Horizon 2030: Will Emerging Risks Unravel Our Global Systems?”, Salus Journal – The Australian Journal for Law Enforcement, Security and Intelligence Professionals, Volume 9, Number 1, p. 2-8

Various scholars and institutions regard global social instability as the greatest threat facing this decade. The catalyst has been postulated to be a Second Great Depression which, in turn, will have profound implications for global security and national integrity. This paper, written from a broad systems perspective, illustrates how emerging risks are getting more complex and intertwined; blurring boundaries between the economic, environmental, geopolitical, societal and technological taxonomy used by the World Economic Forum for its annual global risk forecasts. Tight couplings in our global systems have also enabled risks accrued in one area to snowball into a full-blown crisis elsewhere. The COVID-19 pandemic and its socioeconomic fallouts exemplify this systemic chain-reaction. Onceinexorable forces of globalization are rupturing as the current global system can no longer be sustained due to poor governance and runaway wealth fractionation. The coronavirus pandemic is also enabling Big Tech to expropriate the levers of governments and mass communications worldwide. This paper concludes by highlighting how this development poses a dilemma for security professionals.

Key Words: Global Systems, Emergence, VUCA, COVID-9, Social Instability, Big Tech, Great Reset

INTRODUCTION

The new decade is witnessing rising volatility across global systems. Pick any random “system” today and chart out its trajectory: Are our education systems becoming more robust and affordable? What about food security? Are our healthcare systems improving? Are our pension systems sound? Wherever one looks, there are dark clouds gathering on a global horizon marked by volatility, uncertainty, complexity and ambiguity (VUCA).

But what exactly is a global system? Our planet itself is an autonomous and selfsustaining mega-system, marked by periodic cycles and elemental vagaries. Human activities within however are not system isolates as our banking, utility, farming, healthcare and retail sectors etc. are increasingly entwined. Risks accrued in one system may cascade into an unforeseen crisis within and/or without (Choo, Smith & McCusker, 2007). Scholars call this phenomenon “emergence”; one where the behaviour of intersecting systems is determined by complex and largely invisible interactions at the substratum (Goldstein, 1999; Holland, 1998).

The ongoing COVID-19 pandemic is a case in point. While experts remain divided over the source and morphology of the virus, the contagion has ramified into a global health crisis and supply chain nightmare. It is also tilting the geopolitical balance. China is the largest exporter of intermediate products, and had generated nearly 20% of global imports in 2015 alone (Cousin, 2020). The pharmaceutical sector is particularly vulnerable. Nearly “85% of medicines in the U.S. strategic national stockpile” sources components from China (Owens, 2020).

An initial run on respiratory masks has now been eclipsed by rowdy queues at supermarkets and the bankruptcy of small businesses. The entire global population – save for major pockets such as Sweden, Belarus, Taiwan and Japan – have been subjected to cyclical lockdowns and quarantines. Never before in history have humans faced such a systemic, borderless calamity.

COVID-19 represents a classic emergent crisis that necessitates real-time response and adaptivity in a real-time world, particularly since the global Just-in-Time (JIT) production and delivery system serves as both an enabler and vector for transboundary risks. From a systems thinking perspective, emerging risk management should therefore address a whole spectrum of activity across the economic, environmental, geopolitical, societal and technological (EEGST) taxonomy. Every emerging threat can be slotted into this taxonomy – a reason why it is used by the World Economic Forum (WEF) for its annual global risk exercises (Maavak, 2019a). As traditional forces of globalization unravel, security professionals should take cognizance of emerging threats through a systems thinking approach.

METHODOLOGY

An EEGST sectional breakdown was adopted to illustrate a sampling of extreme risks facing the world for the 2020-2030 decade. The transcendental quality of emerging risks, as outlined on Figure 1, below, was primarily informed by the following pillars of systems thinking (Rickards, 2020):

• Diminishing diversity (or increasing homogeneity) of actors in the global system (Boli & Thomas, 1997; Meyer, 2000; Young et al, 2006);

• Interconnections in the global system (Homer-Dixon et al, 2015; Lee & Preston, 2012);

• Interactions of actors, events and components in the global system (Buldyrev et al, 2010; Bashan et al, 2013; Homer-Dixon et al, 2015); and

• Adaptive qualities in particular systems (Bodin & Norberg, 2005; Scheffer et al, 2012) Since scholastic material on this topic remains somewhat inchoate, this paper buttresses many of its contentions through secondary (i.e. news/institutional) sources.

ECONOMY

According to Professor Stanislaw Drozdz (2018) of the Polish Academy of Sciences, “a global financial crash of a previously unprecedented scale is highly probable” by the mid- 2020s. This will lead to a trickle-down meltdown, impacting all areas of human activity.

The economist John Mauldin (2018) similarly warns that the “2020s might be the worst decade in US history” and may lead to a Second Great Depression. Other forecasts are equally alarming. According to the International Institute of Finance, global debt may have surpassed $255 trillion by 2020 (IIF, 2019). Yet another study revealed that global debts and liabilities amounted to a staggering $2.5 quadrillion (Ausman, 2018). The reader should note that these figures were tabulated before the COVID-19 outbreak.

The IMF singles out widening income inequality as the trigger for the next Great Depression (Georgieva, 2020). The wealthiest 1% now own more than twice as much wealth as 6.9 billion people (Coffey et al, 2020) and this chasm is widening with each passing month. COVID-19 had, in fact, boosted global billionaire wealth to an unprecedented $10.2 trillion by July 2020 (UBS-PWC, 2020). Global GDP, worth $88 trillion in 2019, may have contracted by 5.2% in 2020 (World Bank, 2020).

As the Greek historian Plutarch warned in the 1st century AD: “An imbalance between rich and poor is the oldest and most fatal ailment of all republics” (Mauldin, 2014). The stability of a society, as Aristotle argued even earlier, depends on a robust middle element or middle class. At the rate the global middle class is facing catastrophic debt and unemployment levels, widespread social disaffection may morph into outright anarchy (Maavak, 2012; DCDC, 2007).

Economic stressors, in transcendent VUCA fashion, may also induce radical geopolitical realignments. Bullions now carry more weight than NATO’s security guarantees in Eastern Europe. After Poland repatriated 100 tons of gold from the Bank of England in 2019, Slovakia, Serbia and Hungary quickly followed suit.

According to former Slovak Premier Robert Fico, this erosion in regional trust was based on historical precedents – in particular the 1938 Munich Agreement which ceded Czechoslovakia’s Sudetenland to Nazi Germany. As Fico reiterated (Dudik & Tomek, 2019):

“You can hardly trust even the closest allies after the Munich Agreement… I guarantee that if something happens, we won’t see a single gram of this (offshore-held) gold. Let’s do it (repatriation) as quickly as possible.” (Parenthesis added by author).

President Aleksandar Vucic of Serbia (a non-NATO nation) justified his central bank’s gold-repatriation program by hinting at economic headwinds ahead: “We see in which direction the crisis in the world is moving” (Dudik & Tomek, 2019). Indeed, with two global Titanics – the United States and China – set on a collision course with a quadrillions-denominated iceberg in the middle, and a viral outbreak on its tip, the seismic ripples will be felt far, wide and for a considerable period.

A reality check is nonetheless needed here: Can additional bullions realistically circumvallate the economies of 80 million plus peoples in these Eastern European nations, worth a collective $1.8 trillion by purchasing power parity? Gold however is a potent psychological symbol as it represents national sovereignty and economic reassurance in a potentially hyperinflationary world. The portents are clear: The current global economic system will be weakened by rising nationalism and autarkic demands. Much uncertainty remains ahead. Mauldin (2018) proposes the introduction of Old Testament-style debt jubilees to facilitate gradual national recoveries. The World Economic Forum, on the other hand, has long proposed a “Great Reset” by 2030; a socialist utopia where “you’ll own nothing and you’ll be happy” (WEF, 2016).

In the final analysis, COVID-19 is not the root cause of the current global economic turmoil; it is merely an accelerant to a burning house of cards that was left smouldering since the 2008 Great Recession (Maavak, 2020a). We also see how the four main pillars of systems thinking (diversity, interconnectivity, interactivity and “adaptivity”) form the mise en scene in a VUCA decade.

ENVIRONMENTAL

What happens to the environment when our economies implode? Think of a debt-laden workforce at sensitive nuclear and chemical plants, along with a concomitant surge in industrial accidents? Economic stressors, workforce demoralization and rampant profiteering – rather than manmade climate change – arguably pose the biggest threats to the environment. In a WEF report, Buehler et al (2017) made the following pre-COVID-19 observation:

The ILO estimates that the annual cost to the global economy from accidents and work-related diseases alone is a staggering $3 trillion. Moreover, a recent report suggests the world’s 3.2 billion workers are increasingly unwell, with the vast majority facing significant economic insecurity: 77% work in part-time, temporary, “vulnerable” or unpaid jobs.

Shouldn’t this phenomenon be better categorized as a societal or economic risk rather than an environmental one? In line with the systems thinking approach, however, global risks can no longer be boxed into a taxonomical silo. Frazzled workforces may precipitate another Bhopal (1984), Chernobyl (1986), Deepwater Horizon (2010) or Flint water crisis (2014). These disasters were notably not the result of manmade climate change. Neither was the Fukushima nuclear disaster (2011) nor the Indian Ocean tsunami (2004). Indeed, the combustion of a long-overlooked cargo of 2,750 tonnes of ammonium nitrate had nearly levelled the city of Beirut, Lebanon, on Aug 4 2020. The explosion left 204 dead; 7,500 injured; US$15 billion in property damages; and an estimated 300,000 people homeless (Urbina, 2020). The environmental costs have yet to be adequately tabulated.

Environmental disasters are more attributable to Black Swan events, systems breakdowns and corporate greed rather than to mundane human activity.

Our JIT world aggravates the cascading potential of risks (Korowicz, 2012). Production and delivery delays, caused by the COVID-19 outbreak, will eventually require industrial overcompensation. This will further stress senior executives, workers, machines and a variety of computerized systems. The trickle-down effects will likely include substandard products, contaminated food and a general lowering in health and safety standards (Maavak, 2019a). Unpaid or demoralized sanitation workers may also resort to indiscriminate waste dumping. Many cities across the United States (and elsewhere in the world) are no longer recycling wastes due to prohibitive costs in the global corona-economy (Liacko, 2021).

Even in good times, strict protocols on waste disposals were routinely ignored. While Sweden championed the global climate change narrative, its clothing flagship H&M was busy covering up toxic effluences disgorged by vendors along the Citarum River in Java, Indonesia. As a result, countless children among 14 million Indonesians straddling the “world’s most polluted river” began to suffer from dermatitis, intestinal problems, developmental disorders, renal failure, chronic bronchitis and cancer (DW, 2020). It is also in cauldrons like the Citarum River where pathogens may mutate with emergent ramifications.

On an equally alarming note, depressed economic conditions have traditionally provided a waste disposal boon for organized crime elements. Throughout 1980s, the Calabriabased ‘Ndrangheta mafia – in collusion with governments in Europe and North America – began to dump radioactive wastes along the coast of Somalia. Reeling from pollution and revenue loss, Somali fisherman eventually resorted to mass piracy (Knaup, 2008).

The coast of Somalia is now a maritime hotspot, and exemplifies an entwined form of economic-environmental-geopolitical-societal emergence. In a VUCA world, indiscriminate waste dumping can unexpectedly morph into a Black Hawk Down incident. The laws of unintended consequences are governed by actors, interconnections, interactions and adaptations in a system under study – as outlined in the methodology section.

Environmentally-devastating industrial sabotages – whether by disgruntled workers, industrial competitors, ideological maniacs or terrorist groups – cannot be discounted in a VUCA world. Immiserated societies, in stark defiance of climate change diktats, may resort to dirty coal plants and wood stoves for survival. Interlinked ecosystems, particularly water resources, may be hijacked by nationalist sentiments. The environmental fallouts of critical infrastructure (CI) breakdowns loom like a Sword of Damocles over this decade.

GEOPOLITICAL

The primary catalyst behind WWII was the Great Depression. Since history often repeats itself, expect familiar bogeymen to reappear in societies roiling with impoverishment and ideological clefts. Anti-Semitism – a societal risk on its own – may reach alarming proportions in the West (Reuters, 2019), possibly forcing Israel to undertake reprisal operations inside allied nations. If that happens, how will affected nations react? Will security resources be reallocated to protect certain minorities (or the Top 1%) while larger segments of society are exposed to restive forces? Balloon effects like these present a classic VUCA problematic.

Contemporary geopolitical risks include a possible Iran-Israel war; US-China military confrontation over Taiwan or the South China Sea; North Korean proliferation of nuclear and missile technologies; an India-Pakistan nuclear war; an Iranian closure of the Straits of Hormuz; fundamentalist-driven implosion in the Islamic world; or a nuclear confrontation between NATO and Russia. Fears that the Jan 3 2020 assassination of Iranian Maj. Gen. Qasem Soleimani might lead to WWIII were grossly overblown. From a systems perspective, the killing of Soleimani did not fundamentally change the actor-interconnection-interaction adaptivity equation in the Middle East. Soleimani was simply a cog who got replaced.

### 1NC – Politics DA

#### Omnibus package will pass now absent partisan fights or stalls this weekend. That secures support fur Ukraine, ensures readiness, and reassures Eastern European allies.

Wong 3/3 [Scott Wong and Sahil Kapur, "Ukraine conflict adds urgency as Congress races to fund government", 3/3/22, https://www.nbcnews.com/politics/congress/ukraine-conflict-adds-urgency-congress-races-fund-government-rcna18643]

The deadly war in Ukraine, worsening by the day, has increased the urgency for lawmakers to strike a bipartisan deal on a massive government funding package that almost certainly would include emergency aid for the Eastern European country.

Congress faces a fast-approaching deadline — the government will shut down next week without any action — and related funding issues are quickly piling up.

The White House requested Thursday that $10 billion in emergency defense and humanitarian aid for the Ukraine conflict be linked to the larger omnibus spending bill, up from $6.4 billion in aid just a few days ago. President Joe Biden also wants another $22.4 billion in coronavirus aid to develop new testing, therapeutics and vaccines to fight future variants of the virus.

Both Democratic and Republican appropriators said Thursday that it was imperative to pass a government funding package, with emergency money for Ukraine, before the March 11 deadline.

“To kick the can down the road and pass another short-term stopgap measure, known as a continuing resolution, or CR, would be a “dereliction of duty,” said Senate Armed Services Committee Chairman Jack Reed, D-R.I., who is also on the Appropriations Committee.

Passing an omnibus package that funds federal agencies through September, he said, would give the Defense Department more certainty and better ability to respond to the crisis in Ukraine and shore up defenses at home.

“I think we need to pass the omnibus for the Defense Department, because they’re operating right now, and they need the certainty that the omnibus will give them in terms of funding levels,” Reed said. “And we have to basically deal with all the unexpected expenses that are happening in Ukraine.”

Sen. Rob Portman, R-Ohio, a former White House budget director who is a member of the Foreign Relations Committee, said he has personally heard from U.S. military commanders that “another CR will really hurt our readiness.”

"Now, in particular, we want to do everything we can do to enhance our readiness so that we can help protect not just Ukraine but also our Eastern European allies who are under such pressure,” Portman said. “So, yeah, we need to pass the omnibus.”

The $10 billion package would pay for humanitarian, security and economic assistance for Ukraine and central European allies “due to Russia’s unjustified and unprovoked invasion,” Shalanda Young, the acting White House budget director, wrote in a letter Thursday to congressional leaders.

“Given the rapidly evolving situation in Ukraine,” she wrote, “I anticipate that additional needs may arise over time.”

Shortly before the Senate wrapped up on Thursday, however, a senior GOP aide speculated that a stopgap bill may be necessary to prevent a shutdown next week.

Sen. Richard Shelby, R-Ala., the ranking member of the Appropriations Committee, said this weekend would be “crucial” in determining whether another continuing resolution is needed.

“We can’t afford to stall this weekend. If we do, we’re headed for a CR,” Shelby told reporters.

#### Antitrust ruins bipart—Republicans link it to other partisan disputes

Ghaffary 20 [Shirin Ghaffary, "Republicans showed why Congress won’t regulate the internet", 7/29/20, https://www.vox.com/recode/2020/7/29/21347128/big-tech-antitrust-hearing-facebook-zuckerberg-amazon-bezos-apple-cook-google-pichai]

Allegations that social media platforms have an anti-conservative bias has for years been a rallying cry of President Trump and the Republican party. And leading up to Wednesday, Republicans attacked the focus of the Democrat-run House Judiciary subcommittee hearing — calling on it to focus more on anti-conservative bias and for Twitter CEO Jack Dorsey to appear. Twitter is a small company compared to, say, Facebook, but it has recently taken measures to moderate President Trump’s posts for violating policies around misinformation and hate speech, enraging Republicans.

Democrats, meanwhile, tried to steer the conversation back to issues more directly relevant to antitrust, like if and how these companies intimidate their competition, such as when Facebook acquired its then-rival Instagram in 2012; or whether these companies exploit their users’ privacy, like how Google tracks individuals’ online browsing across the web with cookies; or if Apple is shutting out its competitors by taking an unreasonable cut of profits coming in from independent app developers in its App Store.

What really matters here is whether these companies’ business practices are ultimately harming consumers, most of whom have no choice but to use Big Tech in one way or another if they want to do basic things online like search the web, order goods, or stay in touch with their friends.

In an earlier era, Republicans and Democrats on the committee might have come together to try to focus on what’s been seen as an area of relative bipartisan agreement: protecting the free market. That didn’t happen at today’s hearing. Instead, it was a display of partisan divides.

#### Ukraine conflict will go nuclear. Only sanctions solve—imposing larger costs demonstrates resolve and deters further adventurism in the Baltics

* Not escalating means Putin will escalate faster in the next conflict
* Sanctions are the best brake on escalation

The Economist 3/5 [The Economist, "When Vladimir Putin escalates his war, the world must meet him", 3/5/22, https://www.economist.com/leaders/2022/03/05/when-vladimir-putin-escalates-his-war-the-world-must-meet-him]

If only this week’s bravery were enough to bring the fighting to an end. Alas, Russia’s president will not withdraw so easily. From the start, Mr Putin has made clear that this is a war of escalation—a hygienic word for a dirty and potentially catastrophic reality. At its most brutal, escalation means that, whatever the world does, Mr Putin threatens to be more violent and more destructive even, he growls, if that means resorting to a nuclear weapon. And so he insists that the world back off while he sharpens his knife and sets about his slaughter.

Such a retreat must not happen. Not only because to abandon Ukraine to its fate would be wrong, but also because Mr Putin will not stop there. Escalation is a narcotic. If Mr Putin prevails today, his next fix will be in Georgia, Moldova or the Baltic states. He will not stop until he is stopped.

Escalation is at the heart of this war because it is how Mr Putin tries to turn defeat into victory. The first wave of his invasion proved as rotten as the cabal who planned it—just like his earlier efforts to suborn Ukraine. Mr Putin seems to have believed his own propaganda that the territory he has invaded is not a real country. The initial assault, which led with botched helicopter strikes and raids by lightly armed units, was conceived for an adversary that would implode. Instead, Ukrainian spirits have flourished under fire. The president, Volodymyr Zelensky, has been transformed into a war leader who embodies his people’s courage and defiance.

The optimism of the warmonger made Mr Putin lazy. He was so sure Ukraine would fall rapidly that he did not prepare his people for it. Some troops have been told they are on exercises, or that they will be welcomed as liberators. Citizens are not ready for a fratricidal conflict with their fellow Slavs. Having been assured that there would be no war, much of the elite feels humiliated. They are horrified at Mr Putin’s recklessness.

And Russia’s president believed that the decadent West would always accommodate him. In fact, Ukraine’s example has inspired marches through the capital cities of Europe. Western governments, having listened, have imposed severe sanctions. Germany, which only a week ago drew the line at sending anything more lethal than helmets, is dispatching anti-tank and anti-aircraft weapons, overturning decades of policy based on taming Russia by engaging with it.

Faced with these reverses, Mr Putin is escalating. In Ukraine he is moving to besiege the main cities and calling up his heavy armour to wantonly kill their civilian inhabitants—a war crime. At home he is bringing Russians to heel by redoubling his lies and subjecting his people to the harshest state terror since Stalin. To the West he is issuing threats of nuclear war.

The world must stand up to him, and to be credible it must demonstrate that it is willing to bleed his regime of the resources that enable him to wage war and abuse his own people even if that imposes costs on Western economies. The sanctions devised after Mr Putin annexed Crimea in 2014 were riddled with loopholes and compromises. Instead of being deterred, the Kremlin concluded that it could act with impunity. By contrast, the latest sanctions, imposed on February 28th, have crumpled the rouble and promise to cripple Russia’s financial system. They are effective because they are destructive.

The danger of escalation is that this can easily become a test of who is most willing and able to go to extremes. Recent wars have been asymmetric. Al-Qaeda and Islamic State would commit any atrocity, but their power was limited. America could destroy the planet, but against foes like the Taliban in Afghanistan, nobody imagined it was willing. The invasion of Ukraine is different, because Mr Putin can charge all the way to Armageddon and he wants the world to believe he is ready to do so.

The idea of Mr Putin using a battlefield nuclear weapon is surely unlikely, but not impossible. He has, after all, just invaded his neighbour. And so the world must deter him.

Some will say there is no point in saving Ukraine only to trigger a spiral that may destroy civilisation. But that is a false choice. Mr Putin says he wants to drive nato out of the former Warsaw Pact countries and America out of Europe. If escalation serves him, the next confrontation will be even more dangerous because he will be less ready to believe that, for once, the West will stand its ground.

Others may conclude that Mr Putin is insane and deterrence is hopeless. True, his goals are abhorrent, as are his means of achieving them. Neither does he have Russia’s true interests at heart. But he nonetheless has an understanding of power and how to keep it. No doubt he is alive to the language of threats.

By contrast, still others will want to short-circuit escalation, saying that Mr Putin must be stopped before it is too late. As images of suffering emerge from the ruins of Ukraine’s cities, calls are going up for nato to do something, such as to create a no-fly zone. However, enforcing one requires shooting down Russian aircraft and destroying Russian air-defences. Instead, nato needs to preserve a clear line between attacking Russia and backing Ukraine, while leaving no doubt that it will defend its members. That is the best brake on escalation.

What, then, can it do to deter Mr Putin without courting devastation? Only Mr Zelensky and his people can decide how long to fight. But if Mr Putin causes a bloodbath, the West can tighten the screws. An oil-and-gas embargo would further ruin Russia’s economy. Ukraine’s backers can send more and better arms. nato can deploy more troops in its frontline states.

### 1NC – T Exemptions

#### ‘Scope’ is the extent of the area covered by the core laws

Oxford 22 – Oxford English Dictionary, ‘scope’, https://www.lexico.com/en/definition/scope

1 The extent of the area or subject matter that something deals with or to which it is relevant.

*‘we widened the scope of our investigation’*

#### It’s bounded by exemptions and immunities

Layne E. Kruse 19, Co-Chair, Melissa H. Maxman, Co-Chair, Vittorio Cottafavi, Vice Chair, Stephen M. Medlock, Vice Chair; David Shaw, Vice Chair; Travis Wheeler, Vice Chair; Lisa Peterson, Young Lawyer Representative; all on the Exemptions and Immunities Committee of the ABA Antitrust Section, “Long Range Plan, 2018-19,” American Bar Association, 3/18/2019, https://www.americanbar.org/content/dam/aba/administrative/antitrust\_law/lrps/2019/exemptions-immunities.pdf

D. Top 3 Accomplishments Since Last Long Range Plan in 2015

(1) Publications. In addition to our Annual ALD Updates, we are set to publish an update to the Noerr-Pennington Handbook, which should be out in 2019. We also published a new version of the State Action Handbook in 2016. The Handbook on the Scope of the Antitrust Laws was published in 2015.

(2) Commentary on Legislative and Regulatory Proposals. The Committee has been very active in supporting Section commentary on proposed legislation, regulations, and other policy issues.

For instance, in March 2018, the E&I Committee assisted former E&I Chair John Roberti in composing his article, “The Role and Relevance of Exemptions and Immunities in U.S. Antitrust Law”, presented to the DOJ Antitrust Division Roundtable on behalf of the ABA Antitrust Section.

In January 2018, in response to a request from the Section Chair, we submitted Section comments along with the Legislative and State AG Committees, addressing the proposed Restoring Board Immunity Act legislation that would impact the post-NC Dental exemptions and immunity climate. Previously, we commented on the Professional Responsibility Act.

(3) Spring Meeting Programs. We have sponsored or co-sponsored a program at every Spring Meeting since our last long range plan. In 2019 we will chair Sham Litigation after FTC v. AbbVie The FTC v. AbbVie decision – calling for the disgorgement of $448 million on the basis of sham patent litigation. In addition, we will co-sponsor in 2019 with the Trade, Sports & Professional Associations Committee, a program on “Antitrust Law's Anomalous Treatment of Sports,” addressing how US courts have shown broad deference to the "rules of the game," including near-immunity status for concepts such as "amateurism."

II. Major Competition/Consumer Protection Policy or Substantive Issues Within Committee’s Jurisdiction Anticipated to Arise Over Next Three Years

A. Issue #1: Will Certain Exemptions Be Eliminated or Expanded?

A goal of the current DOJ Antitrust Division is to streamline antitrust laws, and in particular, take a hard look at exemptions and immunities. This is in the wheelhouse of our Committee’s fundamental policy issue: How much of the economy has opted out of our antitrust system? Is that a problem or are ad hoc exemptions acceptable ways to fine tune the application of the antitrust laws?

We anticipate, therefore, that efforts to enact or to repeal existing statutory exemptions and immunities will continue. In recent years, there have been efforts to repeal the exemptions for railroads and (at least in part) the McCarran-Ferguson insurance exemption. The Section and the Committee has generally supported efforts to repeal statutory exemptions. Given that repeal issues are very political it is unlikely that we will see many exemptions actually repealed.

On the other hand, proposals for new exemptions and immunities will continue to be introduced in Congress. The Committee will improve on a template for use in assisting the Section in drafting comments to Congress on newly proposed exemptions and immunities.

One development that may continue in the health care area are issues over a "COPA" or "Certificate of Public Advantage" at the state level. A COPA is a state statutory mechanism that provides certain collaborations in the health care community with immunity from private or government actions under the antitrust laws by invoking the state action doctrine. The FTC has generally opposed such efforts at the state level, but several states have used them to immunize health care mergers. This is a major development that should be monitored.

Through programs, newsletters, and Connect entries, the Committee intends to educate its members about Congressional and other efforts to repeal, or introduce new, exemptions and immunities, as well as the application of existing statutory exemptions and immunities in the courts. The Committee’s Handbook on the Scope of Antitrust Law, published in 2015, addresses developments in the statutory immunities area. It built on the prior publication, Federal Statutory Exemptions from Antitrust Law Handbook in 2007. Our Scope book will need to be updated within the next three years.

B. Issue #2: Will There Be Legislative Solutions to State Action Issues at State and Federal Levels?

The FTC’s case against the North Carolina Board of Dental Examiners put the "active supervision" prong of the state action test front and center. North Carolina State Board of Dental Examiners v. Federal Trade Commission, 135 S.Ct. 1101 (2015). The Court agreed with the FTC’s position that state occupational licensing boards comprised of market participants must satisfy the active supervision requirement. This spurred additional suits against other types of state boards involving regulated professionals. Moreover, every State had to reassess its boards to determine if there is "active supervision." Courts and state legislatures are addressing those issues. We also expect the proper framing of the clear articulation prong of the state action doctrine will be addressed. The Supreme Court spoke to the clear articulation test in FTC v. Phoebe Putney Health System, Inc., 133 S.Ct. 1003 (2013), narrowing the foreseeability test to cover only situations in which the anticompetitive conduct is the “inherent, logical, or ordinary result of the exercise of authority delegated by the state legislature.” How this test has played out in the lower courts will be of particular interest to the Committee and its membership. The COPA issues, at the state level, as previously mentioned, will impact this area.

The Committee expects to address these issues through updates to Connect, newsletters, Spring Meeting programs, committee programs, its contributions to the Annual Review of Antitrust Law Developments. The State Action Practice Manual addresses these issues, as well as the Committee’s Handbook on the Scope of Antitrust Law.

C. Issue #3: Will Noerr Be Restricted or Expanded?

The Noerr-Pennington doctrine is an exemption issue that is frequently litigated. In particular, the most likely area of further development is in the pharma industry. Alleged misrepresentations to government agencies has caught the attention of some courts. In addition, there may be more development on the pattern exception, which raises the issue of whether each act of petitioning in a pattern must satisfy the objectively and subjectively baseless requirements for sham petitioning. The Committee’s new Handbook on Noerr (forthcoming) and its earlier Handbook on the Scope of Antitrust Law addresses developments in the Noerr law.

III. Specific Long Term Plans to Strengthen Committee

The Committee provides important services to the membership of the Section through publications, drafting ABA Antitrust Section comments to proposed regulation and international competition proposed immunities, and programming. The goals of the Committee include: (1) to provide policy comments on key questions about the scope of the antitrust laws for legislation and policy-making; (2) produce a mix of publications and programming that provides relevant and useful information to our members; (3) to ensure that the Committee remains valuable to our members’ practices; and (4) to make the most productive use of electronic communications to deliver the Committee’s work product.

A. Potential Modifications to Charter: What is the Role of this Committee?

The Committee’s current charter accurately characterizes its purview—that is, addressing the scope of the antitrust laws. That scope, of course, is defined primarily in terms of exemptions and immunities (both statutory and non-statutory). The Committee, however, has dealt with other doctrines, such as preemption and primary jurisdiction. These areas may not necessarily be viewed as traditional exemptions or immunities, but they nonetheless directly affect the application and extent of the antitrust laws. In addition, the Committee expends significant efforts to address international issues, including statutory exclusions from the U.S. antitrust laws, including the FTAIA; the related doctrines of act of state, sovereign immunity, and foreign sovereign compulsion; and industry-specific exemptions and exclusions from non-U.S. antitrust laws, including blocking exemptions.

#### ‘Expand’ means to make greater, not clarify its current state by applying it differently

Terry J. Hatter 90 Jr., United States District Judge, California Central District, In re Eastport Assoc., 114 B.R. 686, 690, 1990 U.S. Dist. LEXIS 6308, \*10-11 (C.D. Cal. March 20, 1990), 3/20/1990, Lexis

Second, Eastport asserts that the presumption against retroactivity does not apply because the amendment was intended only as a clarification of existing law. HN7 Where an amendment to a statute is remedial in nature and merely serves to clarify existing law, no question of retroactivity is involved and the law will be applied to pending cases. City of Redlands v. Sorensen, 176 Cal. App. 3d 202, 211, 221 Cal. Rptr. 728, 732 (1985). The evidence in this case, however, does not support the conclusion that the amendment to section 66452.6(f) was simply a clarification of preexisting law. The Legislative Counsel's Digest specifically states that "the bill would *expand* the definition of development moratorium." Senate Bill 186, Stats. 1988, ch. 1330, at 3375 (emphasis added). Since the Legislative Counsel is a state official required by law to analyze pending legislation, it is reasonable to presume that the Legislature amended the statute with the intent and meaning expressed in the Counsel's digest. People v. Martinez, 194 Cal. App. 3d 15, 22, 239 Cal. Rptr. 272, 276 (1987). By its ordinary meaning, the term "expand" indicates a change in the law, rather than a restatement of existing [\*\*11] law. In light of the Counsel's comment, Eastport's argument is unpersuasive.

#### The aff intensifies the application of antitrust to already covered activities---it does not curtail an exemption or immunity.

#### Vote neg:

#### Eliminating exemptions provides a limited and predictable basis for prep and focuses debates on the balance between antitrust and regulation, ensuring conceptual unity.

### 1NC – Core PIC

#### The United States federal government should:

* uniformly and adequately apply the doctrines of contract and patent law to curtail private sector conduct that is more restrictive than reasonably necessary to enable the creation of information technology standards when evaluating whether SEPs violate the FRAND commitments made to become standard-essential;
* establish treble damages and private rights of action in the corresponding areas of law to enforce the regulations.
* and, adequately provide competition-specific expertise to the relevant subdivisions of the appropriate enforcement agencies.

#### The counterplan alone solves patent holdup and avoids chilling innovation or business confidence.

Randi Brown, 2L @ NYU Law, ’18, “Always a Monopoly, Never a Monopolist: Why Antitrust is the Wrong Regulatory Scheme for Protecting Competition in Technical Standards” *NYU Law Proceedings, https://proceedings.nyumootcourt.org/2018/04/always-a-monopoly-never-a-monopolist-why-antitrust-is-the-wrong-regulatory-scheme-for-protecting-competition-in-technical-standards/*

The best approach for looking at these SEP monopolies, is to look at them through the framework of the values behind patent law, rather than antitrust law or unfair trade practice law. Patent law is intended to reward innovation, to compensate for the research and development that leads to such innovation, and to allow such innovation to benefit the public at large.12 These values are reflected in our systems for awarding patents, and in the fact that we recognize intellectual property at all. Private industry derives significant value in intellectual property, and that value comes about as a result of the competitive advantage gained from the right to exclude others from using the fruits of their intellectual labors.13 Standardization, however, largely diminishes these rights.

The right to exclude others still exists for SEP holders, but is lessened by the commitments they make to license their patents on Fair, Reasonable, and Non-Discriminatory (“FRAND”) terms. This commitment is akin to a contractual obligation between the SEP holders and the SSOs, under which implementers of SEP technology are third-party beneficiaries. Because this is a contractual obligation, contract law, which does not police based on market power, is an adequate remedy when SEP holders engage in anticompetitive conduct.14 The Court in Verizon Commc’ns Inc. v. Law Offices of Curtis V. Trinko, LLP noted that “when there exists a regulatory structure designed to deter and remedy anticompetitive harm, the additional benefit to competition provided by antitrust enforcement will tend to be small, and it will be less plausible that the antitrust laws contemplate such additional scrutiny.”15 Here, contract obligations strike the right balance between protecting competition and avoiding overdeterrence.16 In particular, modification of FRAND commitments is workable under contract law as a matter of efficiency, unlike in antitrust where such efficient actions may be deemed patent holdup, a competition violation. Further, even a breach of FRAND commitments may be efficient and benefit competition, and such efficient breaches are deterred under added antitrust scrutiny.

Further, patent law rightly governs the actions of a SEP holder which fall outside of the FRAND commitments. Where there is no applicable FRAND commitment, a SEP holder has the right to refuse to license or deal, which protects intellectual property rights.17 This right of exclusion is the very right conferred through patent, and it is what gives patent holders the ability to extract profits from their innovations, encouraging such innovation in the first place. Patent law can protect SEP holders from abuses by would-be-licensees who infringe on their rights, and can protect SEP implementers by creating a discrete and coherent property right they can license at the value of the technology.

The use of contract and patent law to correctly balance competitive aims and our value of innovation is perfectly acceptable within antitrust law due to the net procompetitive effect of standardization. Looking to anticompetitive conduct alone fails to account for the economic benefits passed on to consumers.18 There will be remedies for breaches of FRAND under contract law which contemplate these economic efficiencies and sanction conduct to the degree which most benefits consumers.19 Even if there is some anticompetitive conduct which would not be addressed by contract law, it is best to err on the side of protecting patent rights, which promote innovation and participation in standards.

Protecting SEP holders from increased scrutiny leads to benefits felt downstream by consumers. This is true because standards facilitate interoperability by establishing a uniform set of building blocks for a given technology. Customers feel the benefits of lowered costs, increased consumer choice, efficiency, and highly valued technology.20 By protecting SEP holders from unneeded antitrust scrutiny, we recognize the value of the patent deemed standard-essential, and reward participation in the standard by patent holders who have innovated. Given the benefits conferred by standards, it is crucial that courts make participation in these standards profitable and elevate the values of patent protection, rather than imposing antitrust remedies. Patents are the right to exclude others from your technology.21 With FRAND commitments, we remove significant benefits to that right. Trying to protect competition through a conventional antitrust scheme has the potential to eliminate the remaining benefits, without adequately recognizing the importance of innovation.

In addition, looking to the market power held by SEP holders in the SEP fails to recognize the downstream competition benefiting consumers. For example, one standard in the tech world is JPEG. JPEG is a method of compressing digital images without losing picture quality. The JPEG standard defines how an image is compressed and decompressed, but not the file format itself.22 Despite standardization, multiple downstream file formats exist and can compete with one another. JPEG itself stands for Joint Photographic Experts Group, which is made up of a cross-section of members of two standard-setting organizations, ISO and ITU.23 JPEG is a great example of both consumer benefits and encouraged innovation. Because of the uniformity of JPEG as a format, photos compressed in this way are able to be opened by hundreds if not thousands of types of software. Consumers can take and save JPEG images and open them with Photoshop, Windows Picture Viewer, Snapseed, and so forth. Further, innovation has not been stymied in the standard itself. One fear with standardization is that a lack of competition in the SEP will result in stagnation in that space. Instead, because technology progresses and innovation downstream can encourage or even require standards to innovate, JPEG has innovated on a number of occasions and is in the process of doing so today.24

Notably, the United States recently moved to an approach that focuses on imposing antitrust liability on implementers and SSOs, rather than SEP holders. Current United States Assistant Attorney General for the Antitrust Division, Makan Delrahim, expressed the view in a speech this past November, that the risk of anticompetitive conduct is greater from implementers than from SEP holders.25 This is because, as a result of the FRAND commitments, buyers are able to hold out for lower prices. Moreover, he noted that the SSOs would also be scrutinized more closely, as these organizations are made up of competitors who have the power to collude and devalue the intellectual property rights.26 Perhaps most importantly, he noted that “patent holders can’t violate the antitrust laws by properly exercising the rights that patents confer.”27 In this, he included the right to refuse to license, calling the FRAND commitments contractual in nature rather than an aspect of competition law.28

Viewing the monopoly that exists in all SEPs as posing antitrust problems results in three negative consequences. First, it discourages standard participation, as antitrust scrutiny can be incredibly costly to innovators. This is especially true for startups and young companies who are able to get a foothold through standardization but may not be able to afford a fight against the weight of the FTC. In addition, standard participants will risk doubly losing value in their patents, as FRAND commitments represent a significant decrease in bargaining power on their own and potential for antitrust liability increases the costs for SEP holders meaningfully.29 Second, antitrust scrutiny above and beyond a contract remedy is inefficient as it doesn’t recognize what may be an efficient denial of a license. Contract law recognizes what is known as “efficient breach,” whereby a participant may breach a contractual obligation so long as they pay for it because the overall net costs are less than the costs of the breach.30 A breach of FRAND may be efficient, and thus should be allowed so long as a contract remedy exists. Third, by adding scrutiny for SEP holders, the value of the underlying technology and patent rights decreases. IP rights are founded on the basic view that creation should result in an ability to exclude.31 Calling the SEP holder a monopolist would diminish if not eliminate this right, as exclusion would be deemed anticompetitive.32 A system which rewards patent holders rather than sanctioning their basic rights reflects the value of innovation in society. Patents reward innovators by allowing them to profit from their inventions. Without profitability, companies will not invest the huge amounts of capital necessary to the research and development process.

\* \* \* \* \*

Standard-Essential Patents may be monopolies by default, but those who hold them should not be deemed monopolists without added anticompetitive effect downstream. Because standards result in more competition downstream, contract and patent law effectively prevent harm to competition without deterring innovation or failing to remunerate research and development. In order to protect the IP rights of innovators and encourage their participation in technical standards, courts should apply the doctrines of contract and patent law rather than antitrust law in evaluating SEPs and the FRAND commitments made to become standard-essential.

## Innovation Adv

### 1NC – Innovation Turn

#### U.S. innovation is high and globally dominant---big business is key.

Wolf ’21 [Martin; April 27; Chief Economics Commentator, M.A. in Economics from Oxford University; Financial Times, “China is wrong to think the US faces inevitable decline,” <https://www.ft.com/content/8336169e-d1a8-4be8-b143-308e5b52e355>]

The Chinese elite are convinced that the US is in irreversible decline. So reports Jude Blanchette of the Center for Strategic and International Studies, a respected Washington-based think-tank. What has been happening in the US in recent years, particularly in politics, supports this perspective. A stable liberal democracy would not elect Donald Trump — a man lacking all necessary qualities and abilities — to national leadership. Nevertheless, the notion of US decline is exaggerated. The US retains big assets, notably in economics.

For one and half centuries, the US has been the world’s most innovative economy. That has been the basis of its global power and influence. So how does its innovative power look today? The answer is: rather good, despite competition from China.

Stock markets are imperfect. But the value investors put on companies is at least a relatively impartial assessment of their prospects. At the end of last week, 7 of the 10 most valuable companies in the world and 14 of the top 20, were headquartered in the US.

If it were not for Saudi Arabian oil, the five most valuable companies in the world would be US technology giants: Apple, Microsoft, Amazon, Alphabet and Facebook. China has two valuable technology companies: Tencent (at seventh position) and Alibaba (at ninth). But those are China’s only companies in the top 20. The most valuable European company is LVMH at 17th. Yet LVMH is just a collection of established luxury brands. That ought to worry Europeans.

When we look only at technology companies, the US has 12 of the top 20; China (with Hong Kong but excluding Taiwan) has three; and there are two Dutch companies, one of which, ASML, is the largest manufacturer of machines that make integrated circuits. Taiwan has the Taiwan Semiconductor Manufacturing Company, the world’s biggest contract computer chipmaker, and South Korea has Samsung Electronics.

Life sciences are another crucial sector for future prosperity. Here there are seven European companies (with Switzerland and the UK included) in the top 20. But the US has seven of the top 10, and 11 of the top 20. There is also one Australian and one Japanese company, but no Chinese businesses.

In sum, US companies are globally dominant and nearly all the most valuable non-US firms are headquartered in allied countries.

#### The plan cause patent holdout that destroys innovation and productivity

Manne 20 [Geoffrey, president and founder of the International Center for Law and Economics (ICLE). “The Deterioration of Appropriate Remedies in Patent Disputes” https://fedsoc.org/commentary/publications/the-deterioration-of-appropriate-remedies-in-patent-disputes]

Property rights are an essential economic institution. As the great UCLA economist Harold Demsetz famously argued, property rights spur specialization, investment, and competition, which in turn increase productivity, innovation, and wealth throughout the economy.[1]

The same holds true for intellectual property rights, including patents, which are no less important than their traditional counterparts in facilitating innovation and the efficient organization of productive economic activity, particularly in the modern, high-tech economy.[2] A wealth of literature indicates that much, if not most, of the value of innovation is passed on to consumers in the form of lower prices and higher quality goods and services.[3] Indeed, as Nobel Laureate William Nordhaus finds, even in the presence of patents to facilitate the appropriability of the value of innovation by inventors, “only a miniscule fraction of the social returns from technological advances over the 1948-2001 period was captured by producers, indicating that most of the benefits of technological change are passed on to consumers rather than captured by producers.”[4] Thus, although measurement problems plague such research, there is strong evidence that nations with greater levels of patent protection have historically achieved significantly higher innovative output than those with lower levels of patent protection.[5]

Nevertheless, a significant body of academic and policy work has argued—with very real policy success—that patent rights in the U.S. have been too strong.[6] The past two decades have witnessed a significant weakening of patent protection in the U.S. as courts, legislators, and several private organizations have progressively chipped away at some of the key features of patent protection. This includes the availability of injunctions, the amount of damages awarded to victims of patent infringement, and other, more subtle changes, such as curbs on fee-shifting between parties to patent litigation.

Behind many of these changes lies a powerful intellectual movement, alleging that excessive patent protection is holding back western economies. These critics chiefly fear that the owners of the standard essential patents (“SEPs”) crucial to much of modern technology are charging their commercial partners too much for the rights to use their patents—referred to as patent holdup and royalty stacking[7]—and that so-called patent trolls (“patent-assertion entities” or “PAEs”) are deterring innovation by small startups by employing “extortionate” litigation tactics.[8] Oversimplifying, the argument is that, by selecting certain winning technologies, standardization artificially weakens implementers’ bargaining position vis à vis patent holders. Accordingly, critics argue that the royalties charged by SEP holders should not exceed those that they could have obtained before their technology was included in a standard. However, there is little evidence beyond occasional anecdotes to support the first of these concerns, and a growing body of empirical research points in the opposite direction.[9] And the latter concern, while real, is complex, and the optimal policy response should address these complexities more than typical proposals do. Yet despite the limited evidence and complexities, policymakers have been quick to act on them.

It may even be the case that the policy changes that have been made are impeding the ability of owners of SEPs to enforce their rights to such an extent that they are now being under-rewarded. Most notably, there is at least some evidence to suggest that the looser enforcement of IP rights is resulting in holdout behavior (i.e., situations where would-be licensees avoid concluding a license agreement because they know that they are shielded from legal repercussions for infringement).[10]

While this does not appear to have resulted in a marked decrease in innovative output so far, there is certainly a risk of that happening, especially if lawmakers continue to alter the legal regime in ways that systematically disadvantage patent holders. Indeed, although the causes are unclear, already there are concerns about secular stagnation and the slowdown in productivity growth.[11] In that context, policies that weaken incentives to innovate seem like the height of folly. Moreover, since many important innovations bear fruit only many years after the initial investment in research and development, any subsequent change of course may have few short-term benefits and might even have short-term costs, making it politically difficult if not impossible to change course once more significant adverse effects on innovation start to appear.

### 1NC – AT: Patent Holdup

#### ‘Patent holdups’ are a lie. Antitrust policies are a greater threat.

Barnett ’18 [Jonathan, Ronald A. Cass, Richard A. Epstein, Douglas H. Ginsburg, Gus Hurwitz, David J. Kappos, Paul Michel, Adam Mossoff, Kristen Osenga, David J. Teece, and Joshua D. Wright; February 22; Professor at the USC Gould School of Law; Dean Emeritus of the Boston University School of Law; Law Professor at New York University; Senior Circuit Judge, United States Court of Appeals for the District of Columbia Circuit, Law Professor at George Mason University; Law Professor at the University of Nebraska; Former Under Secretary of Commerce and Director of the United States Patent & Trademark Office; Retired Chief Judge of the United States Court of Appeals for the Federal Circuit; Law Professor at George Mason University; Professor at the University of Richmond School of Law; Thomas W. Tusher Professor in Global Business at the University of California at Berkeley; Former Commissioner of the Federal Trade Commissioner, Law Professor at George Mason University; IP Watchdog, “Apply Evidence-based Approach to Antitrust Law Equally to Innovators and Implementers,” https://www.ipwatchdog.com/2018/02/22/evidence-based-application-antitrust-law/id=93755/]

As judges, former judges and government officials, legal academics and economists who are experts in antitrust and intellectual property law, we write to express our support for your recent announcement that the Antitrust Division of the Department of Justice will adopt an evidence-based approach in applying antitrust law equally to both innovators who develop and implementers who use technological standards in the innovation industries.

We disagree with the letter recently submitted to you on January 24, 2018 by other parties who expressed their misgivings with your announcement of your plan to return to this sound antitrust policy. Unfortunately, their January 24 letter perpetuates the long-standing misunderstanding held by some academics, policy activists, and companies, who baldly assert that one-sided “patent holdup” is a real-world problem in the high-tech industries. This claim rests entirely on questionable models that predict that opportunistic behavior in patent licensing transactions will result in higher consumer prices. These predictions are inconsistent with actual market data in any high-tech industry.

It bears emphasizing that no empirical study has demonstrated that a patent-owner’s request for injunctive relief after a finding of a defendant’s infringement of its property rights has ever resulted either in consumer harm or in slowing down the pace of technological innovation. Given the well understood role that innovation plays in facilitating economic growth and wellbeing, a heavy burden of proof rests on those who insist on the centrality of “patent holdup” to offer some tangible support for that view, which they have ultimately failed to supply in the decade or more since that theory was first propounded. Given the contrary conclusions in economic studies of the past decade, there is no sound empirical basis for claims of a systematic problem of opportunistic “patent holdup” by owners of patents on technological standards.

Several empirical studies demonstrate that the observed pattern in high-tech industries, especially in the smartphone industry, is one of constant lower quality-adjusted prices, increased entry and competition, and higher performance standards. These robust findings all contradict the testable implications of “patent holdup” theory. The best explanation for this disconnect between the flawed “patent holdup” theory and overwhelming weight of the evidence lies in the institutional features that surround industry licensing practices. These practices include bilateral licensing negotiations, and the reputation effects in long-term standards activities. Both support a feed-back mechanism that creates a system of natural checks and balances in the setting of royalty rates. The simplistic models of “patent holdup” ignore all these moderating effects.

Of even greater concern are the likely negative social welfare consequences of prior antitrust policies implemented based upon nothing more than the purely theoretical concern about opportunistic “patent holdup” behavior by owners of patented innovations incorporated 2 into technological standards. For example, those policies have resulted in demands to set royalty rates for technologies incorporated into standards in the smartphone industry according to particular components in a smartphone. This was a change to the longstanding industry practice of licensing at the end-user device level, which recognized that fundamental technologies incorporated into the cellular standards like 2G, 3G, etc., optimize the entire wireless system and network, and not just the specific chip or component of a chip inside a device.

### 1NC – AT: Democracy

#### Democracy is resilient but fails (no DPT)

Renske Doorenspleet 19, Politics Professor at the University of Warwick, “Conclusion: Rethinking the Value of Democracy,” Rethinking the Value of Democracy, Springer Berlin Heidelberg, 2019, pp. p. 239-243

Key Findings: Rethinking the Value of Democracy

The value of democracy has been taken for granted until recently, but this assumption seems to be under threat now more than ever before. As was explained in Chapter 1, democracy’s claim to be valuable does not rest on just one particular merit, and scholars tend to distinguish three different types of values (Sen 1999). This book focused on the instrumental value of democracy (and hence not on the intrinsic and constructive value), and investigated the value of democracy for peace (Chapters 3 and 4), control of corruption (Chapter 5) and economic development (Chapter 6). This study was based on a search of an enormous academic database for certain keywords,6 then pruned the thousands of articles down to a few hundred articles (see Appendix) which statistically analysed the connection between the democracy and the four expected outcomes.

The frst fiding is that a reverse wave away from democracy has not happened (see Chapter 2). Not yet, at least. Democracy is not doing worse than before, at least not in comparative perspective. While it is true that there is a dramatic decline in democracy in some countries,7 a general trend downwards cannot yet be detected. It would be better to talk about ‘stagnation’, as not many dictatorships have democratized recently, while democracies have not yet collapsed.

Another fnding is that the instrumental value of democracy is very questionable. The feld has been deeply polarized between researchers who endorse a link between democracy and positive outcomes, and those who reject this optimistic idea and instead emphasize the negative effects of democracy. There has been ‘no consensus’ in the quantitative literature on whether democracy has instrumental value which leads some beneficial general outcomes. Some scholars claim there is a consensus, but they only do so by ignoring a huge amount of literature which rejects their own point of view. After undertaking a large-scale analysis of carefully selected articles published on the topic (see Appendix), this book can conclude that the connections between democracy and expected benefts are not as strong as they seem. Hence, we should not overstate the links between the phenomena.

The overall evidence is weak. Take the expected impact of democracy on peace for example. As Chapter 3 showed, the study of democracy and interstate war has been a fourishing theme in political science, particularly since the 1970s. However, there are four reasons why democracy does not cause peace between countries, and why the empirical support for the popular idea of democratic peace is quite weak. Most statistical studies have not found a strong correlation between democracy and interstate war at the dyadic level. They show that there are other—more powerful—explanations for war and peace, and even that the impact of democracy is a spurious one (caveat 1). Moreover, the theoretical foundation of the democratic peace hypothesis is weak, and the causal mechanisms are unclear (caveat 2). In addition, democracies are not necessarily more peaceful in general, and the evidence for the democratic peace hypothesis at the monadic level is inconclusive (caveat 3). Finally, the process of democratization is dangerous. Living in a democratizing country means living in a less peaceful country (caveat 4). With regard to peace between countries, we cannot defend the idea that democracy has instrumental value.

Can the (instrumental) value of democracy be found in the prevention of civil war? Or is the evidence for the opposite idea more convincing, and does democracy have a ‘dark side’ which makes civil war more likely? The findings are confusing, which is exacerbated by the fact that different aspects of civil war (prevalence, onset, duration and severity) are mixed up in some civil war studies. Moreover, defining civil war is a delicate, politically sensitive issue. Determining whether there is a civil war in a particular country is incredibly diffcult, while measurements suffer from many weaknesses (caveat 1). Moreover, there is no linear link: civil wars are just as unlikely in democracies as in dictatorships (caveat 2). Civil war is most likely in times of political change. Democratization is a very unpredictable, dangerous process, increasing the chance of civil war significantly. Hybrid systems are at risk as well: the chance of civil war is much higher compared to other political systems (caveat 3). More specifcally, both the strength and type of political institutions matter when explaining civil war. However, the type of political system (e.g. democracy or dictatorship) is not the decisive factor at all (caveat 4). Finally, democracy has only limited explanatory power (caveat 5). Economic factors are far more significant than political factors (such as having a democratic system) when explaining the onset, duration and severity of civil war. To prevent civil war, it would make more sense to make poorer countries richer, instead of promoting democracy. Helping countries to democratize would even be a very dangerous idea, as countries with changing levels of democracy are most vulnerable, making civil wars most likely. It is true that there is evidence that the chance of civil war decreases when the extent of democracy increases considerably. The problem however is that most countries do not go through big political changes but through small changes instead; those small steps—away or towards more democracy—are dangerous. Not only is the onset of civil war likely under such circumstances, but civil wars also tend to be longer, and the confict is more cruel leading to more victims, destruction and killings (see Chapter 4).

A more encouraging story can be told around the value for democracy to control corruption in a country (see Chapter 5). Fighting corruption has been high on the agenda of international organizations such as the World Bank and the IMF. Moreover, the theme of corruption has been studied thoroughly in many different academic disciplines—mainly in economics, but also in sociology, political science and law. Democracy has often been suggested as one of the remedies when fghting against high levels of continuous corruption. So far, the statistical evidence has strongly supported this idea. As Chapter 5 showed, dozens of studies with broad quantitative, cross-national and comparative research have found statistically signifcant associations between (less) democracy and (more) corruption. However, there are vast problems around conceptualization (caveat 1) and measurement (caveat 2) of ‘corruption’. Another caveat is that democratizing countries are the poorest performers with regard to controlling corruption (caveat 3). Moreover, it is not democracy in general, but particular political institutions which have an impact on the control of corruption; and a free press also helps a lot in order to limit corruptive practices in a country (caveat 4). In addition, democracies seem to be less affected by corruption than dictatorships, but at the same time, there is clear evidence that economic factors have more explanatory power (caveat 5). In conclusion, more democracy means less corruption, but we need to be modest (as other factors matter more) and cautious (as there are many caveats).

The perceived impact of democracy on development has been highly contested as well (see Chapter 6). Some scholars argue that democratic systems have a positive impact, while others argue that high levels of democracy actually reduce the levels of economic growth and development. Particularly since the 1990s, statistical studies have focused on this debate, and the empirical evidence is clear: there is no direct impact of democracy on development. Hence, both approaches cannot be supported (see caveat 1). The indirect impact via other factors is also questionable (caveat 2). Moreover, there is too much variation in levels of economic growth and development among the dictatorial systems, and there are huge regional differences (caveat 3). Adopting a one-size-ftsall approach would not be wise at all. In addition, in order to increase development, it would be better to focus on alternative factors such as improving institutional quality and good governance (caveat 4). There is not suffcient evidence to state that democracy has instrumental value, at least not with regard to economic growth. However, future research needs to include broader concepts and measurements of development in their models, as so far studies have mainly focused on explaining cross-national differences in growth of GDP (caveat 5).

Overall, the instrumental value of democracy is—at best—tentative, or—if being less mild—simply non-existent. Democracy is not necessarily better than any alternative form of government. With regard to many of the expected benefts—such as less war, less corruption and more economic development—democracy does deliver, but so do nondemocratic systems. High or low levels of democracy do not make a distinctive difference. Mid-range democracy levels do matter though. Hybrid systems can be associated with many negative outcomes, while this is also the case for democratizing countries. Moreover, other explanations—typically certain favourable economic factors in a country—are much more powerful to explain the expected benefts, at least compared to the single fact that a country is a democracy or not. The impact of democracy fades away in the powerful shadows of the economic factors.8

### 1NC – AT: 5G

#### No Chinese 5G---Huawei proves they’re unable to turn tech into dominance.

Hal Brands 9-19, Henry A. Kissinger Distinguished Professor of Global Affairs at the Johns Hopkins School of Advanced International Studies, Scholar at the American Enterprise Institute, Ph.D. from Yale University, “Huawei’s Decline Shows Why China Will Struggle to Dominate,” Bloomberg, 09-19-2021, https://www.bloomberg.com/opinion/articles/2021-09-19/huawei-s-decline-shows-why-china-will-struggle-to-dominate

One of the biggest geopolitical developments of the last two years has been the quiet decline of Huawei Technologies Co. In 2019, the Chinese telecommunications behemoth was racing toward dominance of the world’s 5G networks. It was a symbol of Beijing’s apparent rise to technological primacy. Today, however, Huawei isn’t thinking about supremacy: “Our aim is to survive,” its chairman has announced.

Since 2020, Huawei has been caught in the global blowback against Chinese belligerence. It has been pummeled by a U.S. diplomatic and sanctions campaign. Barring an unexpected rescue, its prospects will worsen next year, when Huawei exhausts its limited supply of state-of-the-art— the vital components for modern electronics. For years, many experts believe, Huawei has been tightly linked to the Chinese Communist Party. Now, it is semiconductors becoming a casualty of America’s intensifying technological conflict with Beijing.

Huawei’s decline is instructive for several reasons. It shows how China is often its own worst enemy, as its global assertiveness makes its rivals multiply. It represents bipartisan effectiveness: President Joe Biden has prosecuted the assault against Huawei by refining policies that President Donald Trump initiated with strong congressional support. Not least, it shows that the U.S. has the tools, and can assemble the strategy, to win a high-tech rivalry with China — provided Washington can avoid losing crucial near-term battles first.

Huawei became a telecommunications giant thanks to a unique combination of advantages. It received generous government subsidies, totaling perhaps $75 billion, which allowed it to develop quality products while undercutting its competitors’ prices. Unlike its foreign competitors, Huawei had unfettered access to China’s vast domestic market, which allowed it to operate at a scale that further drove down costs. And it benefitted from the political and diplomatic support of the Communist Party, which viewed 5G telecommunications as a critical arena in the struggle for global power — at a time when America was, one Trump-era official acknowledged, “asleep at the switch.”

By 2020, Huawei controlled 31% of the global telecommunications infrastructure market and had more contracts to build 5G networks than any other company. Its customers were not just cost-conscious developing countries: Roughly half of Huawei’s 91 contracts for 5G were in Europe, and even close U.S. allies such as the U.K. had chosen to include Huawei’s gear in their networks. Meanwhile, the U.S. response was fitful.

If Huawei built the world’s 5G networks, U.S. officials feared, Beijing could cite its National Intelligence Law to demand access to sensitive information flowing through them. China would reap enormous geopolitical leverage, much as the U.K. had by dominating the world’s undersea communications cables in the late 19th and early 20th centuries. Beijing’s vision of the future, in which advanced technologies turbocharge autocratic capitalism, would move closer to reality. And because 5G networks feature infrastructure that is costly and difficult to replace, countries that chose Huawei now might have to rely on its upgrades for years to come. “The race for 5G is on, and America must win,” Trump declared.

Through 2019, however, a divided Trump administration struggled to respond. The potentially punishing sanctions the president leveled against the company were, in practice, patchy and inconsistent. Trump launched an anti-Huawei diplomatic campaign, enlisting Australia, Japan and countries that relied heavily on American protection, such as Poland. Yet the president undermined his own efforts by suggesting that Huawei was just a bargaining chip in the broader U.S.-China dispute.

An “America First” administration also had trouble with the daunting task of developing affordable, non-Huawei options. When Secretary of Defense Mark Esper warned European elites not to rely on Chinese technology in February 2020, a response from the crowd — “are you offering an alternative?” — produced laughter and applause.

Huawei seemed to be running away with the race to wire the world for the next generation. In fact, its fortunes were about to fade.

China’s own behavior is partly to blame. Beijing had already shown a capacity to unintentionally undercut Huawei’s prospects, as when it alienated Canada by effectively kidnapping two Canadian citizens in 2018. The outbreak of Covid-19, and the way China attempted to exploit the pandemic, forced countries around the world to reconsider ties to the regime.

A slew of European countries walked away from Huawei; China’s overall global favorability ratings dropped sharply. Similarly, after Chinese forces clashed with India high in the Himalayas in June 2020, the Indian government effectively barred Huawei from the country’s 5G networks.

The U.S. has been well-positioned to profit from this blowback, because a three-pronged strategy — begun by Trump and continued by Biden — has begun to cohere.

First is a renewed diplomatic push. Pressure from Trump, including threats to curtail intelligence sharing, ultimately helped sway Britain and other close allies to distance themselves from Huawei. The U.S.-sponsored Clean Network, a coalition of countries that have pledged to exclude high-risk vendors, gathered more adherents during 2020 as American officials consistently drove home the dangers of working with Huawei.

In 2021, the fact that U.S. policy has become less gratuitously antagonistic toward allies under Biden has also made it easier to rally international support. Yan Xuetong, dean of the Institute of International Relations at Tsinghua University, acknowledges that the president’s “multilateral club strategy” has taken a toll.

Second, Washington has used powerful sanctions to starve Huawei of vital inputs. By ending Trump’s ambivalence about China, Covid accelerated his anti-Huawei campaign. By the close of the Trump years, Huawei was prohibited from doing business with Google, Facebook and other U.S. firms that provided key software for its phones. More important, Washington had cut off Huawei from the highly sophisticated semiconductors on which its products rely.

Washington’s success came from exploiting asymmetric strengths — the reach of the U.S. financial system, America’s unmatched geopolitical influence, and the ubiquity of U.S. and allied technology at the highest ends of the semiconductor value chain — to turn its policy toward a global prohibition on providing advanced semiconductors or semiconductor technology to China. The U.S. does not, for example, produce the world’s most advanced chip-making equipment; a Dutch firm, ASML, does. But Washington has used its leverage to prevent ASML from exporting specialized chip-making equipment to China, and to stop foreign chipmakers, such as Taiwan Semiconductor Manufacturing Company, from selling their top products to Huawei. Even in highly globalized industries, the arm of American power is long.

The U.S. thus struck at an asymmetric Chinese weakness: It remains unable, despite massive investments, to design and produce cutting-edge semiconductors itself. “The fact that core technology is controlled by others,” President Xi Jinping has admitted, “is our greatest hidden danger.” Here, too, Biden has picked up where Trump left off, limiting Huawei’s ability to raise capital in the U.S. and otherwise intensifying the sanctions campaign.

The damage has been substantial. U.S. restrictions have created new uncertainty around Huawei’s supply chain. They have also raised the likelihood that Huawei will soon have to rely on less-sophisticated semiconductors, which consume more power and ultimately make the networks that feature them more expensive to operate over time. American sanctions are thus giving countries an economic motive to shun Huawei, in addition to longstanding security concerns.

These measures are buying time for a third aspect of U.S. strategy: the multilateral development of alternatives to Huawei. The International Development Finance Corporation is offering financing to countries that choose non-Chinese options for their 5G networks. If Huawei can be stymied, then firms in democratic countries will have a better shot at setting the technological standards that will shape the telecommunications industry in the future.

The Biden administration is also betting on something called Open Radio Access Networks, or O-RAN, an effort to develop common standards that promote greater compatibility between different types of telecommunications equipment. In effect, O-RAN allows different companies to plug and play in a single network, making it harder for Huawei or any other firm to dominate global telecommunications infrastructure.

O-RAN has yet to be deployed commercially at any scale. Feasibility and affordability remain significant concerns; it may work better for big countries than for small ones. Yet the pace of deployments is predicted to accelerate rapidly over the next three to five years, so Biden has put it high on the agenda for U.S. diplomacy with key countries (South Korea, Japan, India) as well as institutions such as the European Union and the Quadrilateral Security Dialogue.

America’s strategy, then, is about running faster as well as slowing its rival. Washington aims to break Huawei’s momentum until the U.S. and its friends can develop alternatives that will limit the Chinese firm’s global appeal.

The effects of U.S. policy are starting to accumulate. As of 2021, eight of the world’s 10 largest economies, countries representing over 60% of the world’s cellular equipment market, and nearly all members of the European Union, had either banned or restricted Huawei from their 5G networks.

Many countries that have not imposed formal restrictions, such as Germany and Canada, have subtly made it very difficult for Huawei. The company’s sales of network gear fell 14.2% between mid-2020 and mid-2021. Its overall revenue fell roughly 29% and earnings have slumped in regions from the Middle East to the Americas. Huawei’s founder, Ren Zhengfei, has declared that there is “no chaos within the company,” but the numbers tell a different story.

Huawei’s predicament could get much worse. Probably next year, the company will run out of the advanced semiconductors it stockpiled as U.S. hostility grew. That will force it to fulfill existing contracts with older, less efficient components — or not fulfill them at all. Huawei may be too important for the Communist Party to let it fail. But its global expansion will become increasingly problematic.

Meanwhile, there has been less collateral damage from the anti-Huawei campaign than some observers initially feared. U.S. and foreign chipmakers worried that the sanctions would crush their sales, given that Huawei was the world’s third-largest chip purchaser.

Allied governments chafed at Washington’s push to make its sanctions extraterritorial. But the chipmakers have not been massacred, in part because Huawei’s now-thriving competitors are buying more, and in part because the U.S. has allowed Huawei to purchase older chips not suitable for its 5G business. And American policies have often benefited major foreign firms, such as Samsung Electronics Co., Ericsson AB and Nokia Oyj, by hobbling their principal rival.

O-RAN remains the least developed part of U.S. strategy. But even here, there are encouraging signs. This year, several major European telecom firms agreed to build O-RAN networks spanning the continent. Major mobile carriers in India have also decided to invest in the technology for their domestic networks and develop products for export.

As they do so, O-RAN will start to profit from scale effects of the sort Huawei enjoyed. And because the Indian telecom market has a low average revenue per user, an approach that is economically viable there could be viable almost anywhere. If that happened, Huawei’s price advantage in developing markets — so far, its trump card — may become a thing of the past.

Two years ago, Huawei was a symbol of China’s global tech ambitions. Today, it is an example of persistent Chinese vulnerability, as well as a marker of how America has begun to fuse the unilateral coercion and multilateral construction necessary to wage a technological cold war. Yet Huawei’s story also underscores a final lesson, on the need for speed in U.S. strategy.

The 5G network is a classic example of a technology with first-mover advantages. Companies that build and install the hardware on which 5G networks sit will enjoy lasting influence over the countries those networks serve. The U.S. nearly waited too long to meet the threat — and even as Huawei struggles, the battle isn’t through.

Washington is just beginning to promote alternatives to Huawei, and to make the generational investments needed to keep America and its allies far ahead in designing and producing top-shelf semiconductors. Beijing isn’t conceding defeat: It is quadrupling down on indigenous innovation in hopes of becoming the world’s leader in advanced semiconductors by 2030.

Other battles await. China is bidding for control of the world’s data, through investments in cloud computing, data centers and fiberoptic cables. AI, biotech and quantum computing loom large. The U.S. has begun, albeit belatedly, to address the challenge of Chinese-dominated 5G networks. The lesson for the broader tech competition is not to wait until it is too late.

#### ‘5G racing’ is total B.S.

Nilay Patel 19, J.D. from the University of Wisconsin Law School, Editor-in-Chief of The Verge, Former Acting Managing Editor for Vox, AB in Political Science from the University of Chicago, “Wait, Why The Hell Is The ‘Race To 5G’ Even A Race?”, The Verge, 5/23/2019, https://www.theverge.com/2019/5/23/18637213/5g-race-us-leadership-china-fcc-lte

I have a dumb question that no one seems capable of answering directly: *Why is 5G a race?*

Everyone — the wireless industry, Democrats, Republicans, the major media, you name it — frames the building of next-generation 5G networks as a “race” in which the United States needs to demonstrate “leadership.”

Here is The Washington Post declaring America has the lead in the race to 5G. Here’s CNN asking “Who’s winning the race to 5G?” Here’s AT&T CEO Randall Stephenson declaring that China isn’t beating the US to 5G “yet,” as some sort of ominous warning. Here’s T-Mobile CEO John Legere telling the House Subcommittee on Communications and Technology that merging with Sprint will let his company “win the race to 5G.” Here is an entire microsite from industry lobbying group CTIA titled “The Race to 5G.”

Let us never forget AT&T being so desperate to lead this “race” that it rolled out fake 5Ge logos on its phones.

But the stakes of this supposed race are wholly unclear. What happens if we win, besides telecom execs getting slightly richer? More importantly, what are the drawbacks to coming in second, or even third? Where is the list of specific negative outcomes of China building a 5G network a month, a year, or even five years before the United States? I’ve never seen it, and I keep asking about it.

NO ONE CAN SAY WHAT BAD THINGS WILL HAPPEN IF WE DON’T WIN THE RACE TO 5G

For example, here’s FCC Commissioner Geoffrey Starks on The Vergecast this week, when I asked why 5G is a race.

“I think it is important for us to continue to lead the race ... we obviously led to 4G and I think we get to set some of the standards that are ultimately going to be implemented worldwide, which is why there is a little bit of a race.”

Starks went on to say that China wants to be a global leader in supplying 5G equipment and that’s why Huawei has been so aggressively building and pricing its gear. But Huawei depends on American chip technology to make its products, and the US government has just put Huawei on a blacklist anyway. So... the race is so we can set some wireless standards? I suspect Apple, Google, Qualcomm, Verizon, and AT&T can fend for themselves when it comes to that process.

The other main argument for winning the “race” to 5G is that having the world’s best and fastest networks will create new economic opportunities for businesses of all kinds — we’ll enable self-driving cars and telemedicine and all the other stuff you hear about during interminable 5G slideshows at trade conferences. At a hearing before the Senate Committee on Commerce, Science, and Transportation earlier this year, Mississippi Sen. Roger Wicker confidently declared that “failing to win the race to 5G would not only materially delay the benefits of 5G for the American people, it would forever reduce the economic and societal gains that come from leading the world in technology.”

WE WON THE RACE TO LTE AND OUR LTE NETWORKS ARE AMONG THE SLOWEST AND MOST EXPENSIVE IN THE WORLD

Maybe. It is indeed true that better networks lead to better opportunities, and that widespread high-speed broadband is something everyone wants. But I sincerely doubt that all of these companies will pick up and move to China or Europe if the United States builds 5G networks slightly slower. After all, we already have some of the slowest and most expensive networks in the world, and Apple and Facebook have not yet relocated to South Korea.

The more I hear about the race, the more I don’t buy it. I think the “race” framing is there to make some big decisions seem urgent and important — to make it appear as though some serious trade-offs are worth it in order to “win.” And those trade-offs are indeed serious: 5G networks will require a serious rethinking of how we use wireless spectrum. There are incredible privacy implications around putting millions of IoT devices in a “smart city” on 5G. Investment dollars will naturally flow toward building 5G networks in cities instead of expanding our networks to rural areas, exacerbating the digital divide.

THE “RACE” IS TO THERE TO MAKE SERIOUS TRADE-OFFS SEEM WORTH IT SO WE CAN “WIN”

And once the “race” to build out 5G in big cities is “won,” the pressure to expand access to other places in the country will vanish, making that divide even worse. It is worth carefully considering all of these things before giving in to haste.

Oh, and it appears that some of the required 5G spectrum might interfere with important weather sensors, a concern raised by NASA, the Navy, and the NOAA in hearings before Congress last week. How did the wireless industry respond to these concerns? By writing a blog post accusing meteorologists from across three government agencies of “risking our 5G leadership.” The implication, of course, is that worrying about detecting major weather events could make us lose the race.

This race is imaginary bullshit. It’s being foisted on us by huge telecom companies that know internet access is fundamentally a commodity and want something new to sell at high prices instead of competing to improve service and lower prices on the networks they have. After all, the United States “won” the “race” for LTE, but it bears repeating: our LTE networks are among the slowest in the world, and our prices among the highest. What did winning that race accomplish for the millions of people across the country that still can’t get a reliable LTE signal?

### 1NC – AT: Kroenig Impact

#### No China rise or war impact

Shifrinson 19 [Joshua Shifrinson is an Assistant Professor of International Relations with the Pardee School of Global Affairs at Boston University. Should the United States Fear China’s Rise? Winter 2019. www.bu.edu/pardeeschool/files/2019/01/Winter-2019\_Shifrinson\_0.pdf]

In short, limited predation—not an overt and outright push to overtake and challenge the United States—is the name of China’s current and highly rational game. As significantly, it appears Chinese leaders are aware of the structural logic of the situation. Despite ongoing debate over the extent to which China has departed from its long-standing “hide strength, bide time” strategy first formulated by Deng Xiaoping in favor a more assertive course seeking to increase Chinese influence in world affairs, Chinese leaders and China watchers have been at pains to point out that Chinese strategy still seeks to avoid provoking conflict with the United States.49 As one analyst notes, China’s decision to carve out a more prominent role for itself in world politics has been coupled with an effort to reassure and engage the United States so as to avoid unneeded competition while facilitating stability.50 Chinese leaders echo these themes, with one senior official noting in 2014 that Chinese policy focused on “properly addressing] conflicts and differences through dialogue and cooperation instead of confrontational approaches.”51 Xi Jinping himself has underlined these currents, arguing even before taking office that U.S.-Chinese relations should be premised on “preventing conflict and confrontation,” and more recently vowing that “China will promote coordination and cooperation with other major countries.”52 Ultimately, as one scholar observes, there is “hardly evidence that [... China has] begun to focus on hegemonic competition.”53 Put another way, China’s leaders appear aware of the risks of taking an overly confrontational stance toward a still-potent United States and have scoped Chinese ambitions accordingly.

## Cyber Adv

### 1NC – Court Circumvention

#### Courts are bought out – circumvents enforcement

Crane ‘21 [Daniel A Crane. Frederick Paul Furth, Sr. Professor of Law, University of Michigan. I am very grateful for many helpful comments from Tom Arthur, Jonathan Baker, Steve Calkins, Dale Collins, Eleanor Fox, Rebecca Haw, Hiba Hafiz, Jack Kirkwood, Bob Lande, Christopher Leslie, Alan Meese, Steve Ross, Danny Sokol, and other participants at the University of Florida Summer Antitrust Workshop. "ANTITRUST ANTITEXTUALISM." https://scholarship.law.nd.edu/cgi/viewcontent.cgi?article=4952&context=ndlr]

This view is so widely entrenched in the legal profession’s understanding of the antitrust laws—including, it must be admitted, this author’s—that it seems presumptuous to claim that the conventional wisdom is wrong, or at least significantly overstated. But it is. While the antitrust statutes may be lacking in some important particulars, they present a readily discernable meaning on many others. As Daniel Farber and Brett McDonnell have argued, “For the conscientious textualist, the statutory texts [of the antitrust laws] have considerably more specific meaning than the conventional wisdom would suggest.”5 And it is not simply the case that the meaning of the statutory texts could be rendered through ordinary methods of statutory interpretation but the courts have failed to see it. Rather, the courts frequently acknowledge that the statutory texts have a plain meaning, and then refuse to follow it.

But it gets worse. The courts have not merely abandoned statutory textualism or other modes of faithful interpretation out of a commitment to a dynamic common-law process. Rather, they have departed from text and original meaning in one consistent direction—toward reading down the antitrust statutes in favor of big business. As detailed in this Article, this unilateral process began almost immediately upon the promulgation of the Sherman Act and continues to this day. In brief: within their first decade of antitrust jurisprudence, the courts read an atextual rule of reason into section 1 of the Sherman Act to transform an absolute prohibition on agreements restraining trade into a flexible standard often invoked to bless large business combinations; after Congress passed two reform statutes in 1914, the courts incrementally read much of the textual distinctiveness out of the statutes to lessen their anticorporate bite; the courts have read the 1936 Robinson-Patman Act almost out of existence; and the Celler-Kefauver Amendments of 1950, faithfully followed in the years immediately after their promulgation, have been watered down to textually unrecognizable levels by judicial interpretation and agency practice. It is no exaggeration to say that not one of the principal substantive antitrust statutes has been consistently interpreted by the courts in a way faithful to its text or legislative intent, and that the arc of antitrust antitexualism has bent always in favor of capital.

#### Fiating through is a voting issue for predictability AND NEG ground.

Michael D. Moberly 14, B.B.A., J.D., University of Iowa; Shareholder, Ryley, Carlock & Applewhite, “Contemplating The Recognition of a Common Law Tort for Wrongfully Refusing to Hire Bankruptcy Debtors,” 22 Am. Bankr. Inst. L. Rev. 431, Lexis

To the extent the Wenners court addressed this "adequate alternative remedy" issue, 216 which is occasionally referred to as preclusion 217 (and also, somewhat misleadingly, 218 as another form of preemption), 219 the court concluded that the plaintiff's common law claim was not barred because section [\*466] 525 provides no remedy for employment terminations that are prohibited by the Bankruptcy Code. 220 [FOOTNOTE 220 BEGINS] See Wenners v. Great State Beverages, Inc., 663 A.2d 623, 625 (N.H. 1995) ("While a plaintiff may not pursue a common law remedy where the legislature intended to replace it with a statutory cause of action . . . here, there has been no clear statutory intent to supplant the common law cause of action . . . 'Section 525(b) itself provides no remedy for violation by a private employer.'" (quoting In re Hicks, 65 B.R. 980, 984 (Bankr. W.D. Ark. 1986))); see also Weeden v. Sears, Roebuck & Co., No. 98-435, 1999 WL 1209494, at \*3 n. 2 (D. N.H May, 25 1999) ("[T]he Wenners court found dispositive the fact that although a federal prohibition of employment termination existed, federal law provided no remedy for violations of the prohibition and no procedures for pursuing a violation."). [FOOTNOTE 220 ENDS] In contrast to its analysis of the federal preemption issue, 221 this aspect of the Wenners court's opinion is unpersuasive. 222 While section 525 provides no specific remedy for the bankruptcy-based discrimination that it prohibits, 223 section 105(a) of the Bankruptcy Code authorizes courts to enforce other provisions of the Code, 224 as the Robinette court recognized. 225 Several courts have invoked this authority to fashion remedies for violations of the antidiscrimination provision. 226

### 1NC – AT: Cyber

#### No cyber impact – attribution, restraint, and capabilities.

Lewis ’20 [James Andrew; 8/17/20; senior vice president and director of the Strategic Technologies Program at the Center for Strategic and International Studies; "Dismissing Cyber Catastrophe," https://www.csis.org/analysis/dismissing-cyber-catastrophe]

More importantly, there are powerful strategic constraints on those who have the ability to launch catastrophe attacks. We have more than two decades of experience with the use of cyber techniques and operations for coercive and criminal purposes and have a clear understanding of motives, capabilities, and intentions. We can be guided by the methods of the Strategic Bombing Survey, which used interviews and observation (rather than hypotheses) to determine effect. These methods apply equally to cyberattacks. The conclusions we can draw from this are:

Nonstate actors and most states lack the capability to launch attacks that cause physical damage at any level, much less a catastrophe. There have been regular predictions every year for over a decade that nonstate actors will acquire these high-end cyber capabilities in two or three years in what has become a cycle of repetition. The monetary return is negligible, which dissuades the skilled cybercriminals (mostly Russian speaking) who might have the necessary skills. One mystery is why these groups have not been used as mercenaries, and this may reflect either a degree of control by the Russian state (if it has forbidden mercenary acts) or a degree of caution by criminals.

There is enough uncertainty among potential attackers about the United States’ ability to attribute that they are unwilling to risk massive retaliation in response to a catastrophic attack. (They are perfectly willing to take the risk of attribution for espionage and coercive cyber actions.)

No one has ever died from a cyberattack, and only a handful of these attacks have produced physical damage. A cyberattack is not a nuclear weapon, and it is intellectually lazy to equate them to nuclear weapons. Using a tactical nuclear weapon against an urban center would produce several hundred thousand casualties, while a strategic nuclear exchange would cause tens of millions of casualties and immense physical destruction. These are catastrophes that some hack cannot duplicate. The shadow of nuclear war distorts discussion of cyber warfare.

State use of cyber operations is consistent with their broad national strategies and interests. Their primary emphasis is on espionage and political coercion. The United States has opponents and is in conflict with them, but they have no interest in launching a catastrophic cyberattack since it would certainly produce an equally catastrophic retaliation. Their goal is to stay below the “use-of-force” threshold and undertake damaging cyber actions against the United States, not start a war.

This has implications for the discussion of inadvertent escalation, something that has also never occurred. The concern over escalation deserves a longer discussion, as there are both technological and strategic constraints that shape and limit risk in cyber operations, and the absence of inadvertent escalation suggests a high degree of control for cyber capabilities by advanced states. Attackers, particularly among the United States’ major opponents for whom cyber is just one of the tools for confrontation, seek to avoid actions that could trigger escalation.

The United States has two opponents (China and Russia) who are capable of damaging cyberattacks. Russia has demonstrated its attack skills on the Ukrainian power grid, but neither Russia nor China would be well served by a similar attack on the United States. Iran is improving and may reach the point where it could use cyberattacks to cause major damage, but it would only do so when it has decided to engage in a major armed conflict with the United States. Iran might attack targets outside the United States and its allies with less risk and continues to experiment with cyberattacks against Israeli critical infrastructure. North Korea has not yet developed this kind of capability.

#### Resilience solves.

Lewis ’20 [James Andrew; 8/17/20; senior vice president and director of the Strategic Technologies Program at the Center for Strategic and International Studies; "Dismissing Cyber Catastrophe," https://www.csis.org/analysis/dismissing-cyber-catastrophe]

One major failing of catastrophe scenarios is that they discount the robustness and resilience of modern economies. These economies present multiple targets and configurations; they are harder to damage through cyberattack than they look, given the growing (albeit incomplete) attention to cybersecurity; and experience shows that people compensate for damage and quickly repair or rebuild. This was one of the counterintuitive lessons of the Strategic Bombing Survey. Pre-war planning assumed that civilian morale and production would crumple

under aerial bombardment. In fact, the opposite occurred. Resistance hardened and production was restored.1

### 1NC – AT: NC3

#### NC3 impacts are nonsense.

Dr. Andrew Futter 16, Associate Professor of International Politics and Director of Research for Politics and International Relations at the University of Leicester, “War Games Redux? Cyberthreats, US–Russian Strategic Stability, and New Challenges for Nuclear Security and Arms Control”, European Security, Volume 25, Issue 2, p. 171-172

It is of course highly unlikely that either the USA or Russia has plans – or perhaps more importantly, the desire – to fully undermine the other’s nuclear command and control systems as a precursor to some type of disarming first strike, but the perception that nuclear forces and associated systems could be vulnerable or compromised is persuasive. Or as Hayes (2015) puts it, “The risks of cyber disablement entering into our nuclear forces are real”. While the growing possibility of “cyber disablement” should not be overstated (notions of a “cyber-Pearl Harbor” (Panetta 2012) or “cyber 9–11” (Charles 2013) have done little to help understand the nature of the challenge), cyberthreats are nevertheless an increasingly important component of the contemporary US–Russia strategic context. This is particularly the case when they are combined with other emerging military-technical developments and programmes. The net result, especially given the current downturn in US–Russian strategic relations, and the way cyber is exacerbating the impact of other problematic strategic dynamics, is that is seems highly unlikely that either the USA or Russia will make the requisite moves to de-alert nuclear forces that the new cyber challenges appear to necessitate, or for that matter to (re)embrace the “deep nuclear cuts” agenda any time soon.

Assessing the options for arms control and enhancing mutual security

Given the new challenges presented by cyber to both US and Russian nuclear forces and to US–Russia strategic stability, it is important to consider what might be done to help mitigate and guard against these threats, and thereby help minimise the risks of unintentional launches, miscalculation, and accidents, and perhaps create the conditions for greater stability, de-alerting, and further nuclear cuts. While there is unlikely to be a panacea or “magic bullet” that will reduce the risk of cyberattacks on US and Russian nuclear forces to zero – be they designed to launch nuclear weapons or compromise the systems that support them – there are a number of options that might be considered and pursued in order to address these different types of threats and vulnerabilities. None, of these however, will be easy.

The most obvious and immediate priority for both the USA and Russia is working (potentially together) to harden and better protect nuclear systems against possible cyberattack, intrusion, or cyber-induced accidents. In fact, in October 2013 it was announced that Russian nuclear command and control networks would be protected against cyber incursion and attacks by “special units” of the Strategic Missile Forces (Russia Today 2014). Other measures will include better network defences and firewalls, more sophisticated cryptographic codes, upgraded and better protected communications systems (including cables), extra redundancy, and better training and screening for the practitioners that operate these systems (see Ullman 2015). However, and while comprehensive reviews are underway to assess the vulnerabilities of current US and Russian nuclear systems to cyberattacks, it may well be that US and Russian C2 infrastructure becomes more vulnerable to cyber as it is modernised and old analogue systems are replaced with increasingly hi-tech digital platforms. As a result, and while nuclear weapons and command and control infrastructure are likely to be the best protected of all computer systems, and “air gapped”14 from the wider Internet – this does not mean they are invulnerable or will continue to be secure in the future, particularly as systems are modernised or become more complex (Fritz 2009). Or as Peggy Morse, ICBM systems director at Boeing, put it, “while its old it’s very secure” (quoted in Reed 2012).

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### T

#### Federal courts have decided 4,278 rule of reason cases.

--WestLaw search for “adv: antitrust & (Rule +2 Reason)”

--this is the search used by Carrier 9 to capture all rule of reason cases, but without the date limiter because Carrier was updating an older article with post-1999 data

--FYI

Michael A. Carrier 9, Professor at Rutgers University School of Law-Camden, “The Rule of Reason: An Empirical Update for the 21st Century,” George Mason Law Review, Vol. 16, Iss. 4, pp 827-837

I. METHODOLOGY

This survey is based on a Westlaw search of all federal cases decided between February 2, 1999, and May 5, 2009. I located the cases by searching broadly for all rule of reason cases: “DA(aft 2/2/1999) & antitrust & (Rule +2 Reason).”

Such a search is designed to pick up every instance in which a court applied rule of reason analysis. I assumed that any court conducting such analysis would at least mention the phrase “rule of reason.” This would appear to be a reasonable assumption given the importance of labels in antitrust. A court applying rule of reason analysis—as opposed to, say, per-se or quick-look analysis—should naturally refer to the concept. And I include “antitrust” as one of my search terms to restrict the universe of cases to antitrust cases, a helpful limitation given the prevalence of the phrase “rule of reason” in other settings such as environmental, patent, and criminal law.9

#### Defendants won 95% of those.

Sandeep Vaheesan 17, Regulations Counsel at the Consumer Financial Protections Bureau, “Resurrecting “A Comprehensive Charter of Economic Liberty”: The Latent Power of the Federal Trade Commission,” University of Pennsylvania Journal of Business Law, Vol. 19, Iss. 3, pp 645-699

In adopting the rule of reason, the FTC practically guaranteed that it would be able to bring few, if any, Section 5 cases. The statistics demonstrate, in practice, that the rule of reason means that the plaintiff almost always loses. A leading study found that, between 2000 and 2009, defendants received a favorable court ruling in more than ninety-five percent of antitrust cases implicating the rule of reason.146

#### Nearly all of those are dismissed based on a substantive finding of ‘no anticompetitive effect’---reversing any one of those would be T! Insert this chart.

Michael A. Carrier 9, Professor at Rutgers University School of Law-Camden, “The Rule of Reason: An Empirical Update for the 21st Century,” George Mason Law Review, Vol. 16, Iss. 4, pp 827-837

Table

Description automatically generated

#### ‘Scope’ is whether antitrust law is available, not how it’s applied

Louis A. Bledsoe 19 III, Chief Business Judge on the North Carolina Business Court, “Rickenbaugh v. Power Home Solar, LLC”, North Carolina Superior Court, Mecklenburg County, 2019 NCBC LEXIS 109, 12/20/2019, Lexis

The question thus is whether the parties' agreement, through the incorporation of the AAA Construction Rules (and by that incorporation, the Supplementary Rules), that an arbitrator would decide the "scope" of the arbitration proceeding constitutes an agreement that the arbitrator would determine whether class arbitration is available in that proceeding. Giving the word "scope" its plain and ordinary meaning and considering it in the context [\*23] in which it is used in the AAA Rules, the Court concludes that it does. Other courts have agreed. See, e.g., JPay, 904 F.3d at 931 ("Formally, the question whether class arbitration is available will determine the scope of the arbitration proceedings."); Reed, 681 F.3d at 635-36 ("The parties' consent to the Supplementary Rules . . . constitutes a clear agreement to allow the arbitrator to decide whether the party's agreement provides for class arbitration."); Burkett, 2014 U.S. Dist. LEXIS 148442, at \*22 (holding that a rule vesting an arbitrator with authority to decide the scope of his or her own jurisdiction includes "the issue of 'who decides' class arbitrability").

#### Qualcomm ruled it didn’t violate antitrust, not that antitrust law didn’t have jurisdiction.

Sullivan 20 [Sullivan & Cromwell LLP, Leading Firm in Business Law “Ninth Circuit Holds That Qualcomm’s Patent Licensing Program Does Not Violate U.S. Antitrust Law”. 8/12/20. https://www.sullcrom.com/files/upload/sc-publication-ninth-circuit-holds-qualcomm-patent-licensing-program-does-not-violate-us-antitrust-law.pdf]

The Ninth Circuit’s decision, unless modified by the Supreme Court, affirms Qualcomm’s SEP licensing model for OEMs (and its refusal to license rival chipmakers), at least with respect to any challenge under U.S. antitrust laws. Because Qualcomm’s model has driven the cellular modem licensing and sale landscape for chip suppliers and handset makers alike, the court’s decision will likely quiet concerns on the part of some that the district court’s decision would upend that market, although it perhaps makes it less likely that the market will see increased competition or that chip prices will drop as may have been the case if Judge Koh’s injunction had been upheld.

Although the court confirmed that an SEP holder has no antitrust duty to deal with rivals outside the limited Aspen Skiing exception, the Ninth Circuit left open the possibility that an SEP holder’s FRAND commitments may obligate it to deal with its rivals.39 Importantly, however, the Ninth Circuit clarified that a company’s breach of its FRAND commitments does not amount to anticompetitive conduct in violation of the Sherman Act. Instead, the remedy for such conduct lies in contract law. Moreover, the court’s decision to vacate as moot the district court’s summary judgment decision—which found that Qualcomm was required by its FRAND commitments to license rival chipmakers—removes what some had considered to be persuasive judicial authority in the U.S. supporting a claim that FRAND requires licensing at all levels of a product distribution chain which implement a standard. This is noteworthy for SEP holders because it returns U.S. jurisprudence to the status quo, and at least one court in the Eastern District of Texas interpreted a comparable FRAND commitment as not requiring a SEP holder to license all comers at any level of the supply chain. This issue continues to be litigated in the U.S., notwithstanding the Department of Justice Antitrust Division general view that the market, not FRAND, should determine license structures.

The court’s refusal to force licensing at the chip level (rather than the OEM level) also may ease concerns that patent-exhaustion considerations could be used to limit SEP licensors’ ability to maximize profits if licenses were required at the chip level. The Ninth Circuit confirmed that royalty rates are not required to be set strictly using the SSPPU and recognized that “OEM-level licensing is now the industry norm.”40 The Ninth Circuit also recognized that “[t]here are good reasons for SEP owners to structure their licensing programs to license end-user products.”41 The court’s findings appear consistent with current flexibility in structuring FRAND licensing programs.

#### There’s a two-step process: first, ‘scope’, which determines whether claims can be heard, and second, the application of a particular legal standard once the question of scope has been decided. The plan only affects the latter.

Lise A. Barrera 96, J.D. from Wayne State University Law School, “Is the Courtroom the New Front for the Resolution of Publishing Disputes?,” The Wayne Law Review, Volume 42, Summer 1996, Lexis

It is important to note the distinction between the expansion of the scope of section 43(a) and the standard that courts apply in granting relief to claims under this section. The scope of section 43(a) allows plaintiffs to claim the section provides them with protection and thus should grant them relief. The expansion of the scope allows a much broader range of claims to be brought legitimately under section 43(a). Once the scope of the statute allows the claim to be brought, the courts apply a standard to the claim in order to determine whether a plaintiff should be granted relief.22 The standard applied is also the product of years of judicial interpretation. While the scope of section 43(a) is expanding, however, the standard for relief seems to be becoming higher and harder to meet.

#### Our evidence is from the ABA Antitrust Section’s Committee on Exemptions and Immunities, which literally wrote an authoritative text called “Handbook on the Scope of Antitrust!” It’s the T evidence gold standard.

Layne E. Kruse 19, Co-Chair; Melissa H. Maxman, Co-Chair; Vittorio Cottafavi, Vice Chair; Stephen M. Medlock, Vice Chair; David Shaw, Vice Chair; Travis Wheeler, Vice Chair; Lisa Peterson, Young Lawyer Representative; all on the Exemptions and Immunities Committee of the ABA Antitrust Section, “Long Range Plan, 2018-19,” American Bar Association, 3/18/19, https://www.americanbar.org/content/dam/aba/administrative/antitrust\_law/lrps/2019/exemptions-immunities.pdf

I. Current State of Exemptions and Immunities Committee

Even though we are a relatively small Committee, we address important policy issues that might not otherwise be addressed by the Antitrust Section. While we often work on issues alongside the Legislation Committee, our scope reaches judicial, as well as statutory exemptions. Our Committee is the one place within the Section that focuses on the concerns that may lead Congress or the courts to carve out certain conduct from traditional antitrust proscriptions.

In the 2017-2018 program year, we drafted and submitted four in-depth Section Comments at the request of the Council; produced six committee programs; published three newsletters; completed one ABA Handbook and are well underway on a second one; cosponsored two Spring Meeting Programs; co-sponsored one podcast; and participated in a Women in Leadership videoconference.

In the 2018-19 program year, we will chair an approved Spring Meeting Program; are cosponsoring a second approved Program; and we have been asked to revisit one of the Comments that we produced in the previous year. We are also working on committee programs, podcasts, and publications.

Perhaps most importantly, we are proud of our diversity achievements. In 2017-18, one of the E&I Co-Chairs was a woman for the first time, and our Young Lawyer Representative was LGBTQ for the first time. This year, we continue with a woman Co-Chair, a woman YLR, and we have added the first Vice Chair from the state of South Carolina on any Section Committee.

A. Scope of Charter: What is Role of Committee?

The Exemptions and Immunities Committee is chartered to address judicially created immunities from the antitrust laws, such as the Noerr-Pennington doctrine, state action, implied immunities, and filed rate doctrines, as well as statutory exemptions, including, among others, the McCarran-Ferguson and Capper-Volstead Acts. The Committee also addresses international issues, such as the Foreign Trade Antitrust Improvements Act (“FTAIA”), and other doctrines, such as antitrust preemption and primary jurisdiction, that affect the application and extent of the antitrust laws. The Committee strives to be the first and best resource for information on the fundamental question of defining the scope of the antitrust laws.

However, another key function of this Committee is an administrative role, rather than as a programming committee. This Committee serves as the de facto institutional memory before legislators and agencies for the Section's position on exemptions and immunities. The Section needs to have one place to look for what it has said in the past on exemption proposals, as well as commentary on DOJ or FTC attempts to narrow or expand exemptions. We believe this Committee has already served in that role and should serve in that role in the future. We want to improve on this function for the Section. We should have a Vice Chair designated as the point person to track prior comments and catalog the specific issues that have been raised. At the same time, we could develop a more standardized response. A related project would be a retrospective study of exemptions and their impact. We would join with International Task Force in its study of the impact of exemptions in other countries.

In short, the Committee should standardize the analysis of exemption proposals and reach out on the international front to catalog the differences in exemptions in different areas of the world.

B. Description of Reflective Evaluation of Membership Levels, Diversity, and Growth

The Committee currently has nearly 300 members, a 20% increase in membership in the last two years. Our members include government antitrust officials, private practitioners, corporate counsel and academics, and some practitioners based outside the United States. This variety of members ensures diverse views on the scope, applicability and appropriateness of antitrust exemptions and immunities.

Although other committees are larger, our Committee tends to include lawyers who specialize in specific antitrust issues. As most members of the Committee are members of other Section committees, the Committee may not be the primary committee that draws members into the Section. We believe that tracking the key issues surrounding the scope of the antitrust laws draws members of broader committees to also join E&I, and thus must continue to be a high priority for the Section.

#### They’re premier in the field

Jonathan B. Baker 19, Research Professor of Law at the American University Washington College of Law, “Market Power in an Era of Antitrust,” The Antitrust Paradigm: Restoring a Competitive Economy, 2019, pp. 11–31

Antitrust norms, especially the objection to collusive conduct, are consistently endorsed and upheld by enforcers and courts, regardless of political affiliation.12 These norms have spread throughout the world, particularly since the 1990s, with the aid of a growing global antitrust community. Annual attendance at the spring meeting of the American Bar Association’s Section of Antitrust Law—the premier gathering in the field—now exceeds 3,000, a threefold increase over the low ebb in the late 1980s. Several new academic journals dedicated to antitrust law, economics, and policy were launched in the last decade.

#### Rules of reason and per se illegality are both ‘prohibitions’

HLR 10 – Harvard Law Review, “The Supreme Court, 2009 Term: Leading Cases: III. Federal Statutes and Regulations: G. Sherman Act,” 124 Harv. L. Rev. 400, Lexis

When the Sherman Antitrust Act was passed in 1890, the expansive language of section 1 - which forbids every "contract, combination … or conspiracy, in restraint of trade" 63 - seemed as if it could [\*407] encapsulate nearly every type of business contract. 64 In Standard Oil, however, the Supreme Court clarified the law, explaining that Congress could not have intended this result and instead meant to prohibit only "unreasonable" restraints of trade. 65 This standard, which came to be known as the "rule of reason," stood in contrast to the rule of per se illegality, under which participants in the conduct in question would be allowed no defense or justification. 66 Due to its invitation of defenses and explanations, as well as its relatively low standard for legality, 67 the rule of reason functioned to allow most conduct that was not per se illegal to continue unimpeded. 68 From the start, detractors criticized the rule as applying the broad language of section 1 too narrowly and allowing too much anticompetitive activity to slip past the preventative measure that Congress had intended. 69

#### ‘Increase’ means ‘make greater’

Mitchell S. Goldberg 19, Judge on the US District Court for Pennsylvania Eastern, “Shire ViroPharma, Inc. v. CSL Behring LLC,” 2019 U.S. Dist. LEXIS 198992, Lexis

Finally, none of the prior art references submitted during prosecution—on which Defendants now rely—teach the inclusion of a baseline level. (See, e.g, Defs.' Opening Claim Constr. [\*37] Br., Ex. 18, at 148 (noting that in the common form of the disease, the reduction in functional activity is due to C1-INH concentrations being only 5-30% of normal, but "in the variant form of the disease, immunochemically detectable concentrations of C1-INH are normal or elevated, but a dysfunctional mutant protein is synthesized . . . . Furthermore, functional inadequacy of C1-INH can be transient without any decrease in the level of C1-INH."); Ex. 19, p. 907 (noting only that "for prevention of attacks, subphysiologic levels of C1-inhibitor (as low as 40% of normal levels) are sufficient").)18 [FOOTNOTE 18 BEGINS] In a final effort to bolster their respective positions, both parties cite to extrinsic evidence. Plaintiff specifically references a statement from their expert Andrew MacGinnitie. Dr. MacGinnitie testified at his deposition that, for certain HAE patients, achievement of 0.4 U/mL would not always result in treatment of an HAE attack. (Pl.'s Opening Claim Constr. Br., Ex. M, Dep. of Andrew MacGinnitie, 117:15-23.)Defendants quote a dictionary definition of "increase" from Webster's Collegiate Dictionary, noting that the term "increase" is defined as "to make greater." (Defs.' Opening Claim Constr. Br., Ex. 20.) Defendants then posit that, to "make greater" requires that the starting point be less than the end result. I find no need to resort to this extrinsic evidence to properly construe the term "increases," as its meaning is unambiguous and clear from the intrinsic record. See Vitronics Corp. v. Conceptronic, Inc., 90 F.3d 1576, 1583 (Fed. Cir. 1996) ("In those cases where the public record unambiguously describes the scope of the patented invention, reliance on any extrinsic evidence is improper."). [FOOTNOTE 18 ENDS]

#### That means the plan’s NOT a numerical increase---in this context, ‘prohibitions’ is a count noun

Bradford et al. 18, Anu Bradford, Henry L. Moses Professor of Law and International Organization, Columbia Law School; Adam S. Chilton, Assistant Professor of Law and Walter Mander Research Scholar, “Competition Law Around the World From 1889 to 2010: the Competition Law Index,” Jnl of Competition Law & Economics (2018) 14(3): 393-432, Lexis

II. The philosophy guiding the CLI

The goal of the CLI is to provide a measure of the intensity of competition regulation for as many jurisdictions and for as long a time period as possible. To do so, the CLI is based on a new coding of the elements of countries' competition laws. The more types of behaviors the law prohibits or the more extensive remedies the law entails, the higher the CLI. At the same time, the more defenses and exemptions the law provides, the lower the CLI. 12 [FOOTNOTE 12 BEGINS] In terms of the analytical logic guiding our index construction, the CLI is similar to those developed by Keith Hylton & Fei Deng as well as Michael Nicholson. See Hylton & Deng, supra note 2; Nicholson; supra note 2. These authors also measure the "scope" or the "net" of competition laws and aggregate the various prohibitions while doing so. We also follow their approach in that we deduct efficiencies from the score that reflects the prohibitions. However, as we discuss in Part VII, important differences exist between the CLI and those constructed by these other authors. [FOOTNOTE 12 ENDS] When designing the CLI in this way, we made two important decisions: (1) focusing on law on the books and (2) coding the presence of key provisions instead of trying to measure competition policies against an optimal policy of some form. We will discuss each of these decisions below. Additionally, we will also discuss some limitations of our approach.

A. Law on the books

The index focuses on competition laws on the books-in other words, the index is only based on competition law statutes. More specifically, the CLI is based on the coding of general competition laws and sectoral regulations containing competition provisions or other laws such as constitutions or criminal laws to the extent they regulate competition or provide sanctions for anticompetitive behavior. Although there are other ways to measure regulations across countries, coding countries' laws is an accepted method of evaluating legal regimes that we believe has several advantages for measuring competition law. 13 The CLI thus attempts to measure the legal framework in place for regulating market competition based on formal laws. 14

There are three things worth noting about the decision to focus on statutes. First, the CLI does not take account of case law. This might seem like a significant omission, especially for the United States competition law community. However, we believe this is a defensible and practical approach because few countries outside the United States have active courts that generate new competition rules or modify statutes to a degree that would influence our coding. 15 To verify this claim, we conducted an expert survey of competition law professors and practitioners from around the world. In total, 166 experts from 86 countries completed our survey. Of those countries, our results suggest that in only twelve jurisdictions do "courts play an extensive role" in the development of competition law (that is, "courts have the power to change the scope of competition law and frequently do so"). In another two jurisdictions, the experts described the role of courts as "large" (that is, "courts have the power to change the scope of competition statues and sometimes do so"). Thus, although our index is derived from competition statutes only, it provides a good proxy for the intensity of competition law in each country.

Second, the CLI does not take account of the resources or efforts countries put into enforcing their competition laws. It is, of course, possible that countries may have a strict law on the books, but that in practice the country expends no effort enforcing the law. In these cases, relying simply on a country's law on the books may overstate the stringency of the country's competition law regime. However, we decided that focusing on the law on the books for the CLI was the only practical way to build a comprehensive cross-sectional time-series dataset of competition policies around the world. This is because enforcement data is difficult, if not impossible, to obtain for a large number of countries and years. As part of our broader data collection efforts, we tried to collect information on the enforcement activities and resources of every country with a competition law regime. 16 After extensive efforts to collect publicly available data and directly contact antitrust agencies around the world, we were able to obtain at least some data on 112 antitrust agencies from 100 countries. But these data are only available for roughly a decade (2000-2010) for most jurisdictions. This experience made us realize that developing a measure of competition policy for nearly all countries that incorporates enforcement resources directly into the index is simply not feasible.

Third, we elected to base our measure of competition policy on the coding of legal statutes instead of surveys. One way that the stringency of competition law around the world has been measured is through surveys of various categories of experts. For instance, the World Economic Forum has collected extensive data on companies' views as to whether the "antimonopoly law is effective" across various countries. 17 Surveys like these have the advantage of being able to provide data on a wide range of countries. Moreover, they also offer the potential of providing a holistic measure of the competition regime within a country (that is, the respondents to the survey can factor in both the law on the books and the way it is enforced into their answers). That said, surveys are not without their disadvantages. Most notably, they capture perceptions of various market actors that can be highly subjective and that may not be comparable across jurisdictions.

B. Measuring common features of competition law

In addition to basing the CLI on coding statutes, we also elected to score countries based on whether they have common features of competition law rather than how closely the country's law resembles an "optimal law." This is because measuring the quality of countries' competition law would require us to engage in subjective assessment of what the appropriate law is, and also subscribe to an assumption that the optimal law remains constant over time and jurisdictions. Some external benchmarks for quality used by other researchers-such as OECD or ICN guidelines-would also be infeasible given the broad scope of our index across time and jurisdictions. There are no international benchmarks generated by these (or other) organizations that would allow us to measure the consistency of historical laws with internationally recognized best practices beyond the past two decades. 18

Instead, we coded countries for whether their laws include various key provisions. Although our data gathering has taught us the many varieties in which competition laws come, some standard features form the foundation of competition regimes. The CLI thus includes information on both the scope of the competition authority that the law conveys-including remedies that can be imposed if a violation is detected, the availability of the private

right of action, or exemptions that shield certain sectors of the economy from competition scrutiny-as well as the substantive provisions of the law across the well-known categories of competition laws-merger control, abuse of dominance, and anticompetitive agreements. When deciding which specific features to code for in these categories, we build on the work by Hylton & Deng and Nicholson yet supplement their features with additional elements that we identify as important. 19 Here, we rely on our expertise as legal scholars-and one of our experience practicing competition law-to assess what the key elements of competition laws are.

Because of the decision to code for key provisions, the CLI is purely descriptive. We do not attach any normative judgment to the index. More law is not necessarily better. Indeed, the way we construct the index reduces the overall score for many established regimes that recognize defenses (such as an efficiency defense) in their statutes. The index only measures the scope or the expansiveness of competition laws and hence the magnitude of regulatory risk embedded in the legal framework. It provides no indication of the effectiveness or soundness of the regime and hence cannot be used to rank countries in terms of their capacity to promulgate an optimal regulation or to act as benchmarks of "optimal" regulation that others should follow.

C. Limitations

Before discussing our data and the coding of the CLI, it is important to recognize that there are limitations to any index that attempts to quantify competition regulation. This is because it is difficult to produce a single metric that tells a comprehensive story of a country's competition regime. For example, if a specific type of conduct is prohibited, is it prohibited always (per se) or sometimes (rule of reason)? This seems like a relevant distinction to code, but it turns out to be difficult to capture systematically in many jurisdictions. For instance, Article 101(3) of the Treaty on the Functioning of the European Union (TFEU) seems to regulate anticompetitive agreements under the rule of reason standard in the European Union, but, in practice, cartels are per se prohibited. This highlights the challenge of coding even just the law in books, let alone accounting for all the nuances of a country's competition policies. 20

But a key principle that has guided our data gathering and coding is to not let the perfect be the enemy of the good. As a result, although we believe that the CLI provides several advancements beyond what was offered by other

measures, we recognize that future data collection and coding efforts could provide an even more complete picture of competition policy around the world. We thus hope that others build on the work we have done and continue to produce more precise measures of the essence of these laws and the intensity with which they shape the regulatory environment for competition.

III. Data

Our large-scale data collection effort began by identifying every jurisdiction that had adopted a domestic competition law by 2010. 21 Our research suggested that 126 countries had a competition law by then, including all 34 OECD countries. Additionally, seven regional organizations in some way regulate competition; including the EU, which exercises supranational competition jurisdiction over its 28 member states. For each jurisdiction, we identified the first year that a competition law was adopted and then tried to find every additional competition law passed thereafter until 2010. Thus, for example, for the United States, the first law we identified dates back to 1890, and for Germany, the first law we identified dates back to 1923.

We then coded the content of each of the laws we identified. To facilitate this coding, we developed a survey instrument that included questions on a large number of provisions found in competition laws. For example, the survey instrument had questions that capture the laws' stated policy goals; various substantive provisions on merger control, abuse of dominance, or anticompetitive agreements; and features such as the type of remedies authorized and exemptions embedded in these laws.

To identify and code these laws, we relied on the research assistance of over 70 students from Columbia Law School over a six-year period. This group included many international students who had relevant knowledge of foreign legal systems and required language skills. We had two students separately code each law using our survey instrument. A third coder then reviewed the original laws and resolved any discrepancies in instances where the original two coders differed on the initial coding round. 22 In the end, we managed to obtain and code 700 laws from 123 countries and 5 regional groups, leaving only 3 countries with competition laws by 2010 outside our dataset. 23

IV. Construction of the CLI

The CLI consists of two categories of variables: one category captures the provisions on the Authority to regulate competition while the other category captures the Substance of the law. By Authority , we refer to provisions on who can enforce the laws and the limits of their application, including the availability of remedies or private litigation as tools of competition enforcement. By Substance , we refer to the substantive rules regulating competition. More specifically, Substance refers to three sub-categories of rules: merger control, abuse of dominance, and anticompetitive agreements.

Figure 1 graphically depicts the categories of variables that comprise the CLI. Table 1 lists all the variables used to construct the CLI by category and the weights assigned to each. For each variable, countries can receive positive or negative "points." For example, a country would receive 1 point in the calculation of the CLI if their antitrust regime has a private right of action, but −0.5 points would be deducted if the countries' antitrust law included industry exemptions. To help illustrate these variables, Figure 2 presents the percent of countries in the world that had each provision in place in 2010. 24 As Figure 2 shows, there is considerable variation in the prevalence of each of the variables we use to construct the CLI. For instance, just 7 percent of countries in the world (13 total countries) have prohibitions on discounts, but 60 percent of countries in the world (119 total countries) authorize countries to issue fines for antitrust violations.

Below we explain the variables used to construct the CLI. 25 We start by describing the Authority category variables, followed by describing the variables that make up the Substance category. Afterwards, we explain how we aggregate all these data into the CLI.

Click here to view image

Figure 1. Construction of the Competition Law Index.

Table 1. Variables used to construct the Competition Law Index

[TABLE 1 OMITTED]

Figure 2. Share and Number of Countries with Key Antitrust Provisions in 2010.

A. Authority

Competition statutes typically define the scope of competition authority and, with that, the structure of the regime. These provisions include determining

who can bring suits against firms alleged of anticompetitive behavior and what remedies can be imposed if a violation is found. These provisions also define the reach of competition law, including whether all industries and enterprise types fall within the scope of the law and whether behavior outside one's own territory can be targeted with a competition action.

Competition laws are typically enforced by governments, making these laws part of the administrative regulatory apparatus of the state. However, some jurisdictions also recognize the right of individuals to bring suits against companies that violate competition rules. This additional avenue for competition claims increases the risk that companies face when operating in the market place. We therefore consider a competition regime that allows private parties to complement the government enforcement as more expansive than one where only the government is empowered to challenge anticompetitive behavior. Consequently, the presence of a private right of action in the competition regime increases the CLI by 1 point.

Remedies are an important element of competition regimes that significantly influence behavior of firms. If certain anticompetitive behavior is prohibited, yet no meaningful consequences are attached to violating the law, the risk associated with anticompetitive behavior is lower and, naturally, violations are more common as a result. The most common remedy embedded in competition laws is a monetary fine. Consequently, the ability to sanction the companies with fines increases the CLI by 1 point. Some jurisdictions have also criminalized anticompetitive behavior. Although fines are substantially more commonly employed as a remedy around the world, many experts argue that the ability to imprison individuals can significantly increase deterrence and hence the effectiveness of a competition law. The existence of imprisonment as a remedy thus further increases the scope of the competition law and the risk embedded in anticompetitive behavior, further adding 1 point towards the CLI.

Neither fines nor imprisonment is typically employed in the context of merger control. Instead, the most common remedy is a divestiture or an injunction-and hence an obligation to modify the structure of the proposed transaction-or an outright prohibition of the merger. Some jurisdictions also employ behavioral remedies even though structural remedies remain more common. This structural remedy targets the anticompetitive concern directly and allows for a significant intervention into the deal structure by authorities. The presence of a divestiture remedy in the law hence increases the CLI by 1 point. 26Link to the text of the note In some jurisdictions, private parties are also entitled to damages. In fact, most jurisdictions that allow for a private right of action recognize damages as a way to provide compensation for injured parties,

leaving an injunction or other remedies for the government to pursue. Moreover, although damages are typically the result of a private right of action, they can also be coupled with a government suit in some jurisdictions. We hence treat damages to private parties as an independent remedy that can further strengthen a competition law by increasing the risk associated with anticompetitive behavior. A law recognizing the right to damages hence increases the CLI by 1 point.

In addition to the private right of action and remedies associated with violations, competition authority can be enhanced with the ability to pursue conduct that emanates from abroad. Many laws recognize extraterritoriality that allows the country to attach jurisdiction whenever their market is affected irrespective of the nationality of firms or the location of the allegedly anticompetitive conduct. The ability to engage in extraterritorial enforcement is significant as it brings within the scope of domestic competition law a wide range of foreign conduct that could otherwise remain unregulated. In our index, the recognition of extraterritoriality in the law enhances the CLI by 1 point.

In contrast, the CLI's authority score is reduced when legislators carve out certain industries or types of enterprises that fall outside the powers of the agency. These exemptions are common and allow certain conduct to escape competition review. Our index takes into account two types of exemptions: exemptions of a certain industry (such as agriculture or tele-communications) as well as certain types of enterprises (such as state-owned enterprises or export cartels). The presence of (any) industry exemptions reduces the CLI by half a point. Similarly, the presence of (any) enterprise exemptions lowers the CLI by half a point. 27Link to the text of the note Throughout the construction of the CLI, we consider any exemptions or defenses that reduce the intensity of the competition regulation to be worth 0.5 as opposed to a full point. This is because the law remains applicable to a range of industries and companies (in case of exemptions) and to a range of transactions and behavior (in case of defenses) where the defense outlined in the law is not applicable.

To summarize, our Authority score can range from −1 to 6, depending on the presence or absence of provisions on a private right of action (1), fines (1), imprisonment (1), divestitures (1), damages (1), extraterritoriality (1), industry exemptions (−0.5), and categorical enterprise exemptions (−0.5).

As we will explain below in Section IVC, these values will be doubled in their weight when we construct the overall index, reflecting our view that these are essential features of the competition regime and critical in generating deterrence.

B. Substance

Most competition laws regulate three broad categories of activity: merger control, abuse of dominance, and anticompetitive agreements. The Substance category of the CLI is built around these three familiar subcategories of rules.

Merger Control : To exercise merger control, many jurisdictions rely on a mandatory or voluntary notification system. In most cases, a notified merger is reviewed by the authority, which has to approve the merger before parties are entitled to close the transaction ( pre-merger notification). In some jurisdictions, merger can be notified after the closing (post-merger notification). Regulatory risk is greater for firms if they have to seek approval as a condition for closing the merger. We also consider the law more invasive if the notification obligation is mandatory as it always imposes costs and delays on deals, whether they raise competition concerns or not. Thus, for the purposes of calculating the CLI, mandatory merger control increases the index by 1 point, as does the obligation to notify pre- as opposed to post-merger. Thus, a system with a mandatory pre-notification adds 2 points towards the overall CLI whereas, for instance, a mandatory post-merger notification or voluntary pre-merger notification adds just 1 point. 28Link to the text of the note

In addition to merger notification, we add points to the CLI depending on how expansive powers the law grants with respect to the substantive merger review. Jurisdictions that restrict mergers on grounds that they lessen competition or create or strengthen dominance (" economic reasons") have their CLI increased by 1 point. Jurisdictions that additionally restrict mergers on grounds of some public interest similarly see their CLI increase by 1 point. Thus, a jurisdiction that gives the agency vast powers to restrict by mergers, whether on economic or public interest grounds, see a 2-point increase in CLI. This reflects the broader risk that parties face when multiple grounds exist for prohibiting or restructuring the merger.

Merger control consists of a prediction of the future effects of the combined entity's behavior in the market place. Often the key question is whether possible anticompetitive effects outweigh efficiencies that the merger creates. One explicit way to acknowledge this is to include an efficiency defense into the competition statute. The presence of this defense reduces the

competition risk as the merging parties can escape prohibition or divestiture or other remedy by showing the efficiencies that the merger generates. Consequently, this defense also lowers the CLI as the scope of prohibition is lower in the presence of the defense. Two other types of defenses are common in the merger area: the failing firm defense that allows a firm on the verge of bankruptcy to be acquired else the assets would disappear from the market altogether. Finally, some jurisdictions are willing to entertain a broader set of reasons that contribute towards public interest ( public interest defense) as grounds for approving an otherwise anticompetitive merger. The presence of any of these defenses reduces the CLI by 0.5 point each, leading to a maximum of −1.5 decrease in the country's CLI.

Abuse of Dominance : Some jurisdictions simply prohibit abusive conduct by a dominant company without giving detailed guidance at the statutory level as to what kind of behavior constitutes an abuse. This kind of a general or "blanket" prohibition can give the agency vast discretion to determine what constitutes an abuse. In many ways, such a prohibition maximizes competition risk as it is unclear what type of conduct falls afoul of competition law. However, such a provision giving agencies open-ended discretion is rare. Typically, competition laws enumerate various types of conduct that count as anticompetitive abuses of a dominant position. To avoid the situation where the CLI is too sensitive to this choice between a blanket prohibition versus enumeration in any given jurisdiction, we assign 2 points for a general prohibition of abuse of dominance yet increase the overall dominance score by small increments with each enumerated abuse.

Specifically, our CLI separately accounts for the most common types of behaviors that are generally considered as abusive when engaged in by a dominant company. These include price and nonprice related conduct, including discriminatory pricing, resale price maintenance, unfair (or excessive) pricing, predatory pricing, and anticompetitive discounts (price-related abuses), as well as tying and refusal to deal (nonprice related abuses). These are generally recognized as the most well-known categories of abusive practices in competition laws and in competition law scholarship. However, to allow for a conduct that was not foreseen by us to contribute towards the CLI, we include an "other abuses" category that captures any other type of conduct recognized by country's law. The acknowledgment of any of these individual types of abuses increases the CLI by 0.25 each, amounting to additional 2 points in total. This brings the maximum intensity of abuse of dominant position to 4 points in total, reflecting the general prohibition plus the enumerated abuses. As with mergers, some competition statutes recognize the efficiencies that otherwise anticompetitive conduct by a dominant company entails. If the law recognizes such an efficiency defense, the CLI is adjusted to reflect this reduced competition risk by a reduction of half a point. Similar reduction follows a presence of a public interest defense.

Anticompetitive Agreements : The final category of substantive prohibitions is anticompetitive agreements. 29Link to the text of the note We separately coded provisions on horizontal and vertical agreements. Our dataset confirms the intuition shared by many that cartels are the most commonly prohibited anticompetitive activity, both today and in the past. Our dataset recognizes four most common cartel practices: price fixing, market sharing, output limitations, and bid rigging. The inclusion of any of these common cartel types in country's law increase the CLI by 0.5 points each, contributing the maximum of 2 points to the CLI. Notably, these are the only types of horizontal agreements that feature in our CLI. We recognize that some competition statutes also regulate other types of horizontal agreements, which may reduce competition yet fall short of being cartels. However, the status of such agreements is highly varied across the world, making it difficult to code them systematically across countries and over time.

We similarly assign the maximum of 2 points towards the CLI if the country's law prohibits the following categories of vertical agreements: exclusive dealing, resale price maintenance, tying and agreements that in some other ways eliminate competitors. Restrictions on exclusive dealing and resale price maintenance are common vertical provisions in competition laws. Their meaning is also generally well understood. Another common provision deals with tying, which many laws consider anticompetitive even in the absence of dominance. Our fourth type of vertical agreement category comprises agreements that aim at eliminating competitors. This is a somewhat more open-ended provision, which is designed to capture prohibitions of coercive or other practices that eliminate competitors or make it difficult for them to increase their market share. 30Link to the text of the note Each of these four categories increases the CLI by 0.5 points, contributing the total of 2 points towards the CLI. Thus, the maximum score for anticompetitive agreements-whether cartels or vertical agreements-will be 4.

As with mergers and dominance provisions, some competition statutes regulating anticompetitive agreements also recognize the efficiencies that some of the potentially anticompetitive conduct entails. These are significantly more common in case of vertical agreements than in the case of cartels. If the law recognizes such an efficiency defense, the CLI will be reduced by half a point to reflect this reduced competition risk. The availability of a public interest defense similarly reduces the CLI by half a point.

Substance Summary: Our Substantive Provisions CLI score can range from −3.5 to 12, depending on whether the law contains provisions on

merger control (max. 4), abuse of a dominant position (max. 4), and anticompetitive agreements (max. 4) and whether some reductions to CLI are made because of the presence of various defenses in the law (max. −3.5).

C. Overall CLI

As Figure 1 and Table 1 illustrate, our general approach is to treat the various key prohibitions as equal unless we have a strong reason to weigh various elements differently. For example, the rules on merger control, abuse of dominance, or anticompetitive agreements contribute equal weights to the index even though some provisions are arguably more important. Similarly, our default was to not weigh various substantive provisions within each of these three primary categories differently. We are all the more cautious to avoid imposing any such hierarchy on our index given the broad scope of our data across the time and jurisdictions. This is because we are skeptical that any hierarchy could equally make sense for the United States competition regime in 1900, the German competition regime in 1950, or the Kenyan competition regime in 2010.

The major exception to this general "equal weighing" approach is that, when combining the Authority and Substance categories into a single index, we weighted the components so that the CLI is based on 50% from the features comprising the competition authority and 50% of the CLI from the features comprising the substantive provisions. Thus, although the competition authority with all its components yields up to 6 points in total, we double their weight and count that sub-index as equivalent to 12 points. This makes competition authority provisions equally as important as substantive provisions. Built this way, substantive provisions on merger control, abuse of dominance, and anticompetitive agreements each contribute 1/6 to the overall index.

The reason we weighted the authority provisions equally with the substantive provisions is that that the authority provisions typically apply to multiple areas of substantive competition regulation and hence increase the overall competition risk in a significant way. We believe this choice is further justified because laws without the possibility of sanctions are unlikely to change behavior. 31Link to the text of the note The CLI hence reflects the view that the elements of competition law that elevate the likelihood of violations being found and consequences being attached-like the availability of remedies or private enforcement-are critical components of the regulation of anticompetitive behavior. 32Link to the text of the note

One other important note about how we construct the CLI is that, after calculating the overall scores from 0 to 24, we then normalize them to range from 0 to 1. A score of 0 is thus the score that countries receive if they do not have any competition statute in a given year, and a score of 1 is the score of the country that had the most stringent legal regime in place (that is, received the most points from Table 1).

V. Results

We provide a complete list of CLI scores in 2010 in Appendix A, 33Link to the text of the note but here we illustrate a number of key trends across countries and over time. First, we show the overall distribution of CLI scores in 2010, and illustrate how that distribution spans across specific countries. We then examine the evolution of the CLI over time. Finally, we take a closer look at trends in CLI scores over time in a few key jurisdictions.

A. Results in 2010

Figure 3 shows the distribution of CLI scores for countries with a competition law in 2010. Because the CLI is normalized to fall between 0 and 1, countries without a competition law are set to have a score of 0. In 2010, the minimum CLI score for a country with a competition law is 0.14 (Benin) while the maximum is 0.95 (a score shared by Japan and Saudi Arabia). For countries with a competition law, the mean CLI score is 0.65 and the median CLI score is 0.67, which is roughly the CLI score of Italy.

Figure 4 illustrates the CLI scores for specific countries in 2010. The darkest color marks the countries that had the highest CLI score in 2010,

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Figure 3. Distribution of CLI scores in 2010.

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Figure 4. Competition Law Index by country in 2010.

ranging from 0.8 to 1. These countries include Canada and China. The second darkest color captures the countries whose CLI score ranges from 0.6 to 0.8 (including the United States and the United Kingdom), followed by lighter shade of blue denoting the countries with a score ranging from 0.4 to 0.6 (including Norway and Singapore), with the next categories with each even lighter shade of gray marking the countries with 0.2-0.4 (including Egypt and Bolivia), and 0-0.2 (the only country that scored in this range in 2010 is Benin), scores, respectively. The countries that are shown as white had no competition law and hence a score of zero in 2010. As Figure 4 shows, it is not just the established antitrust regimes in North America and Europe that have high CLI scores-there are countries in every region of the world with detailed competition laws.

B. Trends over time

Figure 5 explores the evolution of the CLI scores over time. More specifically, Figure 5 depicts the mean CLI score for countries that had a competition law in place in any given year, starting in 1890 and ending in 2010. It shows that the mean score has gradually increased over time, starting from 0.27 in 1890 and growing to 0.65 by 2010. The largest increase took place after 1990, which coincides with a dramatic increase in the number of countries with competition laws. In 1990, there were 51 countries with competition law (which had a mean CLI score of 0.50), but by 2010 there were 126 countries with competition law (which, as previously mentioned, had a mean CLI score of 0.65).

Mean CLI scores have continually increased over time, even though various defenses (which lead to a reduction in the CLI) became more common over time as well. For example, only one country had an efficiency defense for abuse of dominance in 1950, but by 2010, 45 countries had the same defense. But despite the increase in defenses, the overall trend has still been

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Figure 5. Average CLI scores for countries with competition laws, 1890-2010.

systematically towards greater "net stringency" over time. Although it may seem obvious that regulation would have increased over time, there are reasons to think that other trends may have occurred instead. For instance, other areas of business law, such as financial regulation, have followed more of a "sine curve" over the years as the pendulum has shifted from lax to stringent and back again to lax regulation. 34Link to the text of the note Competition law, once introduced, seems stickier. On average, countries add to its scope over time rather than repeal provisions or scale back its stringency.

C. Trends for key players

Figure 6 shows the evolution of CLI scores for six established competition law jurisdictions: Canada, the United States, the European Union, Germany, the United Kingdom, and Japan. Again, the trend towards greater stringency of competition laws over time stands out in these graphs. For Canada, the increase in competition law stringency is rather steady, with the biggest change taking place in 1975 with the adoption of private right of action and remedies. In the United States, the index responds in particular to the following shifts in regulation: the adoption of Clayton Act that introduced merger control in 1914 35Link to the text of the note and the passing of the Hart-Scott-Rodino Act in 1976 that established pre-merger notification. 36Link to the text of the note In the EU, competition law was introduced only in 1957 and, again here, the biggest shift in the CLI occurs when

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Figure 6. CLI scores for key established jurisdictions.

merger control regulation enters into force in 1990. 37Link to the text of the note Overall, the EU's Index may seem surprisingly low compared to other jurisdictions given the EU's reputation as the most stringent competition regime in the world. This is largely due to the absence of features like criminal enforcement, damages, and private right of action in the EU. 38Link to the text of the note Of course, the EU's CLI score does not present the full picture of competition law in Europe, because, as we discuss more in Section VIC, Member States of the EU also have their own competition regimes. Understanding the regulatory risk of doing business in Europe may thus require accounting for the competition policies of the EU and individual members. Turning to one such member, Germany, we do not observe notable shifts but rather a very steady increase in the stringency of

the regime. The United Kingdom manifests a dip in the law's stringency in the 1970s before the passage of its Competition Act in 1980. Finally, Japan stands out with a notably and steadily high index throughout the entire period of its law's existence. This is in part to do with Japan having features like a private right of action but not having defenses in law that would reduce the country's score.

Next, we examine the trends in emerging competition jurisdictions that might reflect different patterns either because their economic fundamentals or broader societal and political structures differ from those that exit in more established competition jurisdictions. Figure 7 displays CLI scores for the BRIC countries: Brazil, Russia, India, and China. China and Russia adopted competition laws relatively recently, which might also affect their laws' stringency. Interestingly, the four BRIC countries exhibit very different patterns. China in particular represents a striking departure from countries whose index shifts gradually. China has some competition provisions as of 1993, but introduces its general competition law in 2008. At the outset, China adopts one of the most stringent competition laws in the world with a CLI score of 0.94 in 2008. The score reflects the broad scope of law with limited defenses. Brazil's law is the second most stringent of the BRIC countries,

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Figure 7. CLI scores for BRIC countries.

gaining in stringency in particular in 1991 when merger review was added to the country's antitrust authority. India has the steadiest law, with minor adjustment taking place in 2009 when merger review is added to the law. Otherwise the stringency of the law remains unchanged. Russia's competition law was adopted in 1990 following the collapse of the Soviet Union. The CLI score starts as relatively high 0.68, with a minor shift downwards in stringency with an amendment to its law in 1995 when private right of actions were removed, followed by a near imminent adjustment upwards in 1996 as Russia adopts imprisonment as a remedy. Taken together, Figure 7 illustrates how competition law is a feature of major developing economies, but that their regimes have not all followed the same pattern.

VI. Alternative versions of the CLI

This section offers four alternative ways that we can employ our data to quantify competition laws across countries and over time. First, we disaggregate our CLI into its sub-components, illustrating the way we can measure the stringency of competition law by focusing on a specific dimension of competition law, only. Second, we leverage the detailed information we coded on various exemptions from competition laws as well as sectoral laws, offering a more nuanced way to capture the stringency of competition laws in instances where provisions apply to a part of the economy, only. Third, we discuss how we can combine our data with coding on regional organizations' competition laws to create an aggregate picture of a country's competition law. Finally, we conduct a principal component analysis that employs statistical techniques to derive the weighting schemes for the CLI.

A. Sub-indexes

Some research projects may focus on specific aspect of competition law as opposed to the regime as a whole. For example, if one seeks to explain the adoption and evolution of merger control laws, the CLI would be too general. Instead, an index of the merger control provisions of a country's competition law might provide a more precise dependent variable to answer this question.

The CLI has the advantage that it can be disaggregated into its components. For example, it can be used to separately measure the strength of a country's competition regime structure by only focusing on the variables comprising the "Authority" score. Moreover, the "Substantive Provisions" of CLI can be further separated into various sub-indexes to create a stringency score for merger control, abuse of dominance provisions, or anticompetitive agreements. To illustrate this point, Figure 8 shows the trends over time across these sub-indexes and compares those trends to the overall CLI.

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Figure 8. CLI sub-indexes.

B. Accounting for exemptions and narrow applications

One particularly nuanced feature of our dataset is that we coded separately for any given coded provision of the competition law whether the provision exempts certain industries or categories of enterprises for all or part of the country's competition law. By way of an example, if our data reveal that tying by a dominant company was prohibited under German competition law in 1986, our data also record if certain industries or enterprise types are exempted from that particular provision.

To illustrate these data, Figure 9 maps countries by the number of provisions in their competition law in 2010 that had each of four kinds of exemptions or narrow applications: Categorical Enterprise Exemptions, Partial Enterprise Exemptions, Narrow Industry Coverage, or General Industry Exemptions. The difference between categorical and partial category exemption is that the former exempts certain enterprise types-say, state monopolies-altogether from competition law whereas the latter exempts them only partially, such as only when they perform certain public functions. Narrow

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Figure 9. Number of competition law provisions with each kind of exemption in 2010.

industry coverage refers to sectoral regulations where some industry is brought within the scope of competition law even when the rest of the economy would remain unregulated. General industry exemption does the opposite by carving out certain industries from the scope of the law while leaving the law applicable to others. As the map shows, although the majority of countries do not have any of these exemptions for any of the provisions of their antitrust regimes, other countries-like Mexico or South America- frequently have these exceptions.

This additional layer of detailed coding makes it possible to adjust the index to create an alternative version of the CLI that takes these exemptions into account (the "Exemption Adjusted CLI"). Thus, although the authority component of the CLI includes deductions for industry and enterprise exemptions in general, in constructing the Exemption Adjusted CLI, we no longer make any blanket reductions from the authority score as we did before. 39Link to the text of the note Instead, we adjust each provision that contributes towards the CLI by using the following multiplier: Narrow Industry Coverage awards the country 0.1 times (10%) the original score, Categorical Enterprise or Industry Exemptions 0.8 times (80%) the score, and Partial Enterprise Exemption 0.9 times (90%) the original score that the country would otherwise obtain. Figure 10 presents the Exemption Adjusted CLI that is calculated after first re-coding the variables used in the CLI to account for these nuances.

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Figure 10. Exemption Adjusted Competition Law Index by country in 2010.

To illustrate this, imagine a hypothetical provision from the 1986 competition law in Germany that prohibited tying for dominant countries. If the tying was only prohibited in telecommunications industry ("narrow application"), before calculating the CLI, we would adjust the German variable for tying from being coded as 1 to 0.1. Because tying receives 0.25 points in the CLI index, the new score of 0.1 would be multiplied by 0.25. Alternatively, if state-owned enterprises were completely exempted from the tying provision, before calculating the CLI, we would adjust the coding of the tying variable from 1 to 0.8. In this scenario, the tying would only contribute 0.8 ? 0.25 towards the CLE (as opposed to full 0.25 points). This adjustment methodology yields a very detailed index, which is more sensitive to the extent to which any exemption or narrow application actually affects a country's competition regime.

However, we hesitate to use this adjusted CLI as our preferred index for two reasons. First, our primary CLI is-simply put-much simpler. Our index already captures multiple elements, making us hesitant to introduce further nuance. Second, and more importantly, this adjusted index is sensitive to the multiplier we assign to the narrow application or the exemption. We cannot be sure that a provision applying to the telecommunications industry, only, should account as 0.1 and hence 10% of the weigh compared to that same provision that covers the entire economy. It may be that 0.05 or 0.20 would be a more defensible adjustment. Our dataset records the multiplier separately, making it easy for any researcher to re-create the index and check its robustness using any number of alternative multipliers that might be considered more appropriate. However, even then, it is doubtful that any adjustment would be "globally" correct. In other words, in some jurisdiction the sector-specific regulation likely constitutes a miniscule part of the economy, whereas in others the role of the industry in question might be central. The importance of state-owned enterprises or state monopolies may also not only vary across countries but likely also changes from year to year even

within a single country. To do justice to the varying economic significance of sectors or entities opted in (narrow application) or opted out (exemptions), we would need to account for the size of the industry or the enterprise type in the country's overall economy-something that is beyond the scope of our project given the broad coverage of our dataset over time and jurisdictions.

C. Accounting for regional antitrust regimes

One additional nuance of competition law is that there are both domestic laws and regional laws regulating competition. 40Link to the text of the note For instance, one challenge when constructing the CLI for EU member state countries is that they have the authority to apply both national law and EU law. But for simplicity, the CLI treats the EU member states as independent nation-states whose competition law score reflects exclusively their national law. Although this approach is simpler, the tradeoff is that it ignores the additional competition law authority that countries like France or Germany derive from the EU law.

To account for this fact, we separately coded the EU competition laws. We then are able to construct a version of the CLI that adjusts each country's laws to account for the coding of provisions from the EU law. More specifically, we code the EU law and the national law separately so that we can construct a combined value for each EU member state following the guidance the EU Treaty sets in this regard. For instance, when constructing an index for Germany, we apply the German national coding (as opposed to EU level coding) for "remedies" variables where the EU treaty allows for individual states to legislate. Yet for the variables where the EU law takes precedence over German law, we allow the EU law coding to prevail over German law coding. In many instances, Germany has the option of pursuing enforcement under German law or EU law. In those cases, we count any given provision to exist in Germany as long as it can be derived from either the German national competition law index or the EU competition law index for that year. 41Link to the text of the note

As a result, given that we coded the EU law and the member state national law separately from the outset, we preserved the option of creating a national-only CLI for each EU member state or an adjusted CLI that layers on EU law onto each member state's law. The default CLI is most relevant if one seeks to measure the competition risk that purely locally operating companies face or if one tries to more accurately capture the regulatory preferences of national legislators. However, regionally adjusted CLI offers a more comprehensive measure of law's stringency, revealing the law's strength that stems from both national and regional law.

D. Principal component analysis

We have now presented several versions of an index that can be used to measure competition law around the world using the data we have collected on competition law. Although we believe that the choices we have made when constructing these indexes are reasonable, they all still are based on subjective choices. For instance, for the main CLI, we decided to weigh Authority variables equally with Substance variables. A valid concern may thus be that any results generated using these data are overly dependent on the decisions we made when creating the indexes and not the underlying data.

To assuage this concern, we follow Buccirossi et al. and also generated a measure of competition laws using our data that does not rely on subjective choices. 42Link to the text of the note More specifically, we conducted a principal component analysis ("PCA") of the 36 variables included in the CLI. The advantage of using PCA is that it relies on statistical properties to analyze the variance among different variables, and then can be used to generate a predicted score for each country-year observation based on the values the country has for those variables. The score produced based by this process thus weights variables based on the amount of variance they explain, not the amount of weight placed on them by researchers. Table 2 reports the correlations between the CLI, the alternative indexes we discussed in Sections VIA and VIB, and the results generated through PCA. When using this approach, the correlation between the CLI and PCA is high-0.88 to be exact.

VII. Comparison to other indexes

As previously noted, the CLI is not the first attempt to measure competition law regimes. We are aware of the following six indexes, which seem relevant for comparison: (1) Antitrust Law Index (ALI) by Nicholson; (2) Scope Index

Table 2. Correlations across measures of competition law

[TABLE 2 OMITTED]

by Hylton & Deng; (3) Competition Policy Indexes (CPI) by Buccirossi et al.; (4) Four Indicators by Borrell and Jimenez; (5) Four New Indicators (FNI) by Stephan Voigt; and (6) Indicators for Competition Law and Policy (CLP) from the OECD. These indexes are summarized in Table 3 and we discuss each below in turn.

A. Comparisons

1. Antitrust Law Index ( ALI) by Nicholson: The ALI was the first attempt to quantify competition laws across jurisdictions by providing a measure of competition statutes for 52 countries. The index is limited to a

single year (2003). Given the similarity between the Nicholson ALI and the Scope Index, we only discuss the Scope Index more extensively below. That said, ALI remains an important pioneer in the field.

2. The Scope Index by Hylton & Deng: The Scope Index expanded on Nicholson's work, covering 102 countries for the years 2001-2004. Like the ALI, the Scope Index quantifies the scope of the law by summing up the various prohibitions and deducting the various defenses that are embedded in statutes. The basic categories in the Scope Index comprise (1) territorial scope, (2) remedies, (3) private enforcement, (4) mergers, (5) dominance, and (6) restrictive trade practices. The only difference between Nicholson ALI and Hylton & Deng Scope Index is the inclusion of a public interest category in merger assessment by the Scope Index (both as a defense and as grounds for prohibition). Otherwise, the individual components of the indexes are identical.

The Scope Index is the closest to the CLI in that it also measures the law in the books, treating prohibitions as elements that increase the scope (or stringency) of the law and defenses as elements that reduce the scope (or stringency) of the law. Basic categories in the Scope Index and our CLI are also the same, even if somewhat differently labeled. For example, we refer to "anticompetitive agreements" where the Scope Index refers to "restrictive trade practices."

But there are elements that are different. First, the CLI includes some elements that are absent in the Scope Index. For instance, we take into account the industry exemptions and enterprise exemptions, which our data suggest that 84 countries had either or both of in 2010. We also incorporate the following variables, which are not part of the Scope Index: (1) failing firm defense in merger control, (2) predatory pricing, loyalty discounts, tying, "other abuses," and public interest defense in the case of dominance, and (3) exclusive dealing, resale price maintenance, and public interest defense in case of anticompetitive agreements.

Second, the Scope Index includes the following elements, which we coded (to allow for replication) but decided not to include in our CLI: "Prevent entry" or "supply refusal" as part of anticompetitive agreements, 43 which we capture through eliminating competitors (we considered these categories as partially overlapping and removed the other categories to avoid double-counting), "obstacles to entry" as an abuse related to dominance (which we capture through more specific abuses that contribute towards hindering entry and, failing that, through our "other abuse" category). Regarding private enforcement, the Scope Index conflates private right of action with right of the private party to initiate an investigation by agency. We code for these separately and only include in the CLI the actual right of a private party to pursue a claim independently. Conceptually, we also treat damages as part of

remedies as opposed to part of private enforcement to allow for the inclusion of damages that agency or courts can order in benefit of injured parties even as part of a government claim.

Third, the way the elements included in the Scope Index and CLI are aggregated differs. Our method for calculating the CLI is similar in that we add up the total prohibitions and obligations and deduct the defenses. The Scope Index has a scale of 0-29 whereas our scale is 0-24 (which we then normalize to fall between 0 and 1). However, our distribution ends up somewhat tighter as we include more defenses, including public interest defense across all areas of competition and the various industry and enterprise exemptions. The Scope Index also counts more substantive provisions (including, we would argue, double counts several provisions) and gives relatively greater weight to merger control. 44 Further, and most importantly, the Scope Index does not double the weight we give to remedies and other elements of competition authority and hence reflects more the substantive law in place rather than the regime structure more broadly.

The biggest difference, however, is that our CLI includes a greater number of laws-including systematically coding the laws other than general competition statutes-and adjusts the coding to reflect amendments that we detected as missing in the coding of the Scope Index. The CLI further takes advantage of our coding of sectoral regulations and our ability to distinguish if some provisions apply narrowly only to some industry or across the economy. Importantly, we always coded the entire "competition regime" in force any given year, which means that we layered together all the old and new laws that were in force in any given year. This entailed a careful review as to whether a new law replaces an old law entirely, amends it partially, or whether the old law remains fully in force while the new law simply adds to the previous statutes. 45 Finally, we only focus on statutes whereas the Scope Index purports to cover some case law, although it remains unclear if this was done in any systematic way. To avoid the risk of bias in the data, we excluded case law. 46

3. Competition Policy Indexes ( CPI): The CPI seeks to measure the quality and intensity of competition policy across a sample of 13 OECD countries over the period of 1995-2005. 47 The authors rely on Gary Becker's theory of deterrence and seek to measure properties of competition regimes that maximize deterrence and hence the effectiveness of competition laws. 48 They construct the CPI by comparing key features of competition policy regimes to generally agreed-upon best practices, such as OECD and ICN guidelines or the authors' judgment. In doing so, they single out the following variables: (1) the agency independence from political and economic interests, (2) the separation between adjudicator and prosecutor, (3) the quality of law in the books, (4) the scope of competition agency's investigative powers, (5) the level of expected sanctions, and (6) the activity level of competition agency as well as the quantity and quality of their resources. With these components, the authors construct a separate index for competition, mergers, institutional features, and enforcement, as well as a single index that incorporates these four sub-indexes. 49

Their component on the "quality of law in the books" would seem to resemble most our of efforts to capture the substance of the laws. However, the CPI purports to measure how "good" the law is. Here, the CPI seeks to capture whether the country applies the "correct" standard of proof (rule or reason or per se) across four types of specific infringements (predatory pricing, refusal to deal, exclusive agreements, and hard-core cartels) and if their assessment of the infringement is focused on economic (positive sign of quality) or noneconomic goals (negative sign of quality). 50 For merger control, the quality of law is considered higher if it entails a notification obligation and if that notification obligation is based on company's turnover (revenue). Finally, the CPI's element measuring "level of sanctions" also bears some resemblance with the CLI as it includes elements that can be derived from statutes, including the range of sanctions that offending firms may face (including fines, imprisonment, and damages) and whether affected parties can sue for damages.

4. Four Indicators: Borrell and Jimenez construct four indexes to measure "objective characteristics of competition policy design and enforcement." 51

They code 13 features across 47 economies, using the competition regimes in 2004 as their baseline for evaluation. Their features are grouped into four categories and capture (1) agency independence, (2) cartels, (3) dominance, and (4) mergers. Their indexes resemble the efforts captured by CPI. For example, their index for cartels asks if cartels are per se illegal, if published guidelines for cartels exist, if criminal sanctions or punitive sanctions are available, and if the country has a leniency policy in place. All these features seek to measure the degree of "seriousness" of cartel policy and their presence contribute positively towards the index. The indexes for dominance and mergers measure the compatibility of those areas with economic theory-focusing on whether dominance abuses are per se illegal, whether dominance is defined by market share, and what that threshold is for dominance. For instance, the per se prohibition enters negatively into the index. The indexes for mergers similarly asks if guidelines exist, whether government or the agency has the last say on mergers, and whether merger control is geared at protecting competition or public interest.

Like the CPI, the Four Indicators also seek to measure the quality of the laws, making the measure difficult to compare to our CLI. Instead of relying on surveys like the Four New Indicators that we discuss below does, or on the best practice guidelines published by international organizations like the CPI does, Borrell and Jimenez base their evaluation on their subjective assessment on the consistency of the law with economic theory, relying heavily on the choice the law makes between using a per se or rule of reason standard or on whether the law is transparent. The similarity with the CLI is limited to few features the Four Indicators capture, predominantly whether the law provides for criminal sanctions.

5. Four New Indicators ( FNI): Stephan Voigt's FNI measures (1) substantive content of competition law, (2) the degree to which the law incorporates economic approach, (3) de jure agency independence, and (4) de facto agency independence. 52 The "substantive law indicator" reflects a higher value if competition policy is mentioned in the constitution; a specific law promoting competition is in place; law has been in place for a long time; the law mentions no or few goals beyond competition; and the law prohibits a high number of practices. The "economic approach" indicator reflects a higher value with: greater reliance on the rule of reason (instead of per se rules) with regard to up to eight practices often considered to be anticompetitive; greater reliance on a number of concepts that have been promoted by economists in recent years (such as collective dominance, conglomerate effects); and greater reliance on both remedies and efficiencies in its merger policy based on the assumption that both these instruments indicate a case-by-case rather than a per se approach. In terms of methodology,

the FNI is based on surveys of agencies and covers 59 countries. There is no time-series component to the survey. Instead, Voigt relies on "currently valid competition law" and hence presumably on law as it exists in 2008.

Voigt's "substantive law indicator" bears some resemblance to our CLI in that the index responds to the enactment of competition law. The index is also sensitive to the number of prohibitions embedded in that law. However, beyond that, the similarities are few. Voigt's substantive law indicator blends quantitative elements (that is, how many prohibitions) with semi-qualitative elements (that is, fewer goals lead to higher index), alongside some structural elements (that is, is competition mentioned in the constitution). At the same time, Voigt's "economic approach" indicator is an attempt to capture purely qualitative elements of competition law, which represents a notable departure from CLI. Beyond these substantive differences, the FNI and CLI have a very different coverage, given that FNI captures 59 countries and is limited to a single year.

#### Here’s a comprehensive list---we’re inserting it.

Christopher L. Sagers 15, James A. Thomas Distinguished Professor of Law and Faculty Director of the Cleveland-Marshall Solo Practice Incubator at the Cleveland-Marshall College of Law, Cleveland State University, “Table of Contents,” Handbook on the Scope of Antitrust, American Bar Association, Section of Antitrust Law, 2015, <https://www.americanbar.org/content/dam/aba-cms-dotorg/products/ecd/ebk/140535931/5030623-TOC.pdf>

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### Cyber

#### 1) DELAY---even if enforcement orders are ultimately entered, each case takes too long to prosecute---that means remedies come too late to create competition.

Alison Jones & William E. Kovacic 20, Jones is a professor at King’s College London; Kovacic is Global Competition Professor of Law and Policy, The George Washington University Law School, “Antitrust’s Implementation Blind Side: Challenges to Major Expansion of U.S. Competition Policy,” The Antitrust Bulletin, vol. 65, no. 2, SAGE Publications Inc, 06/01/2020, pp. 227–255

In the discussion above, we have been addressing the types of remedies that are imposed at the conclusion of a lawsuit. A problem in highly dynamic markets, however, is that the lag between the initiation of a case and a final order on relief may be so great that market circumstances have changed dramatically or the victim of allegedly improper exclusion may have left the market or otherwise lost its opportunity to expand and contest the position of the incumbent dominant firm. In this context, the antitrust cure arrives far too late to protect competition. The relatively slow pace of antitrust investigations and litigation (with appeals that follow an initial decision) has led some observers to doubt the efficacy of antitrust cases as effective policy-making tools in dynamic commercial sectors.

#### The grid is safe.

Larson 18 Selena Larson, Cyber threat intelligence analyst at Dragos, Inc. [Threats to Electric Grid are Real; Widespread Blackouts are Not, 8-6-2018, https://dragos.com/blog/industry-news/threats-to-electric-grid-are-real-widespread-blackouts-are-not/]

The US electric grid is not about to go down. Though it’s understandable if someone believed that. Over the last few weeks, numerous media reports suggest state-backed hackers have infiltrated the US electric grid and are capable of manipulating the flow of electricity on a grand scale and cause chaos. Threats against industrial sectors including electric utilities, oil and gas, and manufacturing are growing, and it’s reasonable for people to be concerned. But to say hackers have invaded the US electric grid and are prepared to cause blackouts is false. The initial reporting stemmed from a public Department of Homeland Security (DHS) presentation in July on Russian hacking activity targeting US electric utilities. This presentation contained previously-reported information on a group known as Dragonfly by Symantec and which Dragos associates to activity labeled DYMALLOY and ALLANITE. These groups focus on information gathering from industrial control system (ICS) networks and have not demonstrated disruptive or damaging capabilities. While some news reports cite 2015 and 2016 blackouts in Ukraine as evidence of hackers’ disruptive capabilities, DYMALLOY nor ALLANITE were involved in those incidents and it is inaccurate to suggest the DHS’s public presentation and those destructive behaviors are linked. Adversaries have not placed “cyber implants” into the electric grid to cause blackouts; but they are infiltrating business networks – and in some cases, ICS networks – in an effort to steal information and intelligence to potentially gain access to operational systems. Overall, the activity is concerning and represents the prerequisites towards a potential future disruptive event – but evidence to date does not support the claim that such an attack is imminent. The US electric grid is resilient and segmented, and although it makes an interesting plot to an action movie, one or two strains of malware targeting operational networks would not cause widespread blackouts. A destructive incident at one site would require highly-tailored tools and operations and would not effectively scale. Essentially, localized impacts are possible, and asset owners and operators should work to defend their networks from intrusions such as those described by DHS. But scaling up from isolated events to widespread impacts is highly unlikely.

### Innovation

#### China’s tech is safe, good norms because they’re interested in international status

Lee & Triolo ’17 [Kai-Fu; Ph.D., is a Co-Founder, Chairman, President, Chief Executive Officer, and Managing Partner of Sinovation Ventures, Paul Triolo is a China Digital Economy Fellow at New America and the geo-technology practice head at the Eurasia Group, “China’s Artificial Intelligence Revolution: Understanding Beijing’s Structural Advantages”, https://www.eurasiagroup.net/files/upload/China\_Embraces\_AI.pdf]

Beijing’s AI policy priorities are clear. The “Next Generation Artificial Intelligence Development Plan,” announced by China’s State Council in July 2017, called for China to catch up on AI technology and applications by 2020, and to become a global AI innovation hub by 2030. Chinese President Xi Jinping hammered the point home in his 19th Party Congress speech in October, when he mentioned the development of advanced manufacturing and the promotion of further integration of the Internet, big data and artificial intelligence with the real-world economy. Beijing has placed huge bets on AI for a host of political and economic reasons, from improving governance capacity to improving policy development and surveillance. The plan calls for China to lead the way in developing a regulatory environment to both encourage AI development and to mitigate the potential downsides of AI. A few months after the national plan’s announcement in July, the Ministry of Science and Technology (MOST) designated Baidu to lead the autonomous vehicle platform, Tencent for medical, Alibaba for Smart Cities, and iFlyTek for speech interfaces. These plans should be taken seriously, as the Chinese government has shown a strong track record in delivering results. For example, Beijing announced in 2010 that China would become the world’s leader in adopting high-speed rail (HSR). Today it has 60% of the world’s HSR market. In 2014, the Chinese government announced the “Mass Entrepreneurship and Innovation Plan.” Today there are business 8000 incubators in China, compared to 1400 in 2014. These plans have teeth, both due to the deadlines and metrics set out at the national level, as well as the local companies that are likely to take these directions as top priorities. We can expect a similar trajectory for China’s AI policies. Historically, the Chinese government has been open-minded towards technology development. When a new technology comes out, the government will give it the benefit of doubt and let it grow, rather than stifle it with policy or endless debates. Also, the environment in China is more conducive to fast launch and iteration. There is a general belief that it is better to launch something and then get it approved later. This allows Chinese businesses to generate real data at scale, which in turn allows technology to improve over a shorter period of time, particularly once AI is introduced into the equation. For example, while in the US, truckers’ unions are petitioning the Department of Transportation to delay autonomous truck testing, in China, the Xiong’an New Area, a planned smart city development southwest of Beijing, is being designed from the ground up with full autonomy in mind. Various highway authorities are willing to develop road augmentation, special lanes, or move warehouses near highway exits, all to facilitate faster deployment of autonomous trucks. We also see major initiatives in cities, following the central government’s call to action. Shanghai, Nanjing, Wuhan, and Tianjin are but a few of the cities coming out with their own AI initiatives. As with past policies, much of the resources will be applied at the provincial and city government levels. The types of resources may include subsidies for top talent (especially overseas talent); guidance for top VC funds, with the government playing the role of limited partner (LP) but offering some of its upside to the general partners (GPs) of the funds; special programs for top AI companies and start-ups (free rent, subsidy for local hiring, housing and private school for top talents); and technical awards for companies and individuals. Finally, the US, EU, and China will also compete to be out in front on developing a regulatory regime around AI technologies and applications. The National Plan’s explicit recognition of the need for regulatory, legal, and ethical principles for AI development and use represents an uncommonly foresighted approach. Of course, the government’s approach to AI regulation, ethics, and economic adjustment will reflect Beijing’s broader model of governance and ideology. Given its preference for a state-centric approach to international issues, for example, it is possible China will launch an initiative via the UN to establish first an automation/AI-related “code of conduct,” or basic regulatory approach, followed by a special committee on the topic and eventually an oversight body operating within a UN framework. Such an initiative would put China at the forefront of developing a global approach to these issues. Beijing has attempted a similar approach on cybersecurity issues, which it argues have a global impact and require a global regulatory response.

# 1NR

### Biz Con DA

#### 2---Chilling---antitrust applies to all industries, so there’s no way to limit the plan’s scope AND firms and lawyers are risk-averse and think this is true---the result is fear of liability that scales back investment.

Thomas Nachbar 19, Professor of Law at the University of Virginia School of Law, JD from the University of Chicago Law School, AB in History and Economics from the University of Illinois, “Book Review: Heroes and Villains of Antitrust”, The Antitrust Source, 18-6 Antitrust Src. 1, June 2019, Lexis

Since Adam Smith, the argument of so-called free-market intellectuals has not been that markets are perfect but rather that they are comparatively better at solving problems than governments. Part of the argument is that, in most cases, market forces will drive a firm that has adopted an inefficient practice to shift to a more efficient one, lest it lose more business than it gains from the practice. But if antitrust law outlawed a practice, there is no potential for the market to correct--the practice once outlawed would remain outlawed. n54 And because antitrust law applies to all industries, a practice outlawed for one firm or industry would be outlawed for all firms in all industries, or be interpreted as such by risk-averse firms and their risk-averse lawyers--not to mention the treble damages that the liable antitrust defendant would have to pay.

[FOOTNOTE] n55 See Credit Suisse Sec. (USA) LLC v. Billing, 551 U.S. 264, 284 (2007) ("In sum, an antitrust action in this context is accompanied by a substantial risk of injury to the securities markets and by a diminished need for antitrust enforcement to address anticompetitive conduct."); Bell Atl. Corp. v. Twombly, 550 U.S. 544, 546 (2007) ("It is one thing to be cautious before dismissing an antitrust complaint in advance of discovery, but quite another to forget that proceeding to antitrust discovery can be expensive.") Verizon Commc'ns, Inc. v. Law Offices of Curtis V. Trinko, LLP, 540 U.S. 398, 414 (2004) ("Mistaken inferences and the resulting false condemnations 'are especially costly, because they chill the very conduct the antitrust laws are designed to protect.'") (quoting Matsushita Elec. Indus. Co. v. Zenith Radio Corp., 475 U.S. 574, 594 (1986)). [END FOOTNOTE]

#### Only antitrust threatens to morph into economy-wide national policy.

Geoffrey A. Manne 18, President and Founder International Center for Law & Economics, “Why US Antitrust Law Should Not Emulate European Competition Policy,” ICLE, A Comparative Look at Competition Law Approaches to Monopoly and Abuse of Dominance in the US and EU Before the United States Senate Committee on the Judiciary Subcommittee on Antitrust, Competition Policy, and Consumer Rights, 12/19/18, https://www.judiciary.senate.gov/imo/media/doc/Manne%20Testimony.pdf

A. The European approach to Facebook and Google as cautionary tale

The question of whether technology platforms should be regulated (and why) is a contentious one. But whatever the political, economic, or social rationale impelling regulation, it remains a crucial question whether antitrust — or competition policy implemented through other laws — is the proper regulatory lever. Despite many claims that European authorities, through their competition laws, have adopted a “better” approach toward regulating technology platforms, these claims are generally based on an a priori preference for the outcome — not on a careful assessment of the underlying legal interpretation and its broader implications.

Indeed, Europe’s recent (and ongoing) experience with applying antitrust to both Facebook and Google presents a cautionary tale, not a model. As these examples show, moving towards a more open-ended enforcement of antitrust law (potentially converging with EU competition law) entails significant risks.

1. Facebook

The German Bundeskartellamt’s (Federal Cartel Office, or “FCO”) ongoing Facebook investigation, for which an infringement decision is said to be in the pipeline,28 is a stark case of the unprincipled extension of antitrust to attempt to reach a politically favored result. Indeed, in contrast to the European Commission — which at least often mentions economic analysis in its decisions — the FCO did not include any economic analysis or an attempt to gauge the actual effects of the complained-of conduct on users in its preliminary assessment. The FCO’s investigation thus bears all the traits of consumer protection enforcement (which, in Europe at least, tends to rely upon bright-line rules and little analysis of effects) rather than competition scrutiny (which nominally entails at least some inquiry into to the economic effect of firms’ conduct). The crux of the case concerns Facebook’s collection of users’ personal data outside its site — data that is then merged with Facebook’s user profiles.29 The German competition agency asserts in its preliminary assessment that Facebook (which it “assumes… is dominant”) is “abusing this dominant position by making the use of its social network conditional on its being allowed to limitlessly amass every kind of data generated by using third-party websites and merge it with the user’s Facebook account.” 30 Note that the allegation on its face is not that Facebook forecloses other sites from amassing this external data, nor that its data collection amounts to anticompetitive harm (e.g., supracompetitive prices) to consumers. Rather, its allegation is that Facebook’s terms of service authorizing this data collection are simply not good for consumers, regardless of their acceptance of the terms, and thus constitute an abuse of dominance. “In the authority’s assessment, consumers must be given more control… and Facebook needs to provide [consumers] with suitable options to effectively limit this collection of data.” 31 The German competition authority is thus attempting to use its antitrust authority to impose on consumers (and Facebook) its idiosyncratic political preferences, in this case with regard to privacy. But turning voluntary contract terms that are not, in and of themselves, anticompetitive into an antitrust violation requires a remarkable and unprecedented sleight of hand. To begin with, the FCO asserts that this data — data collected from outside of Facebook — is “essential” for other social networks to compete with Facebook. But, despite asserting that its assessment is not based on how Facebook uses internal data collected from users’ interactions with Facebook directly, the FCO appears to convert this external data into an essentiality by condemning Facebook’s superior ability to combine it with its own internal data: Facebook has superior access to the personal data of its users and other competitionrelevant data. Because social networks are data-driven products, access to such data is an essential factor for competition in the market. The data are relevant for both[] the product design and the possibility to monetise the service. If other companies lack access to comparable data resources, this can be an additional barrier to market entry.32 The effect of this is to condemn Facebook’s success — and even, perhaps, to end up demanding that Facebook share its internal data — without saying so outright. The reference to “comparable data resources” is an unmistakable nod to the essential facilities doctrine, which can require access to a firm’s competition-relevant inputs where comparable inputs cannot be obtained elsewhere. Here the FCO appears to be asserting that competitors’ effective use of external data is thwarted if they do not have comparable internal data with which to combine it. But, of course, Facebook has this data only as a result of its success in bringing users to its platform. And it would be the height of unmoored antitrust enforcement to demand that other social networks, which do not operate through Facebook (in contrast, say, to advertisers, who do reach consumers via Facebook), must have access to Facebook’s internal data simply to give them a leg up in competing with a more successful rival. And yet, that is precisely what the authority seems to be suggesting — just indirectly by purporting to rest its claim on access to external data (which, like Facebook, competing social networks certainly do try to use). Of course, lack of access to a successful company’s resources is a form of barrier to entry in every case where a challenger wishes to enter a market where existing firms are long established. The same argument that the FCO makes with respect to Facebook and data could be applied to any firm that has a strong reputation, significant brand value, substantial customer loyalty, or even large real estate holdings or an established line of credit with a bank. For antitrust to require competitor access to these resources would be to undermine completely the competitive market forces that antitrust is supposed to support. And yet the FCO does not — and cannot — distinguish these valuable types of capital from that of access to a large pool of self-generated consumer data. The FCO also alleges that Facebook’s “exploitative business terms”33 constitute an antitrust violation because “[t]he damage for the users lies in a loss of control: they are no longer able to control how their personal data are used.” 34 But the allegedly exploitative nature of this loss of control is a function of European data protection laws, not antitrust law. The FCO appears to convert the alleged data protection law violation into an antitrust offence because, [a]ccording to the authority’s preliminary assessment, when operating this business model Facebook, as a dominant company, must consider that its users cannot switch to other social networks. Participation in Facebook’s network is conditional on registration and unrestricted approval of its terms of service. Users are given the choice of either accepting the “whole package” or doing without the service.35 But because of the essentiality of Facebook’s internal data, this choice is alleged to be a false one. And thus consumers “have no option to avoid the merging of their data” 36 — a violation, the FCO asserts, of data protection law. In this way the FCO uses data protection law as a foothold to build a convoluted antitrust case that really amounts to nothing more than the condemnation of Facebook’s size and success.

This is exactly the sort of uneasy merging of general social policy and the tools of competition policy that is so corrosive to the rule of law. Using the language of antitrust, the FCO is basically making a case that Facebook should be subject to competition law penalties for possessing more data than the FCO thinks is appropriate. Perhaps there are violations under other laws — data security or privacy laws, e.g. — but nothing in the FCO’s discussion of its preliminary assessment suggests anything recognizable in the economic literature as an abuse of dominance.

The FCO’s approach would dramatically expand the scope of German (and possibly European) competition law. As some commentators have observed, any dominant company that infringes any legal obligation aimed at protecting consumers — regardless of whether the violation actually results from the absence of competition, results in cognizable anticompetitive effects, or extends the company’s dominance — could be found to infringe competition law.37

Although particularly egregious here, the FCO’s efforts to reach beyond the limited constraints of competition law are not new. Starting in 2017, the FCO has been progressively urging for expansion of its powers into a broader consumer protection set of tools.38 Thus, even if it is unsuccessful in building its case under the current state of the law, the FCO is laying the foundations for convincing the German legislature why it needs vast new powers to combine consumer protection and competition into a single regulatory authority. Notably, even the US Federal Trade Commission (FTC) — which has both consumer protection and competition mandates — treats these missions separately, and regards competition cases to arise only under competition law, and not from the violation of specific consumer protection rules.

The implications of this approach are obvious. If competition law is unconstrained on its own terms — that is, it unmoored from a set of subject-specific constraints imposed by courts and legislatures — it threatens to become a large, sprawling, economy-wide set of regulations that resembles more closely a national industrial policy. The merits or demerits of actually having an economywide industrial policy aside, it is unquestionably a bastardization of antitrust law to facilitate the imposition of policies from law and regulation outside of competition policy, in ways that of necessity will promote other polices at the very expense of competition.

And, although this is a German case, its antecedents in the prevailing orthodoxy of EU law are not hard to recognize. Though the Commission frequently makes noises about conducting an economic analysis, as I discuss below, the EU’s competition process is, at root, a political one. As such, a tremendous amount of leeway is afforded to EU competition regulators. This makes sense, on its own terms: the Commission is, after all, a policy-making body directly responsive to the policy preferences of the President of the European Commission.39 While the Commission may sometimes cite to economics in its decisions, it fundamentally structures its activities in a way that affords it a large degree of policy-making discretion.

The Bundeskartellamt’s action, although specific to Germany, makes (unfortunate) sense against this backdrop. Where, unlike in the US, antitrust enforcement is viewed as a political function of the state, regulators administering competition policy can surely be relied upon to turn it into a general regulatory apparatus, as much as possible. While this is precisely what some advocates seem to want for US antitrust, doing so entails enormous risk and the potential agglomeration of massive political power outside of our democratically elected branch of government.

#### 3---Uncertainty---abrupt expansion of antitrust generates major uncertainty that disrupts business planning.

Alden F. Abbott 21, Senior Research Fellow at the Mercatus Center of George Mason University, J.D. from Harvard Law School and M.A. in Economics from Georgetown University, “Competition Policy Challenges for a New U.S. Administration: Is The Past Prologue?”, Concurrences: Antitrust Publications & Events, February 2021, https://www.concurrences.com/en/review/issues/no-1-2021/on-topic/the-new-us-antitrust-administration-en

12. But recent suggestions put forth in an October 2020 House Judiciary Subcommittee on Antitrust majority report (HJSMR) [12] and in a November 2020 report by the Washington Center for Equitable Growth (WCEGR) [13] (coauthored by various prominent critics of Trump administration antitrust enforcement who served in the Obama administration) would go far beyond application of existing antitrust law to big digital platforms. In particular, the HJSMR proposes taking a highly regulatory approach to digital platforms, including imposing “[s]tructural separations and prohibitions of certain dominant platforms from operating in adjacent lines of business.” [14] The WCEGR also endorses the use of rulemaking (and, in particular, FTC rulemaking) to tackle significant problems of competition. [15] Rushing into rulemakings on platforms (especially without a clear showing of market failure) poses major risks, however, including, in particular, the creation of disincentives to invest in platform-specific innovation; and the interference with potential efficiency-seeking transactions by platform operators and suppliers of complements (in light of inevitable government second-guessing of platform-related business decision-making). The JBA antitrust team may wish to keep such potential costs in mind in setting competition policy vis-à-vis digital platforms.

13. To address the perceived growth and abuse of market power that are said to afflict the American economy, the HJSMR and WCEGR have also proposed to amend and thereby “toughen” the core antitrust statutes, to alter burdens of proof in litigation, and to bestow a substantial increase in resources on federal antitrust enforcers. [16] The problem of scarce agency resources has long been highlighted by enforcement agency leadership, and certainly merits attention. The call for dramatic systemic change in antitrust enforcement norms, however, should be approached cautiously, with a jaundiced eye. In our common-law-based antitrust system, a major disruption to long-familiar statutory schemes would generate major uncertainty regarding antitrust enforcement principles and substantially disrupt business planning for an indeterminate amount of time. Many welfare-enhancing transactions could be sacrificed. The harm to consumer and producer welfare due to lost socially beneficial business initiatives would be hard (if not impossible) to measure, but nonetheless real. It is certainly possible that such losses would outweigh (perhaps substantially) whatever welfare gains might flow from statutory enforcement “reform.” In other words, it should not casually be assumed that “more and different” antitrust would be an unalloyed benefit. As in all other areas of law enforcement, likely costs as well as purported benefits should be central to the antitrust public policy calculus. (Costs would include, of course, the likelihood and magnitude of “false positives” under the new enforcement regime, not just the reduction in socially beneficial transactions.)

### Trade DA

#### Trade turns and solves the case---foreign competition is better than antitrust

Anu Bradford 19, Henry L. Moses Professor of Law and International Organization at Columbia Law School, LLM from Harvard Law School, Master of Laws from University of Helsinki, JD from Harvard Law School, and Dr. Adam S. Chilton, University of Chicago, Professor of Law and the Walter Mander Research Scholar at the University of Chicago Law School, MA in Political Science from Yale University, JD and PhD in Political Science from Harvard University, “Trade Openness and Antitrust Law”, Journal of Law & Economics, Volume 62, Number 1, 62 J. Law & Econ. 29, February 2019, Lexis

2.1. Trade and Antitrust Law as Substitutes

Many scholars suggest that trade liberalization may make adopting an anti trust regime unnecessary (Bhagwati 1968; Helpman and Krugman 1989; Blackhurst 1991; Neven and Seabright 1997; Melitz and Ottaviano 2008). According to this view, free trade is an effective way to ensure that markets remain competitive because facilitating entry checks market power (Baumol, Panzar, and Willig 1982). For example, when an economy is open to trade, monopolists refrain from abusing their market power because low external barriers ensure that competitors can enter the market and contest any such abusive practices. In this way, trade liberalization renders an anti trust intervention into monopolistic practices superfluous. Exports fueled by trade liberalization should also enhance market competition. New opportunities in export markets ensure that more firms can reach an efficient scale of production, which further spurs competition and reduces the need for an anti trust regime (Bartók and Miroudot 2008).

Relying on trade liberalization to safeguard market competition could have several advantages. First, foreign producers must incur certain fixed costs and variable trade costs to enter a new market that domestic producers do not incur. If foreign firms are able to enter and effectively compete even after incurring those costs, they are presumably more efficient and hence may act as an even more effective discipline on the market than domestic firms (Bartók and Miroudot 2008). Second, choosing free trade over anti trust regulation eliminates the need to rely on government bureaucracies. Many who remain skeptical of governmental intervention favor free trade and thus prefer to have imports discipline [\*33] anticompetitive behavior. This argument may gain all the more force today considering the complexities associated with antitrust regulators from over 130 countries all applying different rules in an effort to regulate the global marketplace. Finally, although trade openness may "act as an effective antitrust policy" (Pomfret 1992, p. 11), an effective antitrust policy does not act as an effective trade policy. For example, if the United States were to impose a 30 percent tariff on foreign producers today, foreign firms would likely not enter no matter how competitive the markets are behind the border. Domestic antitrust laws thus may do little to facilitate market entry in the presence of highly protectionist trade policy.

#### says that nations will preempt perceived declines in trade which means regional conflicts are markedly more likely and faster in a world of declining trade – I’ll insert a rehighlight that proves we outweigh on timeframe – cal reads blue

1. van de Haar 20 (Edwin, independent scholar specializing in the liberal tradition in international political thought. He has lectured in international relations and political theory at Brown University, PhD from Maastricht University (2008), a MSc in International Relations from the London School of Economics and Political Science (1997) and a MA in Political Science from Leiden University (1996), “Free trade does not foster peace,” 2020, DOI: 10.1111/ecaf.12405, DOA: 1-5-2020) //Snowball //strikethrough of rhetoric
2. The most obvious rebuttal of these arguments is empirical. It just did not happen. Countries trading with each other, all around the globe, have fought wars with one another, over and over again. Some recent examples are Russia and Georgia, Russia and Ukraine, and Saudi Arabia and Yemen. As Smith predicted, human nature is an important factor in the explanation. People will quarrel and fight: ultimately emotions rule reason. In the domestic situation, there is hardly anyone who thinks that people can do without police and judiciary, because some people simply will not obey the rules. The international system is without a court with enforcement powers. There are some structural constraints, but it remains a human affair. The fundamental insights of Smith and his contemporaries into human behaviour do not amount to some oldfashioned idea, long refuted by modern science. They are confirmed not only by modern economists such as Kahneman (2011) and international relations specialists such as Waltz (1954, pp. 16–79) and Donelan (2007), but also by theorists working on the border between evolutionary psychology and international affairs (Rosen, 2005; Rubin, 2002; Thayer, 2004).
3. The relationship between trade and economic interdependence is also far more complex. Economic interdependence matters sometimes, but it cannot trump power politics. As Copeland (2015, pp. 1–50, 428–46) makes clear, economic interdependence is sometimes a constraint on violent action by a state. Yet it could just as well be a cause of violent action, especially of a pre-emptive nature in the event that actors expect to be cut off from trade and other economic resources in the near future. In this way, the benefits of continued trade lose out against the expected economic vulnerability. Sobek (2009, pp. 107–27) adds that trade relations might lead to uneven power relationships, which may be a cause of war as well.
4. Also relevant here is the fact that free trade does not normally result in bilateral interdependence, except for trade in the rarest goods. Free trade leads to multilateral trade relations, and consequently there may be more than one country where particular goods can be bought. Therefore, in times of war, it is relatively easy to switch to suppliers from country A to country B or C. In this way warfare may be a less costly option than is assumed by the idea of economic interdependence.
5. Public opinion is not automatically opposed to war, as Cobden painfully found out during the Crimean War (1853–56). This has been evident many times since, not least in the two world wars. So the idea of public opinion as a pacifying factor influencing decision-makers must be discarded. It must also be noted that the public in any case hardly ever influences foreign policy decisions on war and peace (Hill, 2003, pp. 250–82).
6. Trade is unable to foster peace, because it is unable to overcome many causes of war. Think about cultural and religious differences, geopolitical causes such as the fight for natural resources, including increasingly rare raw materials, or more traditional wars between great powers or their proxies over a border dispute. States may also act against their economic interest for some perceived higher goal (Coker, 2014). The causes of war are often multifaceted and complex. Wars happen because people have reasons to fight, in the form of goals and grievances, and possess enough resources and resolve (Ohlson, 2009). Trade relations are just one factor in the mix of causes of war, which include such coincidental factors as chance, luck, or reckless behaviour by individuals who happen to influence public policy. International commerce is simply not a “perfectly effective antiwar device” (Suganami, 1996, pp. 153–210). The best one can say is that the protection of trade relations is sometimes one of the factors in the decision not to wage war. Nothing less, nothing more.
7. To sum up, many of Adam Smith's arguments still stand, and are confirmed or complemented by modern research. There is no solid ground for the expectation that trade promotes, fosters, or leads to peace. Generally, international economic interests are not the crucial factors in decisions over war and peace. Too many other factors come into play. To believe that trade fosters peace was folly even hundreds of years ago. To still think so is to believe in fairy tales, to be ~~blinded~~ [confused] by the correlates computed by limited yet available datasets, or both.

#### Recent, robust studies

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Why does protectionism lead to conflict and why does free trade help prevent it? Learn about the connection between peace and free trade.

Frédéric Bastiat famously claimed that “if goods don’t cross borders, soldiers will.”

Bastiat argued that free trade between countries could reduce international conflict because trade forges connections between nations and gives each country an incentive to avoid war with its trading partners. If every nation were an economic island, the lack of positive interaction created by trade could leave more room for conflict. Two hundred years after Bastiat, libertarians take this idea as gospel. Unfortunately, not everyone does. But as recent research shows, the historical evidence confirms Bastiat’s famous claim.

To trade or to raid

In “Peace through Trade or Free Trade?” professor Patrick J. McDonald, from the University of Texas at Austin, empirically tested whether greater levels of protectionism in a country (tariffs, quotas, etc.) would increase the probability of international conflict in that nation. He used a tool called dyads to analyze every country’s international relations from 1960 until 2000. A dyad is the interaction between one country and another country: German and French relations would be one dyad, German and Russian relations would be a second, French and Australian relations would be a third. He further broke this down into dyad-years; the relations between Germany and France in 1965 would be one dyad-year, the relations between France and Australia in 1973 would be a second, and so on.

Using these dyad-years, McDonald analyzed the behavior of every country in the world for the past 40 years. His analysis showed a negative correlation between free trade and conflict: The more freely a country trades, the fewer wars it engages in. Countries that engage in free trade are less likely to invade and less likely to be invaded.

Trading partners

The causal arrow

Of course, this finding might be a matter of confusing correlation for causation. Maybe countries engaging in free trade fight less often for some other reason, like the fact that they tend also to be more democratic. Democratic countries make war less often than empires do. But McDonald controls for these variables. Controlling for a state’s political structure is important, because democracies and republics tend to fight less than authoritarian regimes.

McDonald also controlled for a country’s economic growth, because countries in a recession are more likely to go to war than those in a boom, often in order to distract their people from their economic woes. McDonald even controlled for factors like geographic proximity: It’s easier for Germany and France to fight each other than it is for the United States and China, because troops in the former group only have to cross a shared border.

The takeaway from McDonald’s analysis is that protectionism can actually lead to conflict. McDonald found that a country in the bottom 10 percent for protectionism (meaning it is less protectionist than 90 percent of other countries) is 70 percent less likely to engage in a new conflict (either as invader or as target) than one in the top 10 percent for protectionism.



#### **b) Empirics**

Cary Huang 18, Senior Writer and Veteran Columnist at the South China Morning Post, Former China Editor for The Standard, “Trade Wars Cause World Wars, History Shows. Will This Time Be Different?”, South China Morning Post, 7/17/2018, https://www.scmp.com/comment/insight-opinion/united-states/article/2155565/trade-wars-cause-world-wars-history-shows-will

History provides ample evidence that trade problems have heightened tensions among nations. Such fights lead to economic crises, and trigger political and social crises and, finally, trigger wars.

A full-blown trade war often features the combination of a tariff war and currency war. In practice, exporting countries will, in response to imposed tariffs, resort to currency manipulation, moving to cheapen their money to offset the impact of the tariffs.

But a competitive devaluation among trade partners makes a currency war meaningless. Once countries realise that currency wars do not work, they resort to all the tools available to set up barriers to block trade. This seems evident amid the escalating US-China trade feud. The slump in the renminbi in past few months is stoking fears in markets that China’s policymakers are deliberately pushing the currency’s depreciation in an effort to offset the US tariff hikes.

Trump staring down barrel of yuan devaluation in trade war

Before the first world war, most countries accepted the classical gold standard of pegging their currencies to gold as an effort to anchor smooth trade. However, from 1913, countries began to suspend or abandon the system as they devalued their currencies to compete for export markets in the ongoing tariff war.

The end of the first world war sparked the first worldwide currency war, starting in Weimar Germany in 1921, followed by France in 1925. In the end, all the major economies scrambled to devalue their currencies – sterling, the franc and the US dollar – throughout the 1930s.

In 1930, US president Herbert Hoover signed into law the Smoot-Hawley Tariff Act, which intensified the currency war and deepened the Great Depression. The protectionist law raised tariffs on more than 20,000 imported products and triggered retaliation from many US trade partners.

Trade wars stoke nationalism and hatred among people and finally trigger wars, as evidenced by the breakout of the second world war: the Japanese invaded Manchuria in 1931, and the whole of China in 1937; the Germans invaded Poland in 1939, then the rest of Europe; and the Japanese attacked Pearl Harbour in 1941.

Could Trump’s trade war turn into a third world war?

A quote often attributed to the 19th-century French economist, Frédéric Bastiat, goes: “When goods do not cross frontiers, armies will.” It is obvious that the current US-China trade war is stoking geopolitical tensions between the world’s two largest economies and chief political adversaries, as they become more confrontational over their discord on maritime issues in the South and East China seas and over Taiwan.

History often repeats itself if we do not learn from it. The two full-blown trade wars some 80 and 100 years ago helped to ignite the two world wars. Could such a catastrophe happen again?

#### c) Forecasting---the current environment is uniquely primed for global escalation---trade’s key

Dr. Christopher M. Dent 20, Professor in Economics and International Business at Edge Hill University, PhD in International Political Economy, University of Hull, MA in Economics from the University of Leeds, “Brexit, Trump and Trade: Back to a Late 19th Century Future?”, Competition & Change, Volume 24, Issue 3-4, p. 338-339

Introduction

The global economy and system are entering a critical phase. Populist nationalism is on the rise, fuelled largely by discontent over globalization’s distributional impacts and failure of conventional politics and markets to deliver on their promises (Kyle and Gultchin, 2018). An emerging economic superpower is disrupting the global order and its long incumbent power structures. Multilateralism is under threat, trade protectionism and tariff wars are escalating, many economies are struggling in the lingering aftermath of a severe global recession and the global system is under pressure generally from short- and longer-term crises (Guillen, 2015). World GDP and trade growth are slowing and there are predictions of greater political economic turbulence to come (World Bank, 2019; World Trade Organisation, 2019a). Worst still, the world may be on the brink of a major great power conflict. This scenario not only applies today but also to the late 19th century world. The eventual outcome of events in this period was escalating conflict that culminated in the outbreak of World War 1 (WW1). Whilst such an outcome was not necessarily inevitable by the 1890s it was a retrospectively proven possibility. Hence, avoiding a late 19th century world scenario is, at the very least, desirable.

Trade is central to understanding the political economies of the early 21st and late 19th centuries, making it a suitable empirical prism to make a comparative historical analysis (CHA) of the two periods. What follows is a trade political economy study that will examine various connections between the domestic and the international, focusing also on two significant cases that provide important comparative analytical insights. The result of Britain’s 2016 Brexit referendum and election of Donald Trump as US President in the same year have become emblematic of contemporary populism, economic nationalism and associated resistance against forms of internationalism and globalization.1

#### Breakdown escalates civil conflicts that draw in Iran, Russia, and North Korea---nuclear war

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But that overlooked the ways in which the risk of interstate war was already rising before COVID-19 began to spread. Civil wars were becoming more numerous, lasting longer and attracting more outside involvement, with dangerous consequences for stability in many regions of the world. And the global dynamics most commonly cited to explain the falling incidence of interstate war—democracy, economic prosperity, international cooperation and others—were being upended.

If the spread of democracy kept the peace, then its global decline is unnerving. If globalization and economic interdependence kept the peace, then a looming global depression and the rise of nationalism and protectionism are disconcerting. If regional and global institutions kept the peace, then their degradation is unsettling. If the balance of nuclear weapons kept the peace, then growing risks of proliferation are disquieting. And if America’s preeminent power kept the peace, then its relative decline is troubling.

Now, the pandemic, or more specifically the world’s reaction to it, is revealing the extent to which the factors holding major wars in check are withering. The idea that war between nations is a relic of the past no longer seems so convincing.

The Pessimists Strike Back

More than any other individual, it was cognitive scientist Steven Pinker who popularized the idea that we are living in the most peaceful moment in human history. Starting with his 2011 bestseller, “The Better Angels of Our Nature: Why Violence Has Declined,” Pinker argued that the frequency, duration and lethality of wars between great powers have all decreased. In his 2019 book, “Enlightenment Now: The Case for Reason, Science, Humanism, and Progress,” he wrote that war “between the uniformed armies of two nation-states appears to be obsolescent. There have been no more than three in any year since 1945, none in most years since 1989, and none since the American-led invasion of Iraq in 2003.”

Optimists like Pinker held that, rather than the world falling apart, as a quick glance at headline news might suggest, the opposite was true: Humanity was flourishing. More regions are characterized by peace; fewer mass killings are occurring; governance and the rule of law are improving; and people are richer, healthier, better educated and happier than ever before.

In their book, “Clear and Present Safety: The World Has Never Been Better and Why That Matters to Americans,” Michael A. Cohen and Micah Zenko argued that the evidence is so overwhelming that it is difficult to argue against the idea that wars between great powers, and all other interstate wars, are becoming vanishingly rare. Even when wars do break out, they tend to be shorter and less deadly than they were in the past. John Mueller, a senior fellow at the Cato Institute, also reasoned that the idea of war, like slavery and dueling before it, was in terminal decline, while Joshua Goldstein, an international relations researcher at American University, credited the United Nations and the rise of peacekeeping operations for helping win the “war on war.”

But in recent years, a range of critics have begun to poke holes in these arguments. Tanisha M. Fazal, an international relations professor at the University of Minnesota, contends that the decline in war is overstated. Major advances in medicine, speedier evacuations of wounded soldiers from the field of battle and better armor have made war less fatal—but not necessarily less frequent. Fazal and Paul Poast, who is at the University of Chicago, further assert that the notion of war between great powers as a thing of the past is based on the assumption that all such conflicts resemble World War I and II—both are historical anomalies—and overlooks the actual wars fought between great powers since 1945, from the Korean War and the Vietnam War to proxy wars from Afghanistan to Ukraine. Meanwhile, Bear F. Braumoeller, an Ohio State political science professor, analyzed the same historical data on conflicts used by Pinker, Mueller and Goldstein, and found no general downward trend in either the initiation or deadliness of warfare over the past two centuries. What’s more, Braumoeller contends that the so-called “long peace”—the 75 years that have passed without systemic war since World War II—is far from invulnerable, and that wars are just as likely to escalate now as they used to be. Just because a major interstate war hasn’t happened for a long time, doesn’t mean it never will again. In all probability, it will.

And by focusing solely on interstate wars, the optimists miss half the story, at least. Wars between states have declined, but civil wars never disappeared—and these internal conflicts could easily escalate into regional or global wars.

The number of conflicts in the world reached its highest point since World War II in 2016, with 53 state-based armed conflicts in 37 countries. All but two of these conflicts were considered civil wars. To make matters worse, new studies have shown that civil wars are becoming longer, deadlier and harder to conclusively end, and that these internal conflicts are not really internal. Civil wars harm the economies and stability of neighboring countries, since armed groups, refugees, illicit goods and diseases all spill over borders. Some 10 million refugees have fled to other countries since 2012. The countries that now host them are more likely to experience war, which means states with huge refugee populations like Lebanon, Jordan and Turkey face legitimate security challenges. Even after the threat of violence has diminished in refugees’ countries of origin, return migration can reignite conflicts, repeating the brutal cycle.

A Yugoslav Federal Army tank.

Perhaps most importantly, recent research indicates that civil wars increase the risk of interstate war, in large part because they are attracting more and more outside involvement. In a 2008 paper, researchers Kristian Skrede Gleditsch, Idean Salehyan and Kenneth Schultz explained that, in addition to the spillover effects, two other factors in civil wars increase international tensions and could possibly provoke wider interstate wars: external interventions in support of rebel groups and regime attacks on insurgents across international borders.

Immediately after the Cold War, none of the ongoing civil wars around the world were internationalized. According to the Uppsala Conflict Data Program, there were 12 full-fledged civil wars in 1991—in Afghanistan, Iraq, Peru, Sri Lanka, Sudan, and elsewhere—and foreign militaries were not active on the ground in any of them. Last year, by contrast, every single full-fledged civil war involved external military participants. This is due, in part, to the huge growth in U.S. military interventions abroad into civil conflicts, but it’s not only the Americans. All of today’s major wars are in essence proxy wars, pitting external rivals against one another. Conflicts in Syria, Yemen and Libya are best understood not as civil wars, but as international warzones, attracting meddlers including the United States, Russia, Saudi Arabia, Turkey, Iran, France and many others, which often intervene not to build peace, but to resolve conflicts in a way that is favorable to their own interests. These internationalized wars are more lethal, harder to resolve and possibly more likely to recur than civil wars that remain localized. It is not that difficult to imagine how these conflicts could spark wider international conflagrations. Wars, after all, can quickly spiral out of control.

As Risks Increase, Deterrents Decline

To make matters worse, most of the global trends that explained why interstate war had decreased in recent decades are now reversing. The theories that democracy, prosperity, cooperation and other factors kept the peace have been much debated—but if there was any truth to them, their reversals are likely to increase the chance of war, irrespective of how long the coronavirus pandemic lasts.

Democracy is often considered a prophylactic for war. Fully democratic countries are less likely to experience civil war and rarely, if ever, go to war with other democracies—though, of course, they do still go to war against non-democracies. While this would be great news if democracy and pluralism were spreading, there have now been 14 consecutive years of global democratic decline, and there have been signs of additional authoritarian power grabs in countries like Hungary and Serbia during the pandemic. If democracy backslides far enough, internal conflicts and foreign aggression will become more likely.

Other theories posit that economic bonds between countries have limited wars in recent decades. Dale Copeland, a professor of international relations at the University of Virginia, has argued that countries work to preserve ties when there are high expectations for future trade, but war becomes increasingly possible when trade is predicted to fall. If globalization brought peace, the recent wave of far-right nationalism and populism around the world may increase the chances of war, as tariffs and other trade barriers go up—mostly from the United States under President Donald Trump, who has launched trade wars with allies and adversaries alike.

The coronavirus pandemic immediately elicited further calls to reduce dependence on other countries, with Trump using the opportunity to pressure U.S. companies to reconfigure their supply chains away from China. For its part, China made sure that it had the homemade supplies it needed to fight the virus before exporting extras, while countries like France and Germany barred the export of face masks, even to friendly nations. And widening economic inequalities, a consequence of the pandemic, are not likely to enhance support for free trade.

This assault on open trade and globalization is just one aspect of a decaying liberal international order, which, its proponents argue, has largely helped to preserve peace between nations since World War II. But that old order is almost gone, and in all likelihood isn’t coming back. The U.N. Security Council appears increasingly fragmented and dysfunctional. Even before Trump, the world’s most powerful country ratified fewer treaties per year under the Obama administration than at any time since 1945.

Trump’s presidency only harms multilateral cooperation further. He has backed out of the Paris Agreement on climate change, reneged on the Iran nuclear deal, picked fights with allies, questioned the value of NATO and defunded the World Health Organization in the middle of a global health crisis. Hyper-nationalism, rather than international collaboration, was the default response to the coronavirus outbreak in the U.S. and many other countries around the world.

It’s hard to see the U.S. reluctance to lead as anything other than a sign of its inevitable, if slow, decline. The country’s institutionalized inequalities and systemic racism have been laid bare in recent months, and it no longer looks like a beacon for others to follow. The global balance of power is changing. China is both keen to assert a greater leadership role within traditionally Western-led institutions and to challenge the existing regional order in Asia. Between a rising China, revanchist Russia and new global actors, including non-state groups, we may be heading toward an increasingly multipolar or nonpolar world, which could prove destabilizing in its own right.

Finally, the pacifying effect of nuclear weapons could be waning. While vast nuclear arsenals once compelled the United States and the Soviet Union to reach arms control agreements, old treaties are expiring and new talks are breaking down. Mistrust is growing, and the chance of an unwanted U.S.-Russia nuclear confrontation is arguably as high as it has been since the Cuban missile crisis.

The theory of nuclear peace may no longer hold if more countries are tempted to obtain their own nuclear deterrent. Trump’s decision to abandon the Iran nuclear deal, for one thing, has only increased the chance that Tehran will acquire nuclear weapons. It’s almost easy to forget that, just a few short months ago, the United States and Iran were one miscalculation or dumb mistake away from waging all-out war. And despite Trump’s efforts to negotiate nuclear disarmament with Kim Jong Un’s regime in Pyongyang, it is wishful thinking to believe North Korea will give up its nuclear weapons. At this point, negotiators can only realistically try to ensure that North Korea’s nuclear menace doesn’t get even more potent.

In other words, by turning inward, the United States is choosing to leave other countries to fend for themselves. The end result may be a less stable world with more nuclear actors.

If leaders are smart, they will take seriously the warning signs exposed by this global emergency and work to reverse the drift toward war.

If only one of these theories for peace were worsening, concerns would be easier to dismiss. But together, they are unsettling. While the world is not yet on the brink of World War III and no two countries are destined for war, the odds of avoiding future conflicts don’t look good.

The pandemic is already degrading democracies, harming economies and curtailing international cooperation, and it also seems to be fostering internal instability within states. Rachel Brown, Heather Hurlburt and Alexandra Stark argue that the coronavirus could in fact sow more civil conflict. If this proves accurate, the increase in civil wars is likely to lead to more external meddling, and these next proxy wars could soon precipitate all-out international conflicts if outsiders aren’t careful. With the usual deterrents to conflict declining around the world, major wars could soon return.

#### Trade escalation wrecks the global chemicals industry

Kristen Hays 18, Senior Petrochemicals Editor at Platts, “US Chemical Industry Caught in US-China Trade War”, Platts Petrochemicals Special Report, October 2018, https://www.spglobal.com/platts/plattscontent/\_assets/\_files/en/specialreports/petrochemicals/us-china-trade-war.pdf

INTRODUCTION

The US chemical industry is in the crosshairs of escalating trade tensions between the US and China that have spawned tariffs on hundreds of products from both countries. From steel and parts needed to build multibillion-dollar plants to numerous raw-material chemicals and plastics produced, tariffs have affected hundreds of billions of dollars in commerce between the world’s two largest economies, and markets are responding accordingly.

US petrochemical market participants say Chinese customers increasingly seek other sources for resins and chemicals that once flowed freely from the US, wary of current tariffs and threatened ones that could come into play while shipments are in transit. The American Chemistry Council has vehemently opposed tariffs, arguing that fallout from the additional costs and shifting trade flows will create unintentional, long-term consequences that could threaten the growth of the US as a global supplier.

“There is no acceptable tariff rate for global chemicals trade with China or any US trading partner. Only zero tariffs will maximize our industry’s potential to deliver innovative products to new regions and increase social, environmental and economic sustainability around the world,” ACC President Cal Dooley said in September when President Donald Trump’s administration imposed a third round of tariffs on Chinese products valued at $200 billion.

#### Extinction

Steven Danielpour 14, AIA, CSI, CCS, LEED AP BD+C, Director of Firmwide Specifications at HOK, Member of the Corporate BuildingSmart, BIM, and Project Delivery boards, “Sustainable Coatings: Shifting the Paradigm,” D+D, April 2014, http://www.cristalactiv.com/uploads/press/2014-04%20Sustainable%20Coatings\_Danielpour%20D+D%20April%202014.pdf

New technologies and processes will help deliver the innovations needed to respond to ~~mankind’s~~ greatest challenges, says HOK’s firmwide director of specifications. Whether you’re an architect or facility owner interested in ensuring healthy buildings and communities, a contractor navigating the many shades of “green” coatings or a supplier responding to market demand for these coatings, sustainability matters. But what makes a coating “sustainable” in the built environment, and why should we care? Wikipedia defines sustainability as “a characteristic of a process or state that can be maintained at a certain level indefinitely.” Production, distribution and application of sustainable coatings must meet current needs without compromising our ecosystems’ ability to sustain future populations. Continuing to build the way we have built, using the materials we have used for centuries, is no longer viable in light of diminishing energy, water and other resources. Key megatrends, including population growth, climate change and a proliferation of information, make sustainable coatings all the more critical. So it’s exciting to see the industry responding with advanced technologies that are healthier for building occupants and the environment, while achieving high performance and durability. We see it in such innovations as the newest generation of PVDF (polyvinylidene fluoride) coatings, polysiloxane coating systems, advanced anti-microbials and more. And just ahead we can expect to see phase-changing coatings that will respond chemically to cooler or warmer conditions, for instance, to improve energy efficiency in the building envelope. We may see roofing materials that reflect and absorb heat as appropriate, using phase-changing materials and nanotechnology. Such cutting-edge technologies, along with processes that reduce waste, reuse byproducts and allow reformulation into new products, promise game-changing improvements for coatings. Let’s take a closer look at the drivers that will make sustainable coatings increasingly important, and the processes and technologies on the horizon. Responding to Dwindling Resources The logic is simple: If we continue to consume natural resources faster than they can be replenished, and if we produce wastes for future generations to deal with, we’ll have a harder and harder time maintaining life on Earth as we know it. Scientific research on species extinction makes it clear that human survival depends on maintaining our ecological cycle, as well as those of other species and their habitats. Yet we’re barreling like a runaway train toward depleting some key resources. Petroleum: Petrochemicals, a necessary feedstock for high-performance coatings, derive from fossil fuels that took millions of years to create; they are not readily replenished. Sustainable resource management requires that we conserve irreplaceable resources through closed-loop manufacturing, reusing manufacturing byproducts and recycling waste into new products. Water Resources: Only 3 percent of the Earth’s water is potable, and most of this supply is locked in the polar ice cap. Just 0.003 percent of the world’s water is readily available for human consumption, and 16 percent of that is used to manufacture building materials and construct buildings. Worse yet, due to pollution, 40 percent of streams, 45 percent of lakes and 50 percent of estuaries in the United States were deemed not clean enough to support fishing and swimming in a 2000 Environmental Protection Agency study. The Index of Watershed Indicators reports that only 15 percent of our watershed has relatively good water quality. Forests: Rain forests play an important role in maintaining Earth’s air quality, absorbing carbon dioxide emissions and VOCs (volatile organic compounds), while replenishing the air with oxygen. Statistics show that the annual rate of global deforestation is equal to an area the size of the state of Georgia. This is critical, because it has been estimated that when more than 70 percent of an ecosystem is lost, the remainder may be unable to sustain the environment needed for survival. Waste: The United States generates enough garbage daily to fill 63,000 garbage trucks, which, lined up, would stretch 400 miles from Los Angeles to San Francisco. The building industry accounts for 20 percent of this waste stream. Energy: The U.S. Department of Energy estimates that improvements in U.S. building energy efficiency using existing technology could save $20 billion. Forty percent of the world’s energy is used to construct and operate buildings. The numbers are grim, but designers and suppliers have real options for countering these trends. We can employ what I like to call the Seven Principles of Sustainable Design: Use Low-Impact Materials: Select non-toxic, sustainably produced or recycled materials that require little energy to process. Promote Energy efficiency: Use less energy to manufacture more efficient products. Select for Quality and Durability: Use durable, longer-lasting and better-functioning products to minimize replacement frequency. Design for Reuse and Recycling: Design products, processes and systems for performance in a commercial “afterlife.” Employ Bio-Mimicry: Use scientific data to redesign industrial systems along biological lines, enabling the constant reuse of materials in continuous closed cycles. Substitute for High-Use Service: Shift modes of consumption from single ownership to public/shared ownership (e.g., private automobile to car-sharing service). Promote minimal resource use per unit of consumption. Choose Renewable Sources: Use materials extracted from nearby (local or bioregional), sustainably managed renewable sources that can be composted (or fed to livestock) when usefulness has been exhausted. Responding to a Changing Society Beyond the challenges we face in conserving scarce resources, a few key megatrends underscore the importance of sustainable coatings. Population Growth: World population doubled from 2.5 billion in 1950 to 5 billion in 1990; it is projected to reach 9.8 billion in 2050. The population is also shifting from rural areas to major metropolitan areas, with people migrating for better employment, commerce and quality of life. New construction will be required to support growth and urbanization. We’ll need to replace, upgrade, repurpose and conserve existing structures and infrastructures. Climate Change: Once mislabeled “global warming,” the significant, lasting change from relatively mild, predictable weather patterns to more unpredictable patterns increasingly will affect industrialized farming and dense urban populations. We’ll see more pressure to produce materials, products and assemblies that can withstand extreme variances in weather. Basic code-compliant solutions that are “good enough” today will no longer be acceptable. We’re now designing disaster-mitigation plans and hardening essential facilities and infrastructure, as new codes require mitigation of rising water levels and storms we once saw every 100 years. We can expect to see carbon dioxide emissions regulated, promoting net-zero buildings whose every feature is designed to reduce energy use and associated carbon emissions. Greater emphasis will be placed on energy efficiency and energy recovery, as well as water-resource management and conservation. Information Explosion: Information is growing exponentially, and a corollary increase in access to this information through the Internet means that people are more informed than ever about optimum human health and the risks associated with exposure to chemicals. We pore over studies seeking to define the “tipping point” for toxemia in terms of parts per billion of key compounds. We worry about information that links exposure to changes of DNA affecting future generations. These health concerns are driving changes that have tremendous implications for building materials. • New Regulations: States increasingly introduce regulations designed to control exposure and assure public health. The International Green Construction Code is now used for baseline sustainability in regular building codes. • VOC Limits: VOCs are regulated on the West Coast via the South Coast Air Quality Management District, and on the East Coast via the Ozone Transport Commission. Recent changes in California have lowered VOC limits to a maximum of 50 grams per liter in coatings. • New Organizations: The Living Building Challenge introduced a chemical “Red List” banning hazardous chemicals from use on projects. • More Transparency: As a result of requirements in LEED v4 for product transparency, manufacturers of products used on LEED projects must detail the chemical content of the products in HPDs (health product declarations) and EPDs (environmental protection declarations). • New Social Contract: Major petroleum chemical companies are forced to address the population’s desire to shift from oil and coal to natural gas and to renewable energy and biomass materials. Technology Explosion: The last 20 years of mergers and acquisitions led to large chemical plants manufacturing single resins. The future lies in small batch processing of custom chemicals and new processing technologies. These include nano-technology, micron-level changes to alter product performance; phase-changing materials, capable of storing and releasing large amounts of energy; and regenerative chemicals that respond to environmental changes. What do these megatrends mean for the chemical industry? They portend a shift in processes, standardization and approach. Closed-Loop Processes: Manufacturing closed loops are economically advantageous, reduce/ eliminate waste, reuse byproducts and allow reformulation into new products without downcycling. Shaw Carpet is one success story, creating nylon 6 fibers that can be recycled 100 percent into new carpet. Shaw’s activity resulted in record profits, as producing carpet with nylon 6 requires no new petrochemicals. Tightening of Standards/LCA: Life-cycle costing is the true measure of value instead of traditional first-cost thinking. That is important where better products require less maintenance. Tightening standards will help designers maintain quality through specifications. In fact, as coatings technologies advance, our reliance on standards increases. Standards organizations whose certifications for sustainable offerings fail to keep up with national programs, or whose certifications don’t perform as intended, will be bypassed. For coatings specific standard groups to survive, they must align with national standards and address high performance and durability. Stricter Guidelines: In the healthcare and science laboratory industries, stricter guidelines will be required to combat hospital-acquired infections and address the harsh chemicals/disinfectants necessary to stem infections. Alchemizing Toxic Chemicals: The storage of large quantities of toxic chemicals at various waste sites necessitates that we incorporate toxic chemicals in ways that alchemize them, creating non-toxic, stable, safe products that can be reused and recycled, without toxicity. For example, LEED supports the use of fly ash, the byproduct of coal manufacturing, as cement replacement in concrete production. This activity will decrease chemical reservoirs of fly ash so that they no longer pose a health hazard. Creating Coatings for the Future Coatings technology has evolved as manufacturers respond to market needs and awareness. Getting the Lead Out: For decades lead was added to paints and coatings to improve durability and color retention. Research into the hazards of lead paint, and lead dust, made the industry move from lead to safer alkyd formulations. Recent awareness of the high VOC content has led manufacturers to replace alkyds with lower-VOC acrylic latex systems. Where initial productions met market skepticism regarding performance and durability, formulation improvements now offer paint coatings with low VOCs and better performance, durability, color retention and color-hiding capability than older technologies. Improving Corrosion-Resistant Coatings: Corrosion-resistant coatings for architecturally exposed structural steel have been three-coat systems consisting of organic or inorganic zincrich primers, epoxy intermediate and aliphatic polyurethane topcoats as the most durable high-performance coatings. Advances in the last 20 years have led to two-coat polysiloxane coating systems that, for mild to moderate atmospheric exposure, provide excellent corrosion resistance along with color and gloss retention said to surpass that of polyurethanes. Improving Coatings to Protect Aluminum: Coatings to protect aluminum required chromate pretreatment for surface preparation and bonding of PVDF resin coatings. Awareness of the toxicity of hexavalent chromate prewashes led to development of coatings that do not need chromate prewashes but offer the same service life and durability. In addition, the EPA introduced a significant new use rule (SNUR) last September to limit/eliminate perfluorinated compounds (PFCs) in PVDF coatings in response to overwhelming evidence that these chemicals are persistent bioaccumulative toxicants. PFCs were used as surfactants to improve the bond between coatings and metals. Producers of PVDF coatings altered the chemistry to remove perfluorooctanoic acids. Combining PVDF coatings with acrylics, coatings companies created low-VOC, water-based PVDF coatings with the same performance as the solvent-based PVDFs and that can be applied in the field, making initial application and long-term maintenance easy. Other chemical companies altered the chemistry of PVDF coatings further, developing powder coatings that can be applied in the field or in the shop with the same performance as 20-year warrantable fluid-applied systems. Advancing Anti-Microbials: In high-performance interior coatings for laboratories and hospital facilities, epoxy paints and coatings recently have been replaced with two-component waterborne polyurethane systems based on advancements in polyurea technology. These systems provide high-durability coatings that can contain anti-microbial additives. They have great color retention and durability, while reducing dry time in shop preparations. Controlling Moisture in Buildings: Rain screen design and energy regulations led to improvement in the building energy envelope through creation of air barrier systems. Controlling the movement of moisture through the building envelope increases the durability and life of the thermal envelope. Fluid-applied air barriers face new challenges as IBC 2012 adopts NFPA 285, mandating assembly fire testing of the exterior envelope. Companies must alter formulations to respond to new requirements for fire test performance. Overcoming Issues of Fire-Resistant Chemicals: In the last year, fire-resistant coatings came under attack due to studies linking halogenated products to human health issues. Early formulations migrated, leaching chemicals in the environment. Independent research studies showed fire-retardant coatings to be carcinogenic and endocrine disruptors. Recent formulations provide more durability and intimate bond chemicals in chemical composition of insulation products to prevent leaching and the related hazards. However, the public damage sustained as a result of published reports has led makers of children’s clothing, bedding and toys to remove fire-resistant chemicals from their products. Some design professionals are pushing for building code legislation to remove the requirement that building insulation be fire resistant. So what developments can we expect in architectural coatings technology? Phase-Changing Technology: Phase-changing materials will become more mainstream to address changes in environmental conditions. Coatings will change chemistry in response to environmental changes. These coatings will improve the energy efficiency of the building envelope, while minimizing unwanted effects. Cool Roofing: Some debate surrounds cool roof technology. Reflective roof coatings help reduce energy demand during cooling cycles by reflecting heat from solar radiation. LEED points are available for use of cool roof coatings that help limit the heat island effect in urban environments. Recent research indicates that cool roofs are most effective in reducing the building energy use where the number of cooling days exceeds the number of heating days. Darker roofs may provide better energy performance in colder regions. However, water runoff from black roofs increases the temperature of water in rain and water runoff, and may be harmful to downstream biomes. Cool roof systems not only reduce the heat island effect locally, but also minimize this damage to ecosystems miles away. Titanium Dioxide Coatings: TiO2 coatings clean surfaces through photocatalytic action, using UV light to activate coatings to bond with carbon dioxide. They produce hydrocarbon runoff and oxygen and clean the environment. Here are some examples. • As a concrete additive, titanium dioxide maintains white concrete surfaces, minimizing maintenance, by de-bonding with carbon and dirt. It cleans the air by cycling and capturing carbon particles and VOCs. • In healthcare environments, TiO2 coatings may stimulate antimicrobial action. Operating rooms can “self-clean,” eliminating bacteria between operations by activating enzymatic action through exposure to UV, infrared or other spectral light. • In another application of TiO2 used as a photocatalyst, the technology is used to coat “self-cleaning glass.” While relatively expensive, such technologies may be valuable in polluted areas like China, where rains pose a durability threat to building materials that self-cleaning chemicals can mitigate. • Data reveal that indoor air quality is 10 times more toxic than exterior air. Tightening the building envelope has exacerbated this issue. Manufacturers have produced TiO2- based surface treatments that are activated by UV light to actively purify air when applied to interior and exterior surfaces. Reenvisioning What’s Possible These are exciting developments, but they’re just the beginning. Here are but a few innovations to look for in coming years. Regenerative Coatings. Such coatings alter their chemistry to respond to the environment in ways that are regenerative. For example, cool roof coatings will be developed to respond to hot days by reflecting light and to cold days by absorbing heat. This technology will be available through integration of phase-changing materials and nanotechnology. Better Insulation. Thinner, lighter, more efficient insulations will come down in price, become more mainstream and be adopted by building codes to increase thermal control of the interior environment. Inherently Fire-Resistant Coatings. These coatings will use nano-technology to produce products that are inherently flame and fire resistant, so fire retardants are not necessary. More broadly, we can expect the product transparency requirements in LEED v4 and chemical bans from groups like the Living Building Challenge to fundamentally change our approach to materials development and selection. The industry will produce healthier, environmentally sustainable chemicals and products that mitigate problems while maintaining performance and long life. This effort will depend on greater cooperation among design professionals, chemical companies, manufacturers and fabricators. It will take communication on individual projects, as well as collaboration through cross-industry channels. The challenges and stakes we face are unprecedented in human history, but so are the opportunities.

#### 2. their ev says growing biotech is an alt cause and sets the impact at a tiny risk – cal inserts blue

Piers **Millett 17**, Consultant for the World Health Organization, PhD in International Relations and Affairs, University of Bradford, Andrew Snyder-Beattie, “Existential Risk and Cost-Effective Biosecurity”, Health Security, Vol 15(4), <http://online.liebertpub.com/doi/pdfplus/10.1089/hs.2017.0028>

Historically, disease events have been responsible for the **greatest death tolls** on humanity. The 1918 flu was responsible for more than 50 million deaths,1 while smallpox killed perhaps 10 times that many in the 20th century alone.2 The Black Death was responsible for killing over 25% of the European population,3 while other pandemics, such as the plague of Justinian, are thought to have killed 25 million in the 6th century—constituting over 10% of the world’s population at the time.4 It is an open question whether a future pandemic could result in outright human extinction or the irreversible collapse of civilization.

A skeptic would have many good reasons to think that existential risk from disease is unlikely. Such a disease would need to spread **worldwide** to remote populations, overcome rare genetic resistances, and evade detection, cures, and countermeasures. Even evolution itself may work in humanity’s favor: Virulence and transmission is often a trade-off, and so evolutionary pressures could push against maximally lethal wild-type pathogens.5,6

While these arguments point to a very small risk of human extinction, **they do not rule the possibility out** entirely. Although rare, there are recorded instances of species going extinct due to disease—primarily in amphibians, but also in 1 mammalian species of rat on Christmas Island.7,8 There are also historical examples of large human populations being almost entirely wiped out by disease, especially when multiple diseases were simultaneously introduced into a population without immunity. The most striking examples of total population collapse include native American tribes exposed to European diseases, such as the Massachusett (86% loss of population), Quiripi-Unquachog (95% loss of population), and theWestern Abenaki (which suffered a staggering 98% loss of population).

In the modern context, no single disease currently exists that combines the worst-case levels of transmissibility, lethality, resistance to countermeasures, and global reach. But many diseases are proof of principle that each worst-case attribute can be realized independently. For example, some diseases exhibit nearly a 100% case fatality ratio in the absence of treatment, such as rabies or septicemic plague. Other diseases have a track record of spreading to **virtually every human community worldwide**, such as the 1918 flu,10 and seroprevalence studies indicate that other pathogens, such as chickenpox and HSV-1, can successfully reach over **95% of a population**.11,12 Under optimal virulence theory, natural evolution would be an unlikely source for pathogens with the highest possible levels of transmissibility, virulence, and global reach. But advances in biotechnology might allow the creation of diseases that combine such traits. Recent controversy has already emerged over a number of scientific experiments that resulted in viruses with enhanced transmissibility, lethality, and/or the ability to overcome therapeutics.13-17 Other experiments demonstrated that mousepox could be modified to have a 100% case fatality rate and render a vaccine ineffective.18 In addition to transmissibility and lethality, studies have shown that other disease traits, such as incubation time, environmental survival, and available vectors, could be modified as well.19-2

#### [No](https://www.theatlantic.com/health/archive/2016/06/infectious-diseases-extinction/487514/) extinction---resilient and current infrastructure solves.

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/)

In other words, no, I wasn’t worried—and not because I have a rosy outlook on infectious diseases. I’m well-aware of the damage these diseases are causing around the world: HIV, malaria, tuberculosis; the influenza pandemic that took the world by surprise in 2009; the anti-vaccine movement bumping cases of measles to an all-time post-vaccine-era high; antibiotic-resistant bacteria threatening to collapse the entire structure of modern medicine—all these, like Ebola, are continuously placing an enormous number of lives at risk. 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.

#### Burnout or variation check.

York 14 (Ian, head of the Influenza Molecular Virology and Vaccines team in the Immunology and Pathogenesis Branch, Influenza Division at the CDC, former assistant professor in immunology/virology/molecular biology (MSU), former RA Professor in antiviral and antitumor immunity (UMass Medical School), Research Fellow (Harvard), Ph.D., Virology (McMaster), M.Sc., Immunology (Guelph), “Why Don't Diseases Completely Wipe Out Species?” 6/4, http://www.quora.com/Why-dont-diseases-completely-wipe-out-species#)

But mostly diseases don't drive species extinct. There are several reasons for that. For one, the most dangerous diseases are those that spread from one individual to another. If the disease is highly lethal, then the population drops, and it becomes less likely that individuals will contact each other during the infectious phase. Highly contagious diseases tend to burn themselves out that way. Probably the main reason is variation. Within the host and the pathogen population there will be a wide range of variants. Some hosts may be naturally resistant. Some pathogens will be less virulent. And either alone or in combination, you end up with infected individuals who survive. We see this in HIV, for example. There is a small fraction of humans who are naturally resistant or altogether immune to HIV, either because of their CCR5 allele or their MHC Class I type. And there are a handful of people who were infected with defective versions of HIV that didn't progress to disease. We can see indications of this sort of thing happening in the past, because our genomes contain many instances of pathogen resistance genes that have spread through the whole population. Those all started off as rare mutations that conferred a strong selection advantage to the carriers, meaning that the specific infectious diseases were serious threats to the species.