## 1

#### “Anticompetitive practices” are a wide range of business practices that doesn’t include patents

**Wells 16** – Executive Notes Editor, Washington University Global Studies Law Review, J.D., Washington University in St. Louis

Todd Wells, “Exploring the Space for Antitrust Law in the Race for Space Exploration,” Washington University Global Studies Law Review, Vol. 15, 2016, LexisNexis

Antitrust law attempts to fight anti-competitive actions. "**Anticompetitive practices** refer to a **wide range of business practices** in which a **firm** or **group of firms** may engage in order to **restrict inter-firm competition** to **maintain** or **increase** their **relative market position** and **profits** without necessarily providing goods and services at a lower cost or of higher quality." The Organization for Economic Cooperation and Development, Glossary of Statistical Terms, Anticompetitive Practices http://stats.oecd.org.proxy.library.georgetown.edu/glossary/detail.asp?ID=3145. Obviously, with such a **broad definition** of **anticompetitive practices**, **many types of actions** can **fall under** the **regulation** of **anticompetitive law**. This can cover forms of **collusion**, **price fixing**, **bid rigging**, **bid suppression**, **complementary bidding**, **bid rotation**, **subcontracting**, and **market divisions**. Price Fixing, Bid Rigging, and Market Allocation Schemes: What They Are and What to Look For, U.S. Dep't of Justice, http://www.justice.gov/atr/ public/guidelines/211578.htm. An **even broader approach** would put **patents** under antitrust law. "All of these developments, in **Congress** and the **Courts**, are in the **spirit** of **harmonizing patent** and **antitrust law**, generally **in the direction of subsuming patent law under antitrust law**. From the perspective of **providing clarity** and **certainty** for those who are the targets of patent and antitrust suits, **harmonization has much appeal**." Robin Feldman, Patent and Antitrust: Differing Shades of Meaning,13 Va. J.L. & Tech. 1, 7 (2008).

#### Violation – even if they’re expanding the scope of core laws – the affirmative is not prohibiting an anticompetitive business practice, so they don’t meet the first half of the resolution.

#### Voter for fairness, education, and inherency since congress and the courts are already trying to subsume patent law and antitrust law.

## 2

#### The United States Federal government should cite the Progress clause of the constitution and rule that the doctrine of fair use should prohibit the licensing of climate mitigation and adaption technology citing copyright law.

#### The CP Competes based on antitrust DA links

#### Their author says this solves

Cayton 20 [Samuel, Adjunct Prof at Seattle Univ School of Law, legal intern at the Media Law Group, “The ‘Green Patent Paradox’ and Fair Use: The Intellectual Property Solution to Fight Climate Change,” *Seattle Journal of Technology, Environmental & Innovation Law* 11.1, p.218-22, JCR]

The world faces an imminent threat from climate change that requires drastic structural attention. The U.S. has always led the world in promoting and preserving global security, but political gridlock within the nation could stall the massive changes to steer the world in the right direction. Fortunately, the private sector has an equally important role and duty in the pursuit to reform various industries. However, while industry and entrepreneurship can further develop necessary green technology, a comprehensive transformation in the U.S. patent regime must take place in order to fix the inherent issues around secondary innovations. The Green Patent Paradox demonstrates that the patent system impedes innovation by allowing rights’ holders to sit on their patent rights further slowing the transition to an environmentally sustainable economy. Although eBay is a victory in that it helps encourage continued use of other patent holder’s green patents, the ITC functions as a loophole for patent holders who want to halt secondary users or pressure them to take unwanted licensing agreements. The public and private sectors have both revealed possible solutions in the wake of the climate crisis. While the public sector can fix the patent regime through various means, these solutions either have substantial barriers to becoming reality or pose implementation issues that inhibit inventor incentives. Even with goodwill gestures from large companies, not all businesses are positioned to donate their intellectual property. The doctrine of fair use does not exist in patent law under conceivable rationales even though many viable justifications support its application. However, the lurking effects of the climate crisis demonstrate the societal need to implement a system that tolerates secondary uses of patented green technologies. Optimally with the help of Congress, the judicial branch should allow fair use as an affirmative defense against patent infringement. Such a doctrine would allow secondary use of valuable green patented technologies that may not otherwise reach their full potential while still protecting the rightsholders’ financial and commercial interests. Although patent fair use may not be implemented at the necessary rate, the valiant efforts to innovate from companies within the green technology industry is a vital starting place to carry the U.S. through the twenty-first century.

#### Copyright law is distinct from core antitrust statutes, they have no reason why clayton/sherman are needed

Cayton 20 [Samuel, Adjunct Prof at Seattle Univ School of Law, legal intern at the Media Law Group, “The ‘Green Patent Paradox’ and Fair Use: The Intellectual Property Solution to Fight Climate Change,” *Seattle Journal of Technology, Environmental & Innovation Law* 11.1, p.218-22, JCR]

THE FAIR USE DOCTRINE IN PATENT LAW

While the public and private sectors have developed heroic initiatives to combat climate change, the judicial branch can and should play an important role. As part of this effort, patent law can look to copyright law, its constitutional counterpart,150 for guidance. Copyright law has a fair use defense against infringement that was originally developed from case law.151 Due to the historic development of copyright’s fair use doctrine under the common law, Title 17 of the U.S. Code now enumerates four factors for the courts to consider when determining whether a person is privileged as a secondary user to incorporate the contents of a copyrighted work into their own fair use:

(1) the purpose and character of the use, including whether such use is of a commercial nature or is for nonprofit educational purposes; (2) the nature of the copyrighted work; (3) the amount and substantiality of the portion used in relation to the copyrighted work as a whole; and (4) the effect of the use upon the potential market for or value of the copyrighted work.152

The fair use doctrine in copyright law arose in part as an acknowledgment that the copyright system does not efficiently produce optimal results in the market for creativity. Accordingly, Congress acted to fix market deficiencies and create socially desirable outcomes.153 Additionally, fair use was judicially established in trademark law as a defense against infringement, although its application is more limited than fair use of copyright.154 Therefore, of the three main bodies of intellectual property, patent law is the only one without a fair use defense. The remainder of this section will compare copyright law to patent law and demonstrate that patent law is equally deserving of a fair use defense against infringement.

A. Patents and Copyrights Compared

While it is evident that patent and copyright have separate domains for intellectual property protection, both have strikingly similar origins and features. Both patent and copyright law are rooted in the Progress Clause of the U.S. Constitution.155 Since the Constitution’s ratification, both bodies of law have been developed through statutes as well as common law principles.156 Through these developments, copyright and patent law have established similar doctrines such as contributory infringement, licensee estoppel, and the first sale defense, otherwise known as exhaustion. 157 Most importantly, as patent and copyright promote and establish rules in innovation, each grapple with the question of how to protect the incentives of creators while allowing subsequent inventors and users to build off of the works they register.158 Given these identical policy balances, adjusting the boundaries of patent protection to encourage further innovations through secondary and justifiable use is a conceivable solution to curing market deficiencies.

## 3

#### The fifty states and relevant subnational entities should

#### prohibit the refusal to license climate mitigation and adaptation technologies as an anticompetitive business practice.

* finance any expenses by creating antitrust revolving funds and by increasing NAAG coordination

#### and act in uniformity

#### State coordination solves---multistate litigation and enforcement bureaus overcome deficits.

Arteaga ’21 [Juan and Jordan Ludwig; January 28; former Deputy Assistant Attorney General for the U.S. Department of Justice’s Antitrust Division, J.D. from Columbia Law School; partner in the Antitrust and Competition Group at Crowell and Moring firm, J.D. from Loyola Law School; Global Competition Review, “The Role of US State Antitrust Enforcement,” <https://globalcompetitionreview.com/guide/private-litigation-guide/second-edition/article/the-role-of-us-state-antitrust-enforcement>]

In the United States, competition laws have been implemented and enforced through a dual system where the state and federal governments play distinct, yet complementary, roles in regulating the competitive process. While the Department of Justice (DOJ) Antitrust Division and Federal Trade Commission (FTC) are widely viewed as the stewards of US antitrust laws, state attorneys general have long played an important, albeit varying, role within the United States’ antitrust enforcement regime. This has been especially true during the past 30 years because state attorneys general have become much more effective at coordinating their antitrust enforcement efforts to ensure that they have a meaningful seat at the table in any actions brought jointly with their federal counterparts or are able to bring their own actions when the DOJ and FTC decide not to do so.

Prior to the enactment of the first federal antitrust law – the Sherman Act – in 1890, state antitrust enforcement was quite robust in the United States because at least 26 states had already enacted some form of antitrust prohibition.[[2]](https://globalcompetitionreview.com/guide/private-litigation-guide/second-edition/article/the-role-of-us-state-antitrust-enforcement#footnote-126) In addition, state enforcers had often used general corporation law and common law restraint of trade principles to regulate anticompetitive business practices and transactions.[[3]](https://globalcompetitionreview.com/guide/private-litigation-guide/second-edition/article/the-role-of-us-state-antitrust-enforcement#footnote-125) This well-established state antitrust enforcement infrastructure – coupled with the fact that the Antitrust Division and FTC had only recently been created – permitted state attorneys general to continue playing a leading enforcement role for the first 30 years after the Sherman Act’s passage.[[4]](https://globalcompetitionreview.com/guide/private-litigation-guide/second-edition/article/the-role-of-us-state-antitrust-enforcement#footnote-124) Indeed, state attorneys general successfully prosecuted a number of the most consequential antitrust enforcement actions during this period.[[5]](https://globalcompetitionreview.com/guide/private-litigation-guide/second-edition/article/the-role-of-us-state-antitrust-enforcement#footnote-123)

In the early 1920s, however, state antitrust enforcers began playing a less prominent role because ‘the national dimension of the most important trusts, . . . as well as their ability to restructure in order to evade problematic state laws’, made clear that the federal government needed to step forward in order to adequately protect consumers and the competitive process.[[6]](https://globalcompetitionreview.com/guide/private-litigation-guide/second-edition/article/the-role-of-us-state-antitrust-enforcement#footnote-122) As a result, the DOJ and FTC – whose national jurisdiction and greater resources enabled them to tackle the most pressing competition issues of the time – displaced state attorneys general as the primary source of government antitrust enforcement within the United States.[[7]](https://globalcompetitionreview.com/guide/private-litigation-guide/second-edition/article/the-role-of-us-state-antitrust-enforcement#footnote-121) This largely remained true until the mid-1970s when Congress, in response to the DOJ and FTC’s perceived inactivity, passed two laws that expanded the authority of state attorneys general to enforce the federal antitrust laws and provided them with financial resources to do so.[[8]](https://globalcompetitionreview.com/guide/private-litigation-guide/second-edition/article/the-role-of-us-state-antitrust-enforcement#footnote-120)

In 1976, Congress passed the Hart-Scott-Rodino Antitrust Improvement Act, which, among other things, authorised state attorneys general to bring parens patriae suits (i.e., legal actions brought on behalf of natural persons residing within their states) seeking monetary (treble damages) and injunctive relief for Sherman Act violations.[[9]](https://globalcompetitionreview.com/guide/private-litigation-guide/second-edition/article/the-role-of-us-state-antitrust-enforcement#footnote-119) Congress also passed the Crime Control Act of 1976, which, among other things, provided state attorneys general with tens of millions in federal grants as ‘seed money’ for the creation of antitrust bureaus within their offices.[[10]](https://globalcompetitionreview.com/guide/private-litigation-guide/second-edition/article/the-role-of-us-state-antitrust-enforcement#footnote-118) These laws had their intended effect of reinvigorating state antitrust enforcement.

During the 1980s, for example, state attorneys general once again emerged as vigorous antitrust enforcers, especially with respect to the prosecution of resale price maintenance practices and other vertical restraints.[[11]](https://globalcompetitionreview.com/guide/private-litigation-guide/second-edition/article/the-role-of-us-state-antitrust-enforcement#footnote-117) The rise in the level and prominence of state antitrust enforcement during this period was largely due to a perceived enforcement void at the federal level, where the DOJ and FTC had mostly limited their focus to ‘prohibiting cartels and large horizontal mergers’.[[12]](https://globalcompetitionreview.com/guide/private-litigation-guide/second-edition/article/the-role-of-us-state-antitrust-enforcement#footnote-116) No longer content with ceding antitrust enforcement to federal enforcers, state attorneys general expanded their antitrust dockets from prosecuting purely ‘local matters, such as bid-rigging on state contracts’, to actively investigating and litigating matters with multistate and national implications.[[13]](https://globalcompetitionreview.com/guide/private-litigation-guide/second-edition/article/the-role-of-us-state-antitrust-enforcement#footnote-115) To help ensure that they had a larger seat at the antitrust enforcement table, state attorneys general also increased the coordination of their enforcement efforts and competition advocacy through organisations such as the National Association of Attorneys General (NAAG), which created a Multistate Antitrust Task Force and issued state Vertical Restraints and Horizontal Merger Guidelines during this period.[[14]](https://globalcompetitionreview.com/guide/private-litigation-guide/second-edition/article/the-role-of-us-state-antitrust-enforcement#footnote-114)

## 4

#### Biden slaps backs to pass infrastructure.

López ’9-16 [Burgess Everett and Laura Barrón-López; 2021; reporters, citing Senate Majority Whip Dick Durbin, Sen. Richard Blumenthal, Andrew Bates, a spokesperson for Biden, and Celinda Lake, a pollster on Biden’s campaign; Politico, “Dems call in big gun as they face huge Hill tests,” https://www.politico.com/news/2021/09/16/biden-influence-capitol-democrats-511952]

The next few months will push President Joe Biden to wield every drop of his influence over Congress.

Democrats are plunging into messy internal debates over social programs from child care to drug pricing as they try to beat back GOP resistance on voting rights while steering the United States away from economic catastrophe. And in order to avert a government shutdown, avoid a debt default and fight ballot access restrictions passed in some GOP states, Democratic lawmakers are urging Biden to get more directly involved.

Senate Majority Whip Dick Durbin said that Biden, “more than anyone,” maintains sway over his caucus’s 50 members: “There is no comparable political force to a president, and specifically Joe Biden at this moment.”

Biden appears to be answering the call. The president is getting increasingly involved in Congress’ chaotic fall session as he battles sagging approval ratings, heightened concerns around the pandemic and some internal criticism over his withdrawal from Afghanistan. On Thursday, he'll speak to Senate Majority Leader Chuck Schumer and Speaker Nancy Pelosi ahead of a critical week for funding the government and lifting the debt ceiling.

Rebounding as the midterms draw nearer will depend on whether his big social spending ambitions are realized and if his party can dodge a government shutdown and credit default. But even if he has success on those fronts, he still needs to maintain momentum on Democrats’ elections legislation, which Republicans look certain to torpedo.

“I have full faith and confidence in Joe Biden in all of this,” said House Majority Whip Jim Clyburn, who's pressed Biden to endorse a filibuster carve out for voting rights legislation. “He is working this … and that’s how it should be.”

Biden met with two key Democratic holdouts on his domestic spending agenda on Wednesday, part of a sustained push to keep Sens. Joe Manchin (D-W.Va.) and Kyrsten Sinema (D-Ariz.) on board with his legislative program. Biden’s met with Sinema four times this year, in addition to telephone calls made between the two, and has spoken to Manchin a similar number of times.

“Now is the time” for Biden to jump full-force into the reconciliation conversation, said Sen. Tim Kaine (D-Va.). And the White House made clear that Biden is diving into the series of tricky issues.

Andrew Bates, a spokesperson for Biden, said that Biden and his administration "are in frequent touch with Congress about each key priority: protecting the sacred right to vote, ensuring our economy delivers for the middle class and not just those at the top, and preventing needless damage to the recovery from the second-worst economic downturn in American history.”

To help corral all 50 Senate Democrats for the social spending bill, the president and his party need to create an “echo chamber” around its substance, said Celinda Lake, a pollster on Biden’s campaign. But that won't be easy. Manchin has told colleagues he’s worried about whether the bill’s safety net, climate action and tax reforms will be popular in his state, according to one Senate Democrat. He's also said he won't support a measure at the current spending level: $3.5 trillion.

If Biden can hammer home the popular aspects of the spending plan, it may help assuage Manchin and improve his whip count in Congress. Underscoring the degree to which he's become the face of the multi-trillion dollar reconciliation bill, a Democratic aide said the party is increasingly seeking to frame it as Biden’s agenda, not that of Sen. Bernie Sanders (I-Vt.) or any single Democrat.

“People think they like the reconciliation package, but they really don't know what's in it,” said Lake, who added that her polling shows popularity for the measure, particularly among women and seniors.

The coming months will also challenge Biden’s relationship with Republicans, who are threatening to block a debt limit hike after many of them supported a suspension or increase three times under former President Donald Trump. Biden campaigned as a Democrat who could work with Republicans, and he succeeded this summer by rounding up 19 Senate GOP votes for a $550 billion infrastructure bill.

Yet he’s running into a brick wall in convincing Senate Minority Leader Mitch McConnell to provide at least 10 GOP votes to lift the nation's borrowing limit. Republicans say Biden’s dip in the polls isn’t driving their strategy on the debt ceiling. But it’s not helping either.

“I don’t think anything in the last month has increased the likelihood that he can now create an atmosphere of: Let’s work together,” said Sen. Roy Blunt (R-Mo.), who voted for the infrastructure bill and debt ceiling increases under Trump.

The White House is, so far, sticking by its plan to try and call McConnell’s bluff. Aides in the West Wing consider attaching a debt ceiling suspension or increase to a government funding measure the best way to pressure Republicans on the routine step required by law. Should that approach fail, they may be forced to separate the two fiscal measures to avert a shutdown.

On the debt limit, congressional Democrats are in lockstep with the administration's strategy. But they're looking for Biden to exhibit more of his arm-twisting and back-slapping skills on their social spending plan and their bid to shore up voting rights protections.

Biden “knows better than anyone the power of the United States [presidency] in persuading and sometimes cajoling the key members of Congress, when push comes to shove,” said Sen. Richard Blumenthal (D-Conn.).

#### Antitrust requires PC, knocking out competing domestic initiatives.

Carstensen ’21 [Peter; February 2021; Fred W. & Vi Miller Chair in Law Emeritus at the University of Wisconsin Law School; Concurrences, “The ‘Ought’ and ‘Is Likely’ of Biden Antitrust,” <https://www.concurrences.com/en/review/issues/no-1-2021/on-topic/the-new-us-antitrust-administration-en#carstensen>]

14. Similarly, despite bipartisan murmurs about competitive issues, the potential in a closely divided Congress that any major initiatives will survive is limited at best. In part the challenge here is how the Biden administration will rank its commitments. If it were to make reform of competition law a major and primary commitment, it would have to trade off other goals, which might include health care reform or increases in the minimum wage. It is likely in this circumstance the new administration, like the Obama administration’s abandonment of the pro-competitive rules proposed under the PSA, would elect to give up stricter competition rules in order to achieve other legislative priorities.

15. Another key to a robust commitment to workable competition is the choice of cabinet and other key administrative positions. Here as well, the early signs are not entirely encouraging. In selecting Tom Vilsack to return as secretary of agriculture, the president has embraced a friend of the large corporate interests dominating agriculture who has spent the last four years in a highly lucrative position advancing their interests. Given the desperate need for pro-competitive rules to implement the PSA and control exploitation of dairy farmers through milk-market orders, the return of Vilsack is not good news. Who will head the FTC and who will be the attorney general and assistant attorney general for antitrust is still unknown, but if those picks are also centrists with strong links to corporate America the hope for robust enforcement of competition law will further attenuate!

16. In sum, this is a pessimistic prognostication for the likely Biden antitrust enforcement agenda. There is much that ought to be done. But this requires a willingness to take major enforcement risks, to invest significant political capital in the legislative process, and to select leaders who are committed to advancing the public interest in fair, efficient and dynamically competitive markets. The early signs are that the new administration will be no more committed to robust competition policy than the Obama administration. Events may force a more vigorous policy—I will cling to that hope as the Biden administration takes shape.

#### Quickly secures the vulnerable grid.

Carney ’21 [Chris, August 6; Senior Policy Advisor at Nossaman LLC, former US Representative, Former Professor of Political Science at Penn State University; JD Supra, “The US Senate Infrastructure Bill: Securing Our Electrical Grid Through P3s and Grants,” https://www.jdsupra.com/legalnews/the-us-senate-infrastructure-bill-4989100/]

As we begin to better understand the main components of the Infrastructure Investment and Jobs Act that the US Senate is working to pass this week, it is clear that public-private partnerships ("P3s") are a favored funding mechanism of lawmakers to help offset high costs associated with major infrastructure projects in communities. And while past infrastructure bills have used P3s for more conventional projects, the current bill also calls for P3s to help pay for protecting the US electric grid from cyberattacks. Responding to the increasing number of cyberattacks on our nation’s infrastructure, and given the fragile physical condition of our electrical grid, the Senate included provisions to help state, local and tribal entities harden electrical grids for which they are responsible.

Section 40121, Enhancing Grid Security Through Public-Private Partnerships, calls for not only physical protections of electrical grids, but also for enhancing cyber-resilience. This section seeks to encourage the various federal, state and local regulatory authorities, as well as industry participants to engage in a program that audits and assesses the physical security and cybersecurity of utilities, conducts threat assessments to identify and mitigate vulnerabilities, and provides cybersecurity training to utilities. Further, the section calls for strengthening supply chain security, protecting “defense critical” electrical infrastructure and buttressing against a constant barrage of cyberattacks on the grid. In determining the nature of the partnership arrangement, the size of the utility and the area served will be considered, with priority going to utilities with fewer available resources.

Section 40122 compliments the previous section as it seeks to incentivize testing of cybersecurity products meant to be used in the energy sector, including SCADA systems, and to find ways to mitigate any vulnerabilities identified by the testing. Intended as a voluntary program, utilities would be offered technical assistance and databases of vulnerabilities and best practices would be created. Section 40123 incentivizes investment in advanced cybersecurity technology to strengthen the security and resiliency of grid systems through rate adjustments that would be studied and approved by the Secretary of Energy and other relevant Commissions, Councils and Associations.

Lastly, Section 40124, a long sought-after package of cybersecurity grants for state, local and tribal entities is included in the bill. This section adds language that would enable state, local and tribal bodies to apply for funds to upgrade aging computer equipment and software, particularly related to utilities, as they face growing threats of ransomware, denial of service and other cyberattacks. However, under Section 40126, cybersecurity grants may be tied to meeting various security standards established by the Secretary of Homeland Security, and/or submission of a cybersecurity plan by a grant applicant that shows “maturity” in understanding the cyber threat they face and a sophisticated approach to utilizing the grant.

While the final outcome of the Infrastructure Investment and Jobs Act may still be weeks or months away, inclusion of these provisions not only demonstrates a positive step forward for the application of federal P3s and grants generally, they also show that Congress recognizes the seriousness of the cyber threats our electrical grids face. Hopefully, through judicious application of both public-private partnerships and grants, the nation can quickly secure its infrastructure from cyberattacks.

#### Grid vulnerabilities spark nuclear war.

Klare ’19 [Michael; November; Professor Emeritus of Peace and World Security Studies at Hampshire College; Arms Control Association, “Cyber Battles, Nuclear Outcomes? Dangerous New Pathways to Escalation,” https://www.armscontrol.org/act/2019-11/features/cyber-battles-nuclear-outcomes-dangerous-new-pathways-escalation]

Yet another pathway to escalation could arise from a cascading series of cyberstrikes and counterstrikes against vital national infrastructure rather than on military targets. All major powers, along with Iran and North Korea, have developed and deployed cyberweapons designed to disrupt and destroy major elements of an adversary’s key economic systems, such as power grids, financial systems, and transportation networks. As noted, Russia has infiltrated the U.S. electrical grid, and it is widely believed that the United States has done the same in Russia.12 The Pentagon has also devised a plan known as “Nitro Zeus,” intended to immobilize the entire Iranian economy and so force it to capitulate to U.S. demands or, if that approach failed, to pave the way for a crippling air and missile attack.13

The danger here is that economic attacks of this sort, if undertaken during a period of tension and crisis, could lead to an escalating series of tit-for-tat attacks against ever more vital elements of an adversary’s critical infrastructure, producing widespread chaos and harm and eventually leading one side to initiate kinetic attacks on critical military targets, risking the slippery slope to nuclear conflict. For example, a Russian cyberattack on the U.S. power grid could trigger U.S. attacks on Russian energy and financial systems, causing widespread disorder in both countries and generating an impulse for even more devastating attacks. At some point, such attacks “could lead to major conflict and possibly nuclear war.”14

### 5

#### Growth will rebound due to self-sustaining corporate performance.

Van der Welle ’21 [Peter; July 7; Strategist within the Global Macro team, M.A. in Economics from Tilburg University; Robeco, “How capex holds the key to a self-sustaining economic recovery,” <https://www.robeco.com/latam/en/insights/2021/07/how-capex-holds-the-key-to-a-self-sustaining-economic-recovery.html>]

Title:

How capex holds the key to a self-sustaining economic recovery.

Capital expenditure to fix supply shortages and meet burgeoning demand is seen figuring strongly in the post-Covid recovery.

[Author and summary omitted].

Companies are expected to invest heavily in new equipment and capacity as they seek to meet the pent-up demand released from economic reopening.

“The world is emerging from the pandemic, and much of the focus has been on the release of huge pent-up demand for goods and services that have been inaccessible for much of the past year,” says Peter Van der Welle, strategist with Robeco’s multi-asset team.

“But there is a bigger issue regarding the ability of companies to supply these goods and services, due to the supply side constraints that have emerged through economic reopening. We believe this is powering a resurgence in capital expenditure by companies, and those which are investing in new equipment to meet greater demand will be the more sought after stocks.”

Capex intentions

Van der Welle says this trend can already be seen in the US Federal Reserve’s Capex Intentions Index, which shows that steep year-on-year increases in capital expenditures are planned.

“So, that's promising for a near-term rebound in the capex cycle,” he says. “The market has already picked up on that theme because you can see a clear outperformance of capex-intensive stocks compared to the broader market year to date.”

Fiscal dominance

Van der Welle says five elements support the multi-asset team’s view that capex will rise from here onwards. “The first is the overarching macroeconomic picture in that we are increasingly moving towards an environment of fiscal dominance and away from one that has been monetary-led via quantitative easing,” he says.

“Central banks have pursued very easy monetary policies, but they have hit the nominal lower bounds with regard to policy rates.”

“This is a hard constraint because real rates are difficult for central banks to push even lower than they are nowadays, given the strong consensus among both central bankers and market participants that inflation is transitory.”

Big spending plans

For stimulus, fiscal policy is better suited to address the negative supply shock that Covid-19 has posed. Fiscal dominance can be seen in the huge infrastructure spending planned in the US, with the USD 1.9 trillion American Rescue Plan already in motion, and the USD 2 trillion American Jobs Plan going through Congress. In Europe, the disbursement of the EUR 750 billion EU Recovery Fund is due to start later in July.

“An era of fiscal dominance is able to say goodbye to the secular stagnation thesis, which holds that the economy is suffering from under-investment,” says Van der Welle. “Under-investment due to insufficient demand, which was the biggest problem after the global financial crisis, has become less likely.”

“We saw very subdued consumption growth both in the US and elsewhere between 2009 and 2019. That story is reversing in the US. Households’ income has been supported by fiscal policy during the Covid-19 recession, while burgeoning consumer demand in the reopening phase could prove to be more sticky as employment prospects continue to improve in the medium term.”

Tobin’s Q looks good

A third reason to expect higher capex is driven by ‘Tobin’s Q’ – the market value of a company divided by its assets' replacement cost. If this ratio is above one, then corporates have an incentive to invest directly in the underlying assets rather than buying another company at market value to acquire the same assets.

The Tobin’s Q ratio is currently at 1.7 for the US. “So it's very expensive to do M&A, and it is wiser for corporates to invest in the underlying capital goods themselves,” Van der Welle says.

“We should therefore expect a gradual move away from M&A activity towards companies making direct investments in capital goods.”

Supply-side constraints

The fourth element is the severe supply-side constraints seen in the global economy, as capacity shut down during the pandemic.

“This is reflected in the ISM Prices Paid Index, which reached an all-time high in June in reflection of rampant shortages of raw materials and labor,” says Van der Welle.

“Clearly the issue today following the pandemic is not demand related, but supply related. This will also trigger more awareness to push the productivity frontier and incentivize capital expenditure.”

Less reliance on labor

The fifth element is the partial substitution from labor to capital in the US against the backdrop of lingering labor shortages.

“A decline in the labor force participation rate shows that people are not quickly returning to the labor force, as they have been disincentivized by the subsidies and pay checks they have gained from the stimulus plans, and/or structural changes in their work/life balance due to the pandemic,” says Van der Welle.

“When the cost of labor becomes more expensive, substituting labor with capital becomes more attractive for employers. Typically, the inflection point for capex intentions becoming positive is when unit labor costs rise by more than 2% year on year, which is the case today.”

Capex will lengthen the earnings cycle

Regarding earnings, there is a significant relationship between capex intentions and productivity, though the lag from intending to invest to actually getting a realized productivity gain is quite long – up to several years.

Higher capex that eventually brings higher productivity growth will sustain the earnings cycle, Van der Welle says. Higher productivity gives corporates more pricing power because they suppress unit labor costs, and that means profit margins can stay elevated for longer.

#### Changing the legal standards of antitrust spills over to crush otherwise surging corporate growth.

Thierer ’21 [Adam; February 25; Senior Research Fellow with the Mercatus Center at George Mason University; The Hill, “Open-ended antitrust is an innovation killer,” <https://thehill.com/opinion/technology/540391-open-ended-antitrust-is-an-innovation-killer>]

Unfortunately, the calls for more bureaucracy and regulation emanating from all corners of the political world could have an unintended consequence: discouraging the sort of vibrant innovation and consumer choice that made America’s tech companies household names across the globe.

Sen. [Amy Klobuchar](https://thehill.com/people/amy-klobuchar) (D-Minn.) is leading one charge. Klobuchar, who chairs the Judiciary Subcommittee on Antitrust, Competition Policy and Consumer Rights, [recently introduced](https://www.klobuchar.senate.gov/public/_cache/files/e/1/e171ac94-edaf-42bc-95ba-85c985a89200/375AF2AEA4F2AF97FB96DBC6A2A839F9.sil21191.pdf) the “Competition and Antitrust Law Enforcement Reform Act.” This sweeping measure seeks to expand the powers and budgets of antitrust regulators at the Federal Trade Commission and the Department of Justice. It also includes new filing requirements and potentially hefty civil fines.

The most important feature is the proposed change to the legal standard by which regulators approve business deals. It would allow the government to stop any deal that creates an “appreciable risk of materially lessening competition,” and it also defines exclusionary behavior as, “conduct that materially disadvantages one or more actual or potential competitors.”

These may sound like simple, semantic tweaks, but – much like some of the other policy ideas currently circulating – they would upend decades of settled law and create a sea change in U.S. antitrust enforcement. This change could undermine business dynamism, innovation and investment in ways that inhibit the global competitiveness of U.S. businesses.

Critics of merger and acquisition (M&A) activity by large tech firms include not only Sen. Klobuchar but also Republicans such as Sen. [Josh Hawley](https://thehill.com/people/joshua-josh-hawley) (R-Mo.). Hawley recent [offered an amendment](https://www.axios.com/josh-hawley-big-tech-merger-ban-1467081d-216c-45a2-9d09-9416dfbde330.html) to a budget bill that would preemptively prohibit mergers and acquisitions by dominant online firms. Klobuchar and Hawley believe that M&A skews the market in favor of today’s largest firms, entrenching their market power and discouraging innovation.

History teaches a different lesson. Consider DirecTV and Skype, both once considered innovative market leaders in their respective fields of satellite TV and internet telephony. Both firms stumbled, however, and they might not even be with us today without creative business deals. DirecTV has been partially or fully controlled by Hughes Electronics, News Corp., Liberty Media and now AT&T. Skype has swapped hands multiple times, moving from eBay, to a private investment firm and now to Microsoft.

These were complex deals, and some didn’t work, leading to divestitures. But each was a learning experience that illustrated how dynamic media and technology markets can be with firms constantly searching for value-added arrangements that serve their customers and shareholders. If we make this type of activity presumptively illegal, we’re imagining that government bureaucrats are better suited to make these calls than businesspeople and the consumers who choose whether or not to buy the product.

Worse yet, legal tests like those Klobuchar proposes – “conduct that materially disadvantages potential competitors” – are remarkably open-ended and could be easily abused. The system will be gamed by opponents of deals for business reasons. They will claim that their own failure to attract investors or customers must all be the fault of more creative rivals. That’s a recipe for cronyism and economic stagnation.

Those who worry about today’s largest tech giants becoming supposedly unassailable monopolies should consider how similar fears were expressed not so long ago about other tech titans, many of which we laugh about today. Just 14 years ago, headlines [proclaimed](https://www.technewsworld.com/story/55185.html) that “MySpace Is a Natural Monopoly,” and [asked](https://www.theguardian.com/technology/2007/feb/08/business.comment), “Will MySpace Ever Lose Its Monopoly?” We all know how that “monopoly” ceased to exist.

At the same time, pundits [insisted](https://www.marketwatch.com/story/apple-should-pull-the-plug-on-the-iphone) “Apple should pull the plug on the iPhone,” since “there is no likelihood that Apple can be successful in a business this competitive.” The smartphone market of that era was viewed as completely under the control of BlackBerry, Palm, Motorola and Nokia. A few years prior to that, critics lambasted the merger of AOL and TimeWarner as a new [corporate “Big Brother”](http://www.ojr.org/ojr/workplace/1017966109.php?__cf_chl_jschl_tk__=67a5f6a101935b8e3586ca48216d31ba6d4e03de-1612467283-0-AXvbGCtUx-p_N4T-8_2m8OHezQUhQ9kelg9-pVuD6IzKvFfXrllJujU9ERvjqjyIsAeCovUw9bfZqq75_NYasBM87SnQT_027hDJOhjXeowzK1QQH_7vcmr1tS4XgCGC_NNx6UGbAvVgcJNFhSkqkVKKeRJ-BjdDA7Vus-gwmr7wQXcS7KKfTtHyqxdRfureL9alpZHU2IJcbbdYaZpTjTrfcJHCKa8pIZcdiScjaRJmON9X1Ip20Vuv7tyDHbZSvcrn88WrY_9N_qBpKvZhQ4PAe90w5Fx5iHjjNIzoNMKSpToTFGLbPdqawgge9PVubSQbkS7xXDXxCBMA2Sh-Y_U) that would decimate digital diversity and online competition.

Today, we know these tales of the apocalypse ended up instead becoming case studies in the continuing power of “creative destruction.” New innovations and players emerged from many unexpected quarters, decimating whatever dreams of continued domination the old giants once had.

Today’s biggest players face similar pressures, and it’s better to let rivalry and innovation emerge organically, not through the wrecking ball of heavy-handed antitrust regulation.

#### Extinction---recovery caps numerous geopolitical crises.

Baird ’20 [Zoe; October 2020; C.E.O. and President of the Markle Foundation, Member of the Aspen Strategy Group and former Trustee at the Council on Foreign Relations, J.D. and A.B. from the University of California at Berkeley; Domestic and International (Dis)order: A Strategic Response, “Equitable Economic Recovery is a National Security Imperative,” Ch. 13]

A strong and inclusive economy is essential for American national security and global leadership. As the nation seeks to return from a historic economic crisis, the national security community should support an equitable recovery that helps every worker adapt to the seismic shifts underway in our economy.

Broadly shared economic prosperity is a bedrock of America’s economic and political strength—both domestically and in the international arena. A strong and equitable recovery from the economic crisis created by COVID-19 would be a powerful testament to the resilience of the American system and its ability to create prosperity at a time of seismic change and persistent global crisis. Such a recovery could attack the profound economic inequities that have developed over the past several decades. Without bold action to help all workers access good jobs as the economy returns, the United States risks undermining the legitimacy of its institutions and its international standing. The outcome will be a key determinant of America’s national security for years to come.

An equitable recovery requires a national commitment to help all workers obtain good jobs—particularly the two-thirds of adults without a bachelor’s degree and people of color who have been most affected by the crisis and were denied opportunity before it. As the nation engages in a historic debate about how to accelerate economic recovery, ambitious public investment is necessary to put Americans back to work with dignity and opportunity. We need an intentional effort to make sure that the jobs that come back are good jobs with decent wages, benefits, and mobility and to empower workers to access these opportunities in a profoundly changed labor market.

To achieve these goals, American policy makers need to establish job growth strategies that address urgent public needs through major programs in green energy, infrastructure, and health. Alongside these job growth strategies, we need to recognize and develop the talents of workers by creating an adult learning system that meets workers’ needs and develops skills for the digital economy. The national security community must lend its support to this cause. And as it does so, it can bring home the lessons from the advances made in these areas in other countries, particularly our European allies, and consider this a realm of international cooperation and international engagement.

Shared Economic Prosperity Is a National Security Asset

A strong economy is essential to America’s security and diplomatic strategy. Economic strength increases our influence on the global stage, expands markets, and funds a strong and agile military and national defense. Yet it is not enough for America’s economy to be strong for some—prosperity must be broadly shared. Widespread belief in the ability of the American economic system to create economic security and mobility for all—the American Dream— creates credibility and legitimacy for America’s values, governance, and alliances around the world.

After World War II, the United States grew the middle class to historic size and strength. This achievement made America the model of the free world—setting the stage for decades of American political and economic leadership. Domestically, broad participation in the economy is core to the legitimacy of our democracy and the strength of our political institutions. A belief that the economic system works for millions is an important part of creating trust in a democratic government’s ability to meet the needs of the people.

The COVID-19 Crisis Puts Millions of American Workers at Risk

For the last several decades, the American Dream has been on the wane. Opportunity has been increasingly concentrated in the hands of a small share of workers able to access the knowledge economy. Too many Americans, particularly those without four-year degrees, experienced stagnant wages, less stability, and fewer opportunities for advancement.

Since COVID-19 hit, millions have lost their jobs or income and are struggling to meet their basic needs—including food, housing, and medical care.1 The crisis has impacted sectors like hospitality, leisure, and retail, which employ a large share of America’s most economically vulnerable workers, resulting in alarming disparities in unemployment rates along education and racial lines. In August, the unemployment rate for those with a high school degree or less was more than double the rate for those with a bachelor’s degree.2 Black and Hispanic Americans are experiencing disproportionately high unemployment, with the gulf widening as the crisis continues.3

The experience of the Great Recession shows that without intentional effort to drive an inclusive recovery, inequality may get worse: while workers with a high school education or less experienced the majority of job losses, nearly all new jobs went to workers with postsecondary education. Inequalities across racial lines also increased as workers of color worked in the hardest-hit sectors and were slower to recover earnings and income than White workers.4

The Case for an Inclusive Recovery

A recovery that promotes broad economic participation, renewed opportunity, and equity will strengthen American moral and political authority around the world. It will send a strong message about the strength and resilience of democratic government and the American people’s ability to adapt to a changing global economic landscape. An inclusive recovery will reaffirm American leadership as core to the success of our most critical international alliances, which are rooted in the notion of shared destiny and interdependence. For example, NATO, which has been a cornerstone of U.S. foreign policy and a force of global stability for decades, has suffered from American disengagement in recent years. A strong American recovery—coupled with a renewed openness to international collaboration—is core to NATO’s ability to solve shared geopolitical and security challenges. A renewed partnership with our European allies from a position of economic strength will enable us to address global crises such as climate change, global pandemics, and refugees. Together, the United States and Europe can pursue a commitment to investing in workers for shared economic competitiveness, innovation, and long-term prosperity.

The U.S. has unique advantages that give it the tools to emerge from the crisis with tremendous economic strength— including an entrepreneurial spirit and the technological and scientific infrastructure to lead global efforts in developing industries like green energy and biosciences that will shape the international economy for decades to come.

### Solvency

#### Court circumvention---they ignore intent and plain meaning, reject literature bias towards optimism.

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.

#### Clarifying the scope and meaning of vague language doesn’t solve---courts ignore, Congress backs down, it’s already very clear.

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 Article has shown that, historically, the judiciary has treated the antitrust statutes as broad delegations to the courts to create a pragmatic common law of competition, even when the statutes plainly said something more specifically prohibitory. What, then, are the strategies available to a reformist Congress seeking to rein in business power through remedial antitrust legislation?

The one strategy that does not seem especially promising is simply writing clearer statutes. The antitrust statutes that the courts wrote down in favor of big business did not suffer from a lack of clarity or, if they did, not in the textual implications the courts chose to ignore. Strikingly, the courts continue to insist that the antitrust statutes are indeterminate delegations of common-law power, even while admitting in candor that they have simply chosen to ignore the statutes’ plain meaning in favor of a common method of deciding antitrust cases. For instance, in Professional Engineers, Justice Stevens remarked for the Court that “the language of § 1 of the Sherman Act . . . cannot mean what it says” and therefore that Congress must not have intended “the text of the Sherman Act to delineate the full meaning of the statute or its application in concrete situations,” thus justifying the courts in shaping the “statute’s broad mandate by drawing on common-law tradition.”255 Given over a century’s tradition of interpreting antitrust statutes as invitations to continue a common-law process whatever else is suggested by the statute’s text, it is difficult to see how simply accumulating stern new language in new texts would lead to a different result.

Even where reform statutes are textually honored in their immediate aftermath, history shows a creeping judicial tendency to begin integrating the reform statutes into the mainstream of antitrust jurisprudence within a few decades. This has been the fate of the four major antitrust reform statutes— the FTC, Clayton, Robinson-Patman, and Celler-Kefauver Acts—each of which was meant to rein in capital in ways that the Sherman Act did not. In all four instances, however, the courts incrementally began mainstreaming the statutes into Sherman Act precedent, creating a homogenous antitrust jurisprudence that read the textual distinctiveness out of the reform statutes. Thus, today, cases under the FTC Act, section 3 of the Clayton Act, and the Robinson-Patman Act are largely indistinct from Sherman Act cases,256 and merger cases have been rolled into the same modes of price-theoretic analysis that would be employed in a Sherman Act case.257 Given that neither statutory text nor legislative history seems to have deterred the courts from this process within a few decades after the passage of the statutes, there is little reason to believe that a “this time we mean it” statutory reform would not meet the same fate. If the courts continue to understand aspects of the antitrust statutes as aspirationally motivated and operationally impracticable, the previously observed pattern is likely to continue.

### Advantage 1

#### ‘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.

#### Patent holdup theory is as wrong as the Peaceful Maya theory.

Haber ’17 [Stephen and Alexander Galetovic; March 2; Political Science Professor at Stanford University; Economics Professor at Universidad de los Andes in Santiago; Journal of Competition Law & Economics, “The Fallacies of Patent-Holdup Theory,” Vol. 13, No. 1]

I. INTRODUCTION

Until the late 1980s, archaeologists maintained that the Ancient Maya were a peace-loving people whose elites were primarily concerned with the scholarly study of astronomy and mathematics. They believed this conjecture despite the fact that one could not walk through a Mayan ruin without tripping over immense stelae depicting grotesquely violent images of victorious warriors subjugating their captives.

The process by which archaeologists created a theory about peaceful forest dwellers in the face of self-evident facts to the contrary is a testament to the power of fundamental fallacies. Their first fallacy was the idea that the inscriptions on the stelae were different from other glyph-based writing systems: instead of being a mix of whole words and phonetic sounds, as is the case with Egyptian hieroglyphic and cuneiform, archaeologists and epigraphers maintained that each symbol in the Mayan script represented an entire word or concept. That fallacy led them into a second fallacy: they maintained that non-calendrical Mayan hieroglyphs were indecipherable. That fallacy allowed the emergence of a third fallacy: because the theory of peace-loving forest people could not be tested against written evidence, the gruesome images on the stelae could be explained away as depicting mythical gods, not actual people. Thus, the archaeologists arrived at the false conclusion that the Maya were peaceful folk.

The fact that it took four decades for these fallacies to be overturned, one by one, is a testament to the reluctance of scholars to reject fashionable theories.1 In point of fact, a Russian epigrapher had figured out the principles of Mayan translation in 1952, but it took two decades for American scholars to accept that his theory of Mayan writing was correct and theirs was wrong. It then took another decade for enough monumental inscriptions to be translated to convince archaeologists that the stelae did not depict mythical gods, but instead told the political history of Mayan kings—their birth, military conquests, and death. It took still another decade before a consensus emerged that the evidence that had been right in front of archaeologists all along contradicted their theory.

It would be comforting if the only field ever led astray by fundamental fallacies was Mayan archaeology, but that is hardly the case. Faulty premises often lead researchers toward conclusions that do not fit the facts—so much so that Nobel Laureate Richard Feynman made it the subject of his famous commencement address at the California Institute of Technology, in which he stressed the importance of bending over backward to do every test that might falsify a theory.2

A. An Influential Theory

Our concern here is with how fundamental fallacies gave rise to patent-holdup theory, which has guided antitrust and competition authorities around the world for nearly two decades. In the early 2000s, legal academics and antitrust economists asked an important question: does a decentralized system of technology development, in which complex, interoperable information technology (IT) products rely on standard-essential patents (SEPs) owned by many firms, allow SEP owners to “hold up” manufacturers, thereby stifling innovation and hurting consumers in the form of higher prices and lower-quality products?

The answer—patent-holdup theory—consists of five nested claims. First, that patent owners can systematically overcharge manufacturers for licenses to their patents through the economic mechanism of holdup—the opportunistic appropriation of a downstream firm's quasi rents (revenues in excess of short-run costs). Second, that when there are multiple patent holders, each practicing holdup on a downstream firm, cumulative patent royalty rates become astronomically high—a phenomenon patent-holdup theorists termed “royalty stacking.” Third, that the holdup problem is exacerbated when patented technologies are included in the industry standards necessary to make IT products interoperable and compatible. Fourth, that patent holdup, royalty stacking, and the inclusion of patented technologies in industry standards are strangling innovation, most particularly in SEP-intensive IT products. Fifth, that the government must intervene to solve this problem; the market, left on its own, will fail.

Carl Shapiro's seminal article provides a clear statement of the threat posed by patent holdup to innovation:

The holdup problem is worst in industries where hundreds if not thousands of patents, some already issued, others pending, can potentially read on a given product. In these industries, the danger that a manufacturer will step on a land mine is all too real. The result will be that some companies avoid the mine field altogether, that is, refrain from introducing certain products for fear of holdup.3

He clearly articulates the need for a public policy intervention: “I submit that this holdup problem is very real today, and that both patent and antitrust policymakers should regard holdup as a problem of first order significance in the years ahead.”4

The claim that patent holdup is common and is a threat to innovation can be found in any number of scholarly articles. Joseph Farrell, John Hayes, Carl Shapiro, and Theresa Sullivan state that “surprise hold-up may be largely a transfer, but anticipation of hold-up encourages a range of inefficient forms of self-protection, such as postponing or minimizing investment, or ensuring that standards use only antique technology.”5 Mark Lemley and Carl Shapiro concur:

In the long run, if products are expected to be subject to some degree of holdup, the firm may not find it worth incurring the costs necessary to develop, manufacture, and sell the product. Assertions based on the shut-down condition that royalty stacking is somehow a minor problem or that royalty stacking cannot stifle innovation or hinder the market penetration of products that have been developed are simply unfounded.6

Most recently, Fiona Scott Morton and Carl Shapiro warn that patent holdup and its related mechanisms threaten the Internet of Things (IoT), and suggest the need for antitrust intervention:

Failure to prevent Patent Holdup relating to tomorrow's information technology and communications standards is likely to cause significant social welfare loss in the years ahead. If new and more effective private solutions relating to standard setting do not emerge to promote innovation and protect consumers, antitrust enforcement is one of the only remaining remedies that seems feasible.7

Patent-holdup theory has also been influential among antitrust authorities around the world. Several Federal Trade Commission (FTC) reports8 and a joint Department of Justice (DOJ) and FTC report9 discuss the threat to innovation posed by patent holdup and royalty stacking, citing the academic literature. For example, one FTC report states:

Unless downstream actors—whether innovators or manufacturers—can mitigate the problem [of patent holdup], they may have to choose between the risk of being sued for infringement after they sink costs into invention or production, or dropping innovative or productive efforts altogether. Either option can injure economic welfare.10

These views are echoed by agency heads, such as the former chair of the FTC, the former Deputy Attorney General for Antitrust, and the European Competition Commissioner, who signal that they are willing to take action about the problem.11

Patent-holdup theory is also mentioned in amicus briefs that argue that patent holdup is a common occurrence. For example, a 2006 brief file by 52 intellectual property professors submitted in support of the defendant in eBay, Inc. v. MercExchange, L.L.C. states that:

[S]uch inappropriate “holdups” occur on a regular basis under the Federal Circuit's mandatory-injunction standard. Patentees can obtain revenue in excess of the value of their technology by threatening to enjoin products that are predominantly noninfringing and in which the defendant has made significant irreversible investments.12

It should therefore not be surprising that courts have been influenced by patent-holdup theory. For example, in eBay, Justice Kennedy's concurring opinion cites an FTC report that warns of the impact of patent holdup by firms that do not themselves practice their patents:

An industry has developed in which firms use patents not as a basis for producing and selling goods but, instead, primarily for obtaining licensing fees. For these firms, an injunction, and the potentially serious sanctions arising from its violation, can be employed as a bargaining tool to charge exorbitant fees to companies that seek to buy licenses to practice the patent. When the patented invention is but a small component of the product the companies seek to produce and the threat of an injunction is employed simply for undue leverage in negotiations, legal damages may well be sufficient to compensate for the infringement and an injunction may not serve the public interest.13

The landmark Supreme Court eBay decision is not an outlier. Jonathan Barnett identifies thirty-seven federal court decisions that mention “patent holdup” or “royalty stacking.”14

B. The Stelae That Contradicted the Theory

Like the theory of the peaceful Maya, patent-holdup theory had its own set of facts—stelae, as it were—that contradicted the theory. Patent-holdup theorists asserted that innovation in SEP-intensive IT products was under threat: excessive royalties were discouraging new firm entry and reinvestment by existing firms. They called particular attention to the threat to innovation in mobile telephones and personal computers, as well as in extensions of those products in the IoT.15

Economists measure rates of innovation by examining relative rates of change of quality-adjusted prices,16 and one can download the publicly available, product-by-product, quality-adjusted price data compiled by the Bureau of Labor Statistics in order to carry out an analysis of innovation rates across products and within products over time.17 An analysis of that data shows that from 1997 to 2013, rates of innovation in phone equipment (which includes low-tech items such as fax machines and landline phones, as well as wireless phones) was 10 percent per annum faster than the economy-wide average. The data show that the rate of innovation in portable and laptop computers was faster still—31 percent per annum faster than the economy-wide average. Similar rates of innovation are observed in other SEP-intensive IT products such as video equipment, audio equipment, desktop computers, and televisions. Furthermore, rates of innovation in SEP-intensive IT products have not slowed over time relative to the rates of innovation in similar, non-SEP-intensive IT products.18 For example, the rate of innovation in SEP-intensive laptop computers compared with non-SEP-intensive mainframe computers shows that SEP intensity was associated with faster innovation.19

There are other hallmarks of innovation beyond falling quality-adjusted relative prices: one would expect to see rapidly increasing output even in the face of falling prices; and, because innovation is typically characterized by Schumpeterian creative destruction, one would also expect to see high levels of firm entry and exit. This is precisely what researchers do see when they examine data on the canonical case of the mobile phone industry. Between 1994 and 2013, the number of SEP holders increased from 2 to 128. Patent-holdup theory would predict that this increase should have dramatically slowed the rate of innovation. That prediction did not obtain in reality, however. Prices of mobile devices dropped very fast, while output grew sixty-two-fold. During this same period, there was rapid entry of new firms into the manufacture of phones and tablets—so much so that industrial concentration, measured with the number of devices sold, actually fell in this industry over time.20

According to patent-holdup theory, excessive patent royalties cause slow rates of innovation. As an empirical matter, the aggregate royalties paid by licensees in any industry can be estimated on the basis of the SEC 10-K and 40-F filings of the patent-licensing firms.21 The data on the canonical case of mobile phones shows that the cumulative royalty yield from the twenty-one largest patent licensors in the mobile phone value chain was only 3.3 percent of a mobile phone's average sales price in 2015. That ratio has been fairly stable since at least far back as 2007.22 Researchers have parameterized royalty-stacking models from the patent-holdup literature using actual price and quantity data, and have discovered that the royalty yield predicted by the models is more than twenty times higher than the actual royalty yield and about four-fifths of the price of a smartphone. They have also found that no individual patent licensor earns an individual royalty consistent with the hypothesis that it operated as a monopolist.23

The facts of fast and continuous innovation in the mobile phone industry—one of the stelae of patent-holdup theory—are evident to anyone with a smartphone in their pocket. Three decades ago, a mobile phone cost the current equivalent of $10,000, was the size of a brick, weighed a kilo, and enabled its user to make a half-hour call before going dead. Today, a smartphone has more computational power than the supercomputers that guided the Apollo missions to the moon, allows a user to produce and share data, video, and audio files with anyone on the planet, costs an average of $300—and also happens to make a phone call.

At the same time that there are self-evident stelae contradicting patent-holdup theory, there is no positive evidence in support of its core predictions. Damien Geradin and Miguel Rato,24 Damien Geradin, Anne Layne-Farrar and Jorge Padilla,25 Vincenzo Denicolò, Damien Geradin, Anne Layne-Farrar, and Jorge Padilla,26 Richard Epstein, F. Scott Kieff, and Daniel Spulber,27 Kirti Gupta,28 Anne Layne-Farrar,29 J. Gregory Sidak,30 and Edward Egan and David Teece31 review the literature on patent holdup, patent thickets, and royalty stacking.32 All of these studies reach the same general conclusion, which is perhaps best summed up by Layne-Farrar: “Certainly the theories have been developed, but the empirical support is still lacking. Despite the fifteen years that proponents of the theories have had to amass evidence, the empirical studies conducted thus far have not shown that holdup or royalty stacking is a common problem in practice.”33

C. Three Fundamental Fallacies and Their Origin

When theory and evidence disagree, there is either something wrong with the theory or something wrong with the evidence. We think that there is something wrong with the theory.

Patent-holdup theory conflates two different economic mechanisms: holdup and market power. Holdup means that one firm appropriates another firm's quasi rent—its revenues minus its short-run costs—through opportunistic behavior. A firm that is being held up, by definition, does not generate enough revenue to cover its long-run costs. Therefore, the firm will not reinvest once its capital wears out. This is not a long-run equilibrium. Market power, by contrast, means that a firm can set prices such that it appropriates a monopoly rent from a market. The exercise of market power can be a long-run equilibrium, because the downstream firms will cover their long-run costs and continue to reinvest as their capital equipment wears out.34 Thus, holdup and the exercise of market power are two different, mutually inconsistent economic mechanisms. One cannot simultaneously have a long-run equilibrium and not have a long-run equilibrium.

The conflation of holdup and market power leads to three fallacies that underpin patent-holdup theory. Once the mechanics of holdup are loosened from their moorings in economic theory, it becomes possible to simultaneously claim that patent holdup is a variant of holdup as it is understood in mainstream economics and define it in ways that are inconsistent with the meaning of holdup as it is understood in mainstream economics. Patent holdup elides key assumptions of the standard theory and transforms necessary conditions for holdup into sufficient conditions for holdup. The implications are fundamental. In the established theory, firms—working together—will make structural, contractual, and behavioral adaptations in order to prevent holdup, thereby sustaining trade and investment in equilibrium. In patent-holdup theory, by contrast, firms cannot adapt and solve the problem wrought by opportunistic renegotiation of a contract, because the game begins after the R&D is completed and manufacturers invest. Adaptations to prevent holdup are ruled out by construction, and market failure is inevitable.

The conflation of holdup and market power leads to a second fallacy. Patent-holdup theory claims that the same manufacturing firms can be held up many times over, resulting in a phenomenon called royalty stacking. In point of fact, however, holdup cannot occur many times over to the same firm. A firm's quasi rents (the difference between its revenues and its short-run costs) can be extracted only once. Any attempt to extract more revenues would cause the firm to shut down. Royalty stacking, by contrast, is about the exercise of market power by multiple input suppliers to downstream firms. Although this multiplicity of input suppliers might be an inefficient organization of a market, it nonetheless can be a long-run equilibrium, unlike holdup.

To claim that market power is being exercised, one needs to identify its source. In royalty stacking, the source is the patents themselves. A patent confers a temporary, limited property right that might confer some market power—and does so by design. Thus, in order to claim that there is a public policy problem, one needs to claim that the patents in question confer market power in excess of that which is conferred by the patent grants themselves. What could the source of that excess market power be? According to the theory, patent-holding firms are able to appropriate more than their incremental contribution to a product's value by virtue of the fact that their technologies have been made part of a standard. The users of the technology are locked into that standard and consequently can be subjected to patent holdup.

The conflation of holdup and market power leads to a third fallacy: patented technologies that are part of an industry standard add little or no value to the markets that they help to create. There are two problems with this fallacy—one theoretical and the other empirical. The theoretical problem is, as Nobel Prize winner Kenneth Arrow showed in 1962, that when an innovation is “drastic” (that is, much better than the alternatives on offer) a profit-maximizing monopoly will charge less than the technology's incremental value. The empirical problem is that the whole point of standard development organizations (SDOs) in IT industries is to make large technological jumps at a fast pace, so that manufacturers may produce superior products that consumers will adopt enthusiastically, thereby increasing the revenues of all the industry stakeholders.35 They are not in the business of small incremental improvements; they are in the business of creating drastic innovations.

#### Best studies and the Trump years prove no impact

Kee et al 2013 - Senior economist @ the World Bank  
Hiau Looi Kee, Cristina Neagu [either a world class hand baller or an economist], and Alessandro Nicita [economist at the United Nation Conference for Trade and Development]; Is Protectionism on the Rise? Assessing National Trade Policies during the Crisis of 2008; Review of Economics and Statistics95.1 (Mar 2013): 342-346

WITH the dramatic collapse of world trade in the wake of the biggest global recession in recent history, many have feared that governments may respond by increasing tariffs and other trade policy barriers to protect their domestic economies, which may indirectly prolong the recession and lead to domestic unrest. In fact, in December 2008, the first of the crisis-related demonstrations erupted in several cities in Russia over the increase in car tariffs (Levy, 2008). Has protectionism been rising since fall 2008? To answer this question, we compare the overall trade restrictiveness Indices (OTRI) of a wide range of countries in 2008 and 2009. The OTRI summarizes the trade policy stance of a country by calculating the uniform tariff that will keep its overall imports at the current level when the country in fact has different tariffs for different goods. Unlike trade-weighted average tariffs, the OTRI takes into account the importance of each good in total imports, as well as the responsiveness of the import of each good with respect to its tariff. Thus, not only are the weights proportionate to the import value of the goods, but goods that have a larger fall in imports when tariffs are imposed (those goods that are highly elastic in demand) are also given larger weights. The empirical methodology of the OTRI was first developed by Kee, Nicita, and Olarreaga (2008, 2009), based on the theoretical underpinning of Anderson and Neary (1994, 1996, 2003). Irwin (2010) also uses a similar methodology to study the historic protection level of the United States from 1867 to 1961. A major benefit of looking at the changes in the OTRI over the crisis period is that it allows us not only to measure the changes in trade policy but also to quantify the drop in trade due to those changes. This is the point of departure of our paper from the previous literature, which tends to focus on only average tariff increases or the percentage of tariff lines that have increased during the crisis period. Many recent papers have studied the trade impact of the global crisis in 2008 (see Baldwin & Evenett, 2009, and Baldwin, 2009). While consensus has yet to emerge among researchers, the two leading explanations for the large and synchronized drop in trade are the role of international supply chains (Yi, 2009) and the lack of trade credits and finance during the crisis period (Amiti & Weinstein, 2009; Chor & Manova, 2009). In a unified framework, Eaton et al. (2010) merges an input-output framework with a gravity trade model of the world and shows that changes in demand play the most significant role in explaining the large drop in trade-to-GDP ratio during the crisis, while trade frictions, which include trade policies and trade credits, explain at most about 15% of the collapse in trade. Thus, trade policy as a protectionist device has not been seen to play a substantial role in the global collapse of trade—neither as a cause nor a consequence. Nevertheless, anecdotal evidence suggests that some countries are actively tinkering with their trade policies. For example, during the crisis period, Bolivia, Ecuador, and Turkey have altered their tariffs on a large share of their imported products, and India increased its use of antidumping (AD) duties. How important are those changes in explaining or prolonging the collapse in world trade? The objective of this paper is to carefully compare the trade policies of a wide range of countries over the crisis period and assess the extent of the fall in trade due to the increase in tariffs and AD duties of these countries. For the purpose of this paper, we narrowly define trade policies to include only tariffs and AD duties. Due to data limitations, we do not look at other policies that may affect trade, such as government bailouts and buy-national requirements, which could play a much larger role than tariffs and AD in affecting trade during the crisis period. To achieve our objective, we obtained the most favored nations (MFN) applied tariff schedules and the bilateral tariff schedules for a wide range of countries in 2008 and 2009.1 The MFN-applied tariffs tend to overestimate the level of protection because they do not account for the existence of bilateral or regional tariff preferences. Hence, it is important for us to construct the OTRI based on the bilateral tariff schedules. This significantly complicates the calculation of the OTRI because each country may have up to 200 trading partners and each bilateral tariff schedule consists of nearly 5,000 Harmonized System (HS) 6 digit products. To capture the effect of antidumping, we also merge the bilateral tariff schedules with the World Bank Global Antidumping Database. Thus, changes in the OTRI reflect trade policy changes related to both the changes in applied tariffs and antidumping duties during the crisis period. In addition, we need bilateral import demand elasticities and bilateral trade flow data to properly weigh these bilateral tariffs. We modify the multilateral import demand elasticity estimates in Kee et al. (2008) to obtain bilateral import demand elasticities. Bilateral trade flow data are from Comtrade. Finally, to make sure that changes in the OTRI period purely capture changes in trade policies, we use the 2008 bilateral trade flows and elasticities as fixed weights. As such, changes in trade or elasticity due to demand shocks will not affect our OTRI measures. Going through the schedules of all countries in our data set, we found that overall, there has been no widespread increase in tariffs. Although many countries have increased tariffs on imported products, the trade impact has generally been minimal. However, for a handful of countries, tariff increases on important items in agriculture and manufacturing pushed up their OTRI and significantly affected trade. Russia, Malawi, and Argentina all increased tariffs on manufacturing products that caused their OTRI to increase by 0.9 to 1.2 percentage points and their trade flows to drop by US$4.8 billion, US$29 million, and US$914 million, respectively. Turkey increased tariffs on a wide range of agricultural products, which raised its OTRI by 0.8 percentage points and caused its trade flow to decrease by US$2.2 billion. With the removal of a temporary tariff reduction on palm oil and the introduction of some antidumping duties, India had a large increase in the level of protectionism on agriculture products (8.3 percentage points), even though this was offset by tariff liberalization in the manufacturing sector such that India’s OTRI increased only by 0.1 percentage points. Other countries that had large drops in trade due to increases in tariffs include China (US$5 billion), Canada (US$1.8 billion), and Brazil (US$991 million). Finally, for the United States and the EU, although the tariff schedules remained roughly the same throughout our period of analysis, spikes in antidumping duties caused their OTRI to increase by 0.5 percentage points, and 0.1 percentage points, respectively. Jointly, if we add up all the decreases in trade for all countries during the crisis period due to changes in tariffs and antidumping duties, in the worst-case scenario, the total decrease in imports is about US$43 billion, which is less than half a percent of the world’s imports in 2008. According to the latest estimate of theWorld Trade Organization (2010), the world’s imports decreased by 24% from its precrisis level. Thus, trade policies can explain at most 2% of the sharp drop in world trade. This suggests that protectionism was not the main culprit behind the collapse of world trade and the collapse of world trade did not cause protectionism to increase.

### Advantage 2

#### No climate wars

Erik **Gartzke 11**, Associate Professor of Political Science at UC-San Diego, March 16, 2011, “Could Climate Change Precipitate Peace?,” online: <http://dss.ucsd.edu/~egartzke/papers/climate_for_conflict_03052011.pdf>

An evolving consensus that the earth is becoming warmer has led to increased interest in the social consequences of climate change. Along with rising sea levels, varying patterns of precipitation, vegetation, and possible resource scarcity, perhaps the most incendiary claims have to do with conflict and political violence. A second consensus has begun to emerge among policy makers and opinion leaders that global warming may well result in increased civil and even interstate warfare, as groups and nations compete for water, soil, or oil. Authoritative bodies, leading government officials, and even the Nobel Peace prize committee have highlighted the prospect that climate change will give rise to more heated confrontations as communities compete in a warmer world.Where the basic science of climate change preceded policy, this second consensus among politicians and pundits about climate and conflict formed in the absence of substantial scientific evidence. While anecdote and some focused statistical research suggests that civil conflict may have worsened in response to recent climate change in developing regions (c.f., Homer-Dixon 1991, 1994; Burke et al. 2009). these claims have been severely criticized by other studies (Nordas&Gleditsch 2007; Buhaug et al. 2010: Buhaug 2010).1 In contrast, long-term macro statistical studies find that conflict increases in periods of climatic chill (Zhang et al. 2006, 2007; Tol& Wagner 2010).2 Research on the more recent past reveals that interstate conflict has declined in the second half of the twentieth century, the very period during which global warming has begun to make itself felt (Goldstein 2002; Levy et al. 2001; Luard 1986, 1988; Hensel 2002; Sarkees, et al. 2003; Mueller 2009).3 While talk of a ''climatic peace” is premature, broader claims that global warming causes conflict must be evaluated in light of countervailing evidence and a contrasting set of causal theoretical claims.4

#### Alt cuases---Their ladilaw card is in the context of China acting as well which the plan doesn’t solve---no where do they say china cares about reaching net zero

#### Warming doesn’t cause extinction---new studies.

**Nordhaus 20** Ted Nordhaus, an American author, environmental policy expert, and the director of research at The Breakthrough Institute, citing new climate change forecasts. [Ignore the Fake Climate Debate, 1-23-2020, https://www.wsj.com/articles/ignore-the-fake-climate-debate-11579795816]//BPS

Beyond the headlines and social media, where Greta Thunberg, Donald Trump and the online armies of climate “alarmists” and “deniers” do battle, there is a real climate debate bubbling along in scientific journals, conferences and, occasionally, even in the halls of Congress. It gets a lot less attention than the boisterous and fake debate that dominates our public discourse, but it is much more relevant to how the world might actually address the problem. In the real climate debate, no one denies the relationship between human emissions of greenhouse gases and a warming climate. Instead, the disagreement comes down to different views of climate risk in the face of multiple, cascading uncertainties. On one side of the debate are optimists, who believe that, with improving technology and greater affluence, our societies will prove quite adaptable to a changing climate. On the other side are pessimists, who are more concerned about the risks associated with rapid, large-scale and poorly understood transformations of the climate system. But most pessimists do not believe that runaway climate change or a hothouse earth are plausible scenarios, much less that human extinction is imminent. And most optimists recognize a need for policies to address climate change, even if they don’t support the radical measures that Ms. Thunberg and others have demanded. In the fake climate debate, both sides agree that economic growth and reduced emissions vary inversely; it’s a zero-sum game. In the real debate, the relationship is much more complicated. Long-term economic growth is associated with both rising per capita energy consumption and slower population growth. For this reason, as the world continues to get richer, higher per capita energy consumption is likely to be offset by a lower population. A richer world will also likely be more technologically advanced, which means that energy consumption should be less carbon-intensive than it would be in a poorer, less technologically advanced future. In fact, a number of the high-emissions scenarios produced by the United Nations Intergovernmental Panel on Climate Change involve futures in which the world is relatively poor and populous and less technologically advanced. Affluent, developed societies are also much better equipped to respond to climate extremes and natural disasters. That’s why natural disasters kill and displace many more people in poor societies than in rich ones. It’s not just seawalls and flood channels that make us resilient; it’s air conditioning and refrigeration, modern transportation and communications networks, early warning systems, first responders and public health bureaucracies. New research published in the journal Global Environmental Change finds that global economic growth over the last decade has reduced climate mortality by a factor of five, with the greatest benefits documented in the poorest nations. In low-lying Bangladesh, 300,000 people died in Cyclone Bhola in 1970, when 80% of the population lived in extreme poverty. In 2019, with less than 20% of the population living in extreme poverty, Cyclone Fani killed just five people. “Poor nations are most vulnerable to a changing climate. The fastest way to reduce that vulnerability is through economic development.” So while it is true that poor nations are most vulnerable to a changing climate, it is also true that the fastest way to reduce that vulnerability is through economic development, which requires infrastructure and industrialization. Those activities, in turn, require cement, steel, process heat and chemical inputs, all of which are impossible to produce today without fossil fuels. For this and other reasons, the world is unlikely to cut emissions fast enough to stabilize global temperatures at less than 2 degrees above pre-industrial levels, the long-standing international target, much less 1.5 degrees, as many activists now demand. But recent forecasts also suggest that many of the worst-case climate scenarios produced in the last decade, which assumed unbounded economic growth and fossil-fuel development, are also very unlikely. There is still substantial uncertainty about how sensitive global temperatures will be to higher emissions over the long-term. But the best estimates now suggest that the world is on track for 3 degrees of warming by the end of this century, not 4 or 5 degrees as was once feared. That is due in part to slower economic growth in the wake of the global financial crisis, but also to decades of technology policy and energy-modernization efforts. “We have better and cleaner technologies available today because policy-makers in the U.S. and elsewhere set out to develop those technologies.” The energy intensity of the global economy continues to fall. Lower-carbon natural gas has displaced coal as the primary source of new fossil energy. The falling cost of wind and solar energy has begun to have an effect on the growth of fossil fuels. Even nuclear energy has made a modest comeback in Asia.

#### No Russia war---deterrence solves

Edward **Lucas 15**, senior editor for the Economist, has specialized in Russia and Eastern Europe, “No, We’re Not Facing World War III,” 12/6/15, http://www.thedailybeast.com/articles/2015/12/06/no-we-re-not-facing-world-war-iii.html

Yet the big point is that deterrence worked, and still works. In fact it works better now than ever. The United States is overwhelmingly dominant in every part of the military spectrum, from space to cyber via conventional and nuclear weapons, just as the Western alliance with its combined GDP of around $40 trillion, and population of 800 million, is overwhelmingly more powerful than Russia (GDP of $1.7 trillion and population of 140 million: both shrinking, incidentally).

Putin is a bully, but he is not insane. He may rattle his nuclear saber, but in any real confrontation with the West, he is the guaranteed loser. He can credibly menace the Baltic states (because in Pentagon war games, the Russians always get to the coast before the allies get to Estonia, Latvia, and Lithuania). But this ignores the wider context. So long as the West responds to a geographically limited provocation with a much broader response, Putin is powerless. He is only able to intimidate us if he frames the conflict in his terms: “Will you risk World War III to protect Estonia?”

The answer to that is (in most Western capitals) clearly no, but it is an answer to the wrong question. Instead, we should frame the conflict in our terms. The apocalypse which we can wreak on the Putin regime has nothing to do with enriched uranium and missiles. It comes from exploiting Russia’s Achilles Heel—its dependence on Western financial markets and systems. The Putin regime steals tens of billions of dollars every year from the Russian people. But it does not stash those ill-gotten gains in its own rotten realms. It puts them into well-run investment vehicles in the West. Capital flight from Russia is running at $100 billion a year.

This gives the West—if it so chooses—the best possible response to Russian military intimidation. We can freeze and if necessary seize the Kremlin’s assets in the West. We can question and if necessary prosecute the bankers, lawyers, and accountants who have facilitated this huge tide of dirty money that washes through Vienna, Cyprus, London, and Dubai. We can also investigate the curious behavior of Russian participants in setting energy prices in world markets.

This does not mean we should neglect the military countermeasures needed to deter the Putin regime from bullying its neighbors. We need more troops in Poland and the Baltic states, with closer integration of non-NATO Sweden and Finland. We need better intelligence—especially about Russia’s battlefield nuclear weapons—better cyber-defenses, and a resilient economic and political system which can withstand sanctions, propaganda attacks, and the targeted use of corruption. All these are the elements of what in military jargon is known as “hybrid warfare”—the use of a wide range of military and non-military means in pursuit of a political goal. Hybrid warfare was waged in Ukraine, initially to dramatically success effect.

But it has not succeeded. Russia did not stoke an insurrection all across southern and eastern Ukraine. It did not best the Ukrainian army (pitifully led and equipped though it was). It did not succeed in breaking the Ukrainian people’s will, or toppling the elected government. All that happened for lessons which we should bear in mind in our far stronger and richer societies: Ukrainians survived because they were not scared. We are losing because we are. The fear of “World War III” is part of the Kremlin’s psychological arsenal, designed to make us think that resistance is futile or suicidally risky.

It is not. Russia is in objective terms a nuisance, not a menace. It becomes a danger only because we let it. Putin is far more scared of us than we should be of him. After all, we’ve got his money.