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FOREIGN COMPETITIVE THREATS TO AMERICAN INNOVATION AND ECONOMIC LEADERSHIP

HEARING

BEFORE THE

SUBCOMMITTEE ON INTELLECTUAL PROPERTY

OF THE

COMMITTEE ON THE JUDICIARY
UNITED STATES SENATE

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TUESDAY, APRIL 18, 2023

UNITED STATES SENATE,
SUBCOMMITTEE ON INTELLECTUAL PROPERTY,
COMMITTEE ON THE JUDICIARY,
Washington, DC.

The Subcommittee met, pursuant to notice at 2:32 p.m., in Room 226, Dirksen Senate Office Building, Hon. Christopher A. Coons, Chair of the Subcommittee, presiding.

Present: Senators Coons [presiding], Durbin, Hirono, Padilla, Welch, Tillis, Cruz, and Blackburn.

OPENING STATEMENT OF HON. CHRISTOPHER A. COONS, A U.S. SENATOR FROM THE STATE OF DELAWARE

Chair COONS. This hearing will come to order. I'd like to thank our four witnesses for participating today. I'd like to also thank Ranking Member Tillis and his staff for working so closely together with me and mine on a consensus basis. You and your team, Senator, have been a great partner on these issues and I thank you for your partnership and leadership.

Today, we're going to explore foreign threats to American innovation and economic leadership. This is a timely and critical topic and I'm looking forward to a productive conversation. America's leadership on the global stage depends on our ability to foster and protect innovation and creativity, both at home and abroad. Our competitors and adversaries recognize this fact.

China, for example, has been trying now for decades to unseat America as the world's innovation superpower. To do so, Chinese governments and companies collaborate to acquire foreign technology and create domestic innovation industries. This isn't a surprise, as IP drives economic growth. The USPTO reported that in 2019, IP-intensive industries—things like computer technology, pharmaceuticals, entertainment—accounted for nearly 50 million American jobs and $7.8 trillion in economic value, representing 40 percent of our GDP.

Innovation is a key driver for our competitiveness and our national security. China's focus on IP raises national security concerns and questions about how China is manipulating rules-based international systems to its own advantage. We'll explore those concerns and questions today with our panel of witnesses.

China has pursued innovation and economic supremacy in part by using illegal means. Brazen trade, secret theft, and economic espionage by China is well documented. According to the Department of Justice, approximately 80 percent of the economic espionage cases it prosecutes involve trade secret theft by the Chinese government or its agents.

Trade secret theft has touched my own State of Delaware. Our oldest or perhaps best known company, DuPont—Chinese nationals stole trade secrets protecting their innovative titanium dioxide production technology and sold these secrets to a Chinese state-owned company for $30 million.

We also need to be concerned about the threats posed by counterfeit goods often sourced from abroad. In 2021, four-fifths of all counterfeit goods entering the United States originated in China. Although we seized $3 billion of counterfeit goods at the border in the last year, this amounts to a small fraction of the total. These counterfeit products can be unsafe and harm consumers. As Co-Chair of the Congressional Trademark Caucus, alongside Senator Grassley, I know just how challenging and dangerous counterfeits can be.

For example, prescription drugs that are counterfeit may not contain the active ingredient, or can contain even worse, deadly elements like fentanyl. Fake airplane parts widely found in service centers around the world can increase the chances that a plane malfunctions or crashes.

Beyond illegal means, China has increasingly used legal processes to unseat America as the world's economic and innovation leader. Although these means haven't received as much media attention as illegal activities, they're equally as harmful and more difficult to combat. China has manipulated standards-setting boards and flooded the USPTO with trademark and patent applications to slow down all of its work.

The threats to our economic leadership and our innovation ecosystem aren't just from China. Other countries like India have also been inconsistent in their IP protection and enforcement, for example.

At the same time, emerging weaknesses in our own IP system have made it more difficult for rights holders to assert their rights, protect themselves, and safeguard their IP from either domestic or foreign threats. Patents are today easier to challenge in the PTAB in trials than in district courts. Patent owners who prevail in litigation can no longer rely on securing permanent injunctions to prevent ongoing infringement.

I also remain concerned about unresolved issues around the scope of eligible subject matter or patentability. More than a decade after the Supreme Court waded into patent eligibility law, confusion reigns about what areas of innovation are still eligible for patent protection. Critical technologies like medical diagnostics and software have been excluded from protection here, but qualify for patent protection in Europe and China.

These and many other challenges have led to the slipping stature of our IP system on the global stage and jeopardize long-term investments in research. I worry that China and other adversaries and competitors will exploit our system for their advantage.

So I've worked hard on a variety of bills, bipartisan legislative proposals to address these concerns, and I will reference them today and look forward to exploring them with my Ranking Member and other Members of this Subcommittee. With Senator Tillis's cooperation—bless you, Senator—we've assembled a great panel with a diversity of views and perspectives to grapple with these and other issues. I'll introduce them shortly, but we'll now turn over to Senator Tillis for his opening statement. Senator.

OPENING STATEMENT OF HON. THOM TILLIS,
A U.S. SENATOR FROM THE STATE OF NORTH CAROLINA

Senator TILLIS. Thank you, Chairman. It's good to get the band back together. I've enjoyed working with you on the Intellectual Property Subcommittee and alternating statuses as Chair and Ranking Member. And I'm very optimistic that we're going to pick up where we left off and I look forward to that. I also want to thank my staff, the folks who do a lot of the work, have all the technical details. And especially, and also, your staff because they've been great to work with.

I'm looking forward to what we can accomplish in this current Congress, but I think we can be proud of what we've accomplished over the past several years together. And I would also like to thank Senator Leahy for the work that he did. A special thanks to Senator Hirono. Senator Hirono, I think you may actually have a perfect attendance record for IP Subcommittee hearings. So, Senator Welch, that's an aspiration for you. But we do appreciate your engagement and the opportunity to work for us together. And Senator Welch, thank you for being here. Welcome to the Subcommittee.

You know, whether it's patents, trademarks, copyrights, or trade secrets, a strong, reliable, and predictable IP right is paramount to incentivizing U.S. innovation and creativity. Innovation and creativity fuel economic growth for a great country and it has to be protected and nurtured so that it continues to do so well in the future. Based on the USPTO's latest edition of their IP and U.S. economy report, an estimated 63 million U.S. jobs directly or indirectly relied on IP-intensive industries. And these industries accounted for nearly 41 percent of our GDP.

Our purpose today is to explore the ways in which foreign adversaries threaten U.S. economic innovation dominance through intellectual property theft and abuse. As the Chair said, the most notable threat, of course, is the Chinese Communist Party. But to be clear, they're not the only foreign bad actor undermining U.S. intellectual property. In fact, I could cite a few, particularly in the IP space for pharmaceuticals and biotech that some of our greatest friends and partners have disagreements in just exactly how far our IP protection should go.

But the reality is, China is the greatest violator of theft and it has catapulted them into an economic powerhouse. I'm always reminded of what almost looks like a movie set of a Pipe. It's called Charlotte Pipe, in North Carolina. About 100-year-old business. Foundry is very modern, but looks like the foundry when it was first established. You can go to a province in China and see what looks like a movie set. Charlotte Pipe. Stamped Charlotte Pipe on counterfeit goods are on, well, obviously, counterfeit goods.

That has to stop. A lot of their success is based on the innovation and the creativity of this Nation. Their goal is to assume the title as a global innovation leader regardless of the methods employed. Methods such as theft via espionage and counterfeiting which cost the U.S. hundreds of billions of dollars each year. And beyond theft, a significant concern for all of us here today should be the CCP overtaking the United States in domestic innovation, rather than a current reliance on theft, using past theft to become a competitor head-to-head.

We've got to do better. We've got to incent innovation. And I believe that the foundation or the bedrock for our success is making sure that we protect intellectual property rights. Given the urgency of the threat to the United States and our IP community, it is appropriate that we kick off this Subcommittee with this topic.

I'm happy once again to be working closely with the Chair. I look forward to your testimony. And I do think there may be a vote, depending upon how long this Committee goes, but we will continue to push forward. And, Mr. Chair, I'm happy to either miss the vote, or have the vote happen after the hearing so that we can hear all of your testimony. Thank you.

Chair COONS. Thank you, Ranking Member, Tillis. Would Chairman Durbin like to make a brief statement?

You are fine. But thank you so much for joining us. And, Senator Welch, welcome to the Subcommittee.

Senator TILLIS. I thought he was just taking roll, that's why I didn't thank him. Thank you, Chair.

Chair COONS. We now will turn to our witness panel. Today, we welcome four witnesses to testify to us about Foreign Competitive Threats to American Innovation and Economic Leadership.

Our first witness, Mark Cohen, is distinguished senior fellow and director of the Asia IP Technology Project at the Berkeley Center for Law and Technology. Prior to teaching, Professor Cohen served as senior counsel to the U.S. Patent and Trademark Office and was the Office's first attaché in China.

Next, we have Patrick Kilbride, senior vice president of the Global Innovation Policy Center at the Chamber of Commerce. Mr. Kilbride oversees the Center's multilateral and international programs promoting the enforcement and protection of IP rights. He served in the Bush administration as Deputy Assistant U.S. Trade Representative for Intergovernmental Affairs and Public Liaison.

Next, we have Matthew Turpin. Mr. Turpin is a visiting fellow at the Hoover Institution and senior advisor at Palantir Technologies. He served at the U.S. National Security Council as the director for China and senior advisor on China to the Secretary of Commerce under the previous administration. He also served in the Obama administration as an advisor on the People's Republic of China to the chairman and vice chairman of the Joint Chiefs of Staff at the Pentagon.

Last, but certainly not least, we have Ms. Suzanne Harrison, founder and principal, Percipience LLC, a board level advisory firm focused on IP strategy and management, and quantifying and mitigating IP risk. Ms. Harrison also serves as chair of the Patent Public Advisory Committee.

Let me just briefly lay out mechanics. After we swear in the witnesses, each witness will have 5 minutes to provide their opening statement. Then we'll proceed to a first and possibly second round of questioning of 5 minutes each. And with that, if you would all stand. Could you please raise your right hand?

[Witnesses are sworn in.]

Chair COONS. Thank you. Let the record reflect all swore in the affirmative. Mr. Cohen, you may proceed with your opening statement.

STATEMENT OF MARK COHEN, SENIOR FELLOW, BERKELEY CENTER FOR LAW AND TECHNOLOGY, AND DIRECTOR, ASIA IP PROJECT, UNIVERSITY OF CALIFORNIA BERKELEY SCHOOL OF LAW, BERKELEY, CALIFORNIA

Professor COHEN. Thank you very much, Chairman Coons, Ranking Member Tillis, Senators and staff. It's a pleasure to be here today. Senators, China's rise did not occur overnight. Rather, we have made profound mistakes in not identifying China's increasing innovative capacity. And we need to proceed, now, without the bureaucratic myopia, antique organizational structures, and indifference to data that have haunted prior administrations. And we need to develop approaches that are in our long-range best interests. The needs are urgent.

During the past 10 years, U.S. competitiveness in key technologies has eroded. Various studies based on such measures as patents, scientific publications, widely cited papers, or technology clusters have shown that China's capacity to innovate in many areas now exceeds the United States. I begin today my brief talk with some immediate steps. I follow this with two long-range issues: talent and transparency. In terms of immediate steps, there are three sub-issues: unfilled positions; self-strengthening our IP system; and the need for a whole-of-U.S. Government approach.

First, we need to fill the IPEC role. We should also establish a Deputy USPTO Director for International Affairs who could marshal the PTO's resources to better serve the inter-agency. There's also an important role for our Solicitor General and/or the PTO to educate our courts when they come into conflict with actions from Chinese courts. This role becomes more acute in light of China's stated goals of becoming a center for resolving international IP and commercial disputes. And it's reflected, I believe, in the Defend Courts Act from this Committee.

Second, we also need to clean up our own legal house. Our IP system has weakened as China has strengthened its own, often in the same precise areas. Here are several issues. One of them was just identified—creating stable and predictable eligibility outcomes, including fixing 101 issues. Another, is addressing low-quality IP filings, particularly in trademarks from China. Another, is to have China and other countries disclose government subsidies of USPTO patent and trademark filings. And another, is to develop better data driven approaches to China's technological challenges. I also note that the TRIPS waiver extension for therapeutics and diagnostics should also be carefully considered, if we're going to go forward on that. I personally oppose it.

Third, we also need to create a whole-of-Government approach to deal with these challenges. I would like to see a kind of task force of leading tech executives, academics, and officials with a broad mandate that could address the kind of multidisciplinary challenges that we face. I should say, China doesn't say, "Let's infringe on U.S. patent." They say, "How we are going to acquire that technology?" And that really demands a whole-of-Government approach because it's interdisciplinary in nature.

With my remaining time, I will focus on non-competes and transparency. A proposed FTC rule banning non-competes will make trade secrets much harder to enforce in local markets. Non-compete agreements give companies critical time to adjust to the possible loss of proprietary technology from employee mobility. They permit a company to protect its trade secrets without being forced to disclose it to judicial bodies. They are simply easier to enforce.

Today in China, there's a 30 percent chance of winning a trade secret case. However, the odds change to 66 percent if a non-compete is involved. Why would we deprive our companies of a better and fairer chance to win a trade secret case?

Professor Denis Simon from UNC, testifying before Congress a few months ago, noted that Chinese employees in the semiconductor sector are often offered triple their salary in order to migrate to a competing company. And is this what we want with our CHIPS Act funding? That teams of U.S. employees are poached by China or other countries as has happened in California? Giving our companies the ability to staunch the poaching of tech talent is critical to our efforts to develop greater technological self-sufficiency.

My final concern is transparency, particularly transparency of judicial decisions. I've been involved in this area my whole career. Yet, if you ask me today if the Chinese judicial system is biased against foreigners, I could not comprehensively answer you. If you ask me if the Phase One Agreement and its commitments to improve China's IP system such as providing a patent linkage regime for pharmaceuticals are being fully implemented, I could not answer you. Most of the cases are not published.

I can answer you that based on available data and dozens of studies, that foreign parties do very well in IP litigation in China. But these studies are based on Chinese government curated databases. We need full transparency, not curated transparency. Part of the reason that China may not be living up to its commitments is that we have no way of monitoring China's implementation of them. Part of the responsibility for that also rests with us for not adequately prioritizing transparency. Thank you for your attention to these important issues.

[The prepared statement of Professor Cohen appears as a submission for the record.]

Chair COONS. Thank you very much, Professor Cohen. Mr. Kilbride.

STATEMENT OF PATRICK KILBRIDE, SENIOR VICE PRESIDENT, GLOBAL INNOVATION POLICY CENTER, U.S. CHAMBER OF COMMERCE, WASHINGTON, DC

Mr. KILBRIDE. Thank you, Mr. Chairman, Senators. Appreciate it. We're here on behalf of the U.S. Chamber because we see the

U.S. IP-based innovation ecosystem under duress. This is a multi-stakeholder ecosystem that, more successfully than anyone else in the world, advances knowledge and develops tests, regulates, and delivers new technologies in a useful form to end users.

The National Science Foundation has found that three-quarters of the R&D performed within this ecosystem comes from the private sector, an investment that relies on intellectual property rights backed by the rule of law. IP is so critical because it enables those investments in long-term, high capital, high risk projects. It enables owners to assign a value to their intangible assets and enables them to engage in exchange of assets with other stakeholders within the ecosystem on mutually agreed and enforceable terms.

And yet, this innovation ecosystem is under threat, systemically, in a multilateral level and in piecemeal national level attacks. It takes the form of online piracy, counterfeiting, trade secret theft, erosion of legal rights, forced technology transfer, political stigmatization of IP, and outright waiver of global IP commitments creating an environment where American innovation and creativity is vulnerable.

These threats come from every corner of the globe. Certainly China, where forced technology transfer is part of the exercise. But also closer to home, where the EU Data Act, for instance, could force American companies to share trade secrets with governments and possibly even competitors. Here at home, we see self-inflicted wounds, such as U.S. support for the TRIPS waiver, the FTC non-competes attack that Professor Cohen mentioned, and the proliferation of abusive practices, and third-party litigation financing that make the cost of prosecuting patents far more expensive.

Americans are encountering these harms at home in the form of counterfeiting and piracy. The Chamber has studied this. The OECD has finding illicit trade on the order of half a trillion dollars each year, with obvious implications for health and safety, including cybersecurity, and American jobs and growth. The businesses tell us if we can make it, they can fake it. It impacts everything with some obvious—you know, fake pharmaceuticals were mentioned, food, cosmetics, toys, medical equipment, and chemicals, for instance.

In the COVID–19 pandemic, the increase in online shopping led fakes being delivered directly to Americans' front door in the form of small parcels, which exacerbates the enforcement challenge. The Chamber is working to address these challenges with our public sector partners through groundbreaking public-private partnerships. Including, an MOU signed with the U.S. Customs and Border Protection and a detailee project to the National IPR Center, where we're helping companies to share information directly with customs agents, HSI investigators so that they can stop seizures from getting in, identify the bad actors, and prosecute the crimes.

We believe a similar model could be applied in the streaming piracy space, and we're pursuing conversations with relevant agencies to that end. I want to thank Congress and the Senate for passage of the INFORM Consumers Act in the last Congress, which brings important transparency to the e-commerce space. We see our members in those industries doing important work to do proactive vetting and monitoring of sellers, prosecuting of bad ac-

tors, cooperating with brand owners, and raising consumer awareness together with the Chamber.

The streaming piracy threat, similarly to counterfeits, costing us 290,000 creative professional jobs in 2020—costing just those people $30 billion in revenue, but economywide, up to half a million jobs and $115 billion in GDP, undermining a creative sector that employs 5 million Americans and provides nearly 12 percent of the U.S. economy. One of the challenges we have that makes our creative sector more vulnerable is that U.S. Government does not currently provide the tools to shut down foreign-based infringing websites. We can shut down U.S.-based websites, and criminal and civil penalties apply, but we cannot do it for foreign-based infringement.

We talked a lot about China, and obviously, I think the scope of counterfeits from China is known to everyone. The Chairman mentioned 80 percent of seizures at the U.S. border. With piracy, the challenge with China is more the market access barriers that prevent a legitimate market from providing access to consumers there so creating, you know, a pirate market. We see rule by law instead of rule of law. This creates an environment of public policy risk that's anathema to investment and innovation and creativity. The Chamber has a new study on that, which I'd be happy to share with the Committee. Thank you very much, Mr. Chairman.

[The prepared statement of Mr. Kilbride appears as a submission for the record.]

Chair COONS. Thank you, Mr. Kilbride. Mr. Turpin.

STATEMENT OF MATTHEW TURPIN, VISITING FELLOW, STANFORD UNIVERSITY'S HOOVER INSTITUTION, AND SENIOR ADVISOR, PALANTIR TECHNOLOGIES, WASHINGTON, DC

Mr. TURPIN. Chairman Coons, Ranking Member Tillis, and other Members of the Committee, thank you for inviting me today. While I'm a senior advisor at Palantir Technologies and a visiting fellow at Stanford's Hoover Institution, the views I express today are my own, and they're shaped by my last dozen years focused on U.S./China policy during both the Obama and Trump administrations.

A decade ago, Admiral Dennis Blair and Governor Jon Huntsman chaired the Commission on Theft of American Intellectual Property. Their work revealed that on an annual basis, United States suffered approximately $300 billion in economic loss due to economic espionage, primarily by the People's Republic of China, along with the loss of millions of jobs. Over a decade, that's $3 trillion in losses.

In 2017, the U.S. Trade Representative conducted an investigation under Section 301 of the Trade Act to examine whether the PRC government actions harm the United States. That investigation revealed four elements of Beijing's technology transfer regime.

First, the use of opaque administrative processes, joint ventures requirements, foreign ownership and limitations, and other mechanisms to require or pressure the transfer of valuable U.S. technology to the PRC.

Second, the PRC government's actions and policies that deprive U.S. companies of the ability to set market-based terms and technology-related negotiations.

Third, the government's direction and unfair facilitation of outbound and Chinese investment targeting U.S. companies and assets in key industry and technology sectors.

And fourth, the PRC government conducts economic espionage using both human and cyber tradecraft, including the direct participation of PRC intelligence services like the Ministry of State Security.

The IP Commission, the Section 301 investigation, and dozens of criminal prosecutions over multiple administrations, expose a truth that many have found reluctant to acknowledge. That the United States is the victim of a comprehensive, intentional campaign by the PRC, which results in grave economic and national security harms. In many ways, the cost of these harms exceed the benefit that Americans gain from our economic relationship with China.

This comprehensive state-sponsored campaign strikes at the very heart of our economy, and the economies of our allies, and endangers the qualitative military advantage that constitutes our deterrence against both Beijing and Moscow. Our economy, while broad and diverse, relies upon a foundation of innovation and technology leadership. That foundation, reinforced by a constitutional and legal superstructure supervised by this Committee, that guarantees property rights and builds transparency which incentivizes innovation and free markets over mercantilism and state control. Our legal and social structures create the environment for prosperity innovation that is the envy of the world.

Our national security is built upon a qualitative military advantage which offsets the quantitative and geographic advantages of our potential adversaries. This qualitative advantage persuades potential adversaries that the costs of military aggression will far exceed the benefits that they could gain. To create this qualitative military advantage, the U.S. military relies upon unequal access to the technological advantages generated by our innovation economy.

The Chinese Communist Party is attacking this dynamic economic and national security system with its comprehensive campaign of forced technology transfer and economic espionage. Beijing abuses its access to the globalized economic system to undermine the United States and other open societies.

As this Subcommittee well knows, the United States has extensive layers of protection. Dedicated and hardworking Americans across departments and agencies work every day to protect us from this hostile campaign. Unfortunately, the PRC adapts its strategy and tactics to exploit gaps and seams in our protective layers more rapidly than we can adapt.

Additionally, PRC entities acting at the direction of the PRC government weaponized the U.S. legal system in ways that are against the interests of Americans. And to date, we have been relatively little to impose costs on those PRC entities that benefit from this campaign.

The United States must consider a shift to holding the PRC and its commercial entities collectively responsible. Episodic and uncoordinated responses by individual departments and agencies, no matter how well meaning, are no longer sufficient.

I have four recommendations. First, identify the beneficiaries of IP theft, forced technology transfer, and economic espionage.

Second, enable closer coordination across the U.S. Government and the private sector to understand the tactics and techniques that the PRC uses.

Third, compel corporate and other private sector victims to be transparent about IP theft and other forced technology transfer requirements.

And fourth, stop the importation of goods produced with, or which benefits from, this harmful campaign.

Chairman Coons, Ranking Member Tillis, other Members of the Committee, thank you for this opportunity to testify. I look forward to addressing your questions.

[The prepared statement of Mr. Turpin appears as a submission for the record.]

Chair COONS. Mr. Turpin, thank you for your testimony. Ms. Harrison.

STATEMENT OF SUZANNE HARRISON, FOUNDER AND PRINCIPAL, PERCIPIENCE LLC, AND CHAIR, PATENT PUBLIC ADVISORY COMMITTEE, SAN FRANCISCO, CALIFORNIA

Ms. HARRISON. Chairman Coons, Ranking Member Tillis, Senators, it's an honor to discuss three ways this Committee can utilize IP to ensure our national security and increase our economic competitiveness. I'm here testifying in my personal capacity, and all the views and opinions expressed today are my own.

My background is in executive corporate management with emphasis in strategy, finance, and organizational behavior. I've spent the last 30 years advising multinational corporations, small companies, inventors, and patent officers around the world how to use IP to increase value for organizations and economies. I have created, defined, and benchmarked best practices for intellectual property management, and I've written three seminal books on the subject. Many of the strategies that you see nation-states employing were learned by watching how companies deal with their competitors.

I am currently the chair of the USPTO PPAC, where we submit a report to Congress in the White House every year with our view of what is happening in the USPTO and the IP ecosystem, along with recommendations for both the USPTO and Congress on how to improve the IP system. In 2020, with co-authors Jeanne Suchodolski and Bowman Heiden, we identified that the Chinese government is currently utilizing a competitive strategy which is a systematic and coordinated effort to achieve technical and economic dominance through both legal and illegal means to misappropriate U.S. technology, undermine our innovation ecosystem, economic stability, and national security. We named this Chinese strategy Innovation Warfare.

The U.S. needs an effective counterstrategy to address this new competitive threat. IP is the newest tool in our comprehensive defense toolbox, and we must do a better job of utilizing it to keep our country safe and grow our economy. I would now like to discuss the three ways this Committee can help.

First, create and disseminate a new IP narrative. For the past 17 years, the narrative around IP has focused on optimizing the IP system for one set of industries over another. This ultimately led to the formation and implementation of PTAB at the USPTO. Un-

fortunately, this also led to a lack of public confidence with the USPTO as this set up a false and damaging narrative that either the USPTO examiners were granting patents that should not have been granted, or that PTAB judges were invalidating patents that were rightfully granted. Redirecting that narrative is necessary to strengthen public perception of IP. Describing how IP can help the Nation economically, technologically, and as a vital part of our national security strategy is needed.

Two, shore up our IP ecosystem. In the Innovation Warfare paper, we discuss using patents as technology control positions. The concept of a technology-controlled position only works if patents can actually exclude. Over the past 17 years, the Supreme Court has significantly eroded the ability of a patent to exclude others. Congress needs to restore this fundamental right and reduce ambiguity created by the judiciary across the IP ecosystem in areas such as obviousness, eligibility, claim construction, damages, and more. This time, Congress should account for the role of IP in maintaining economic and technological competitiveness, and optimize the system in ways which allow for different industries to use and value patents differently. Successfully growing our economy requires all industries to utilize IP in ways that are advantageous to their growth.

Finally, clearly define the leadership role of the USPTO in this new environment. While it is true that the Defense Department has the statutory authority to keep our Nation safe, the needed expertise to bring this counterstrategy to fruition is scattered widely across multiple agencies, as our panelists here today can attest. The USPTO has data that can be useful to enable other agencies to visualize these new and emerging battlefields, and feed into a predictive forecasting model such as future-oriented technology analysis.

This Committee should work with Director Vidal to define and authorize the USPTO's role in working with the DOD on FTA matters, specifically, and on a counterstrategy more broadly. I'd like to conclude my remarks by briefly reflecting on what the other witnesses have shared.

Data matters a lot. And we need more of it, and we need to use it more consistently. We need a defined holistic strategy and not incremental changes to our IP system which requires a different way of thinking about this problem. Our freedoms and values that are embedded in our legal system are at stake, and we are under attack. That needs to be thought through very carefully. Thank you for your attention, and I look forward to answering any questions you may have.

[The prepared statement of Ms. Harrison appears as a submission for the record.]

Chair COONS. Thank you, Ms. Harrison. Thank you, all four of you, for your thoughtful testimony. I appreciate the various perspectives you've brought to bear about foreign threats to American IP and potential ways to counter them. I'll start my questioning by exploring China's plans to become an innovation superpower, and the illegal methods they're using to advance their goals. And if we run out of time in this round, I'll likely take a second to explore how we can strengthen our IP system.

Professor Cohen, if I might start with you. In 2015, the Chinese government announced its Made in China 2025 Initiative, which identified key industries and technologies for which it hoped to supplant U.S. global leadership. Can you briefly explain China's strategic IP plans, and how you expect their strategy to evolve in the coming years?

Professor COHEN. Yes. It's a great question, and it could be the subject of many hearings unto itself. I think most Americans, most individuals from market economies, would be shocked at the level of industrial policy planning that goes behind not only manufacturing, but innovation and, more specifically, intellectual property.

So, in addition to Made in China 2025, we have the national IP strategy, which is usually in tenure, increments. And we also have local and national ministerial-level policies governing IP, innovation, manufacturing, and related areas. You know, most of these—the concerning areas are in sectors that we would consider strategic or emerging industries: robotics; AI; 5G; 6G; high-tech genomics; advanced manufacturing techniques; etc.

In many cases, they seek some degree of dominance. Sometimes it's measured in terms of patents, or technology, or exports, or talent. And talent programming is also a significant part of these industrial policies. I don't know any counterpart to that in the United States about how to develop talent through the universities or even bringing in foreign talent. And that feeds into a lot of these national talent concerns that the FBI and our police agencies have problems with—luring talented professors, corporate officials, technologists to China, to help China advance its economy.

My own belief is a lot of what happens in China that is nefarious is not so much government-mandated, but government-inspired. There's a difference. If China wants to acquire technology, it will do it at the lowest cost, with the least publicity possible. And in many cases, that means that individuals want to try to satisfy these mandates in order to get incentives, subsidies, promotion, recognition. And that feeds into, really, a vast plan to increase innovative capacity and technological and national security capacity in a wide range of sectors.

Chair COONS. Thank you. Mr. Kilbride, if I might, just the economic impact of online piracy and counterfeiting interest me. It's been reported four-fifths of the U.S. population shops online. Nearly all of us do. And a significant proportion of the counterfeit markets moved to online. Have e-commerce platforms provided effective initiatives to assist in identifying and removing counterfeit products, the majority of which are coming from China?

Mr. KILBRIDE. Thank you, Mr. Chairman. Great question. And the answer is, it's a mixed bag. Some are doing better than others. We see some real best practices, and we're working to benchmark those. They include some of the steps that I mentioned in my testimony, including very significant work to proactively vet, you know, sellers, which is assisted by passage of the INFORM Consumers Act, but also proactive steps on behalf of the industry.

We see some companies investing in units that enable them to use their own data to share with prosecutors, and essentially, hand over cases ready to prosecute when they've identified bad-actor networks. And we see much more cooperation with brand owners.

That's been a real improvement, but obviously there's more work to be done.

Chair COONS. Well, thank you. The INFORM Consumers Act was an important step forward, Mr. Chairman. I'll mention that I have also worked with Senator Tillis on the SHOP SAFE Act that would hold platforms liable for the sales of harmful counterfeits unless they've adopted a set of best practices for evaluating sellers and products.

Mr. Turpin, if I might, briefly, and then in the next round, I'll come to you, Ms. Harrison. Trade secret and IP theft through economic espionage disadvantage our companies, our national security, our global competitiveness. I'm concerned we're not doing enough to counter this theft, to impose costs on the beneficiaries. That's why I've worked on the SECRETS Act with Senator Cornyn, to help prevent goods made with stolen trade secrets from entering our market. Do you agree that preventing goods from being imported to the U.S. would help deter state-encouraged or state-sponsored IP theft?

Mr. TURPIN. Mr. Chairman, thank you. Absolutely. I think without the perception of a significant cost, it is unlikely that we would see a change in behavior. Right? So, fundamentally, we would need to see the imposition of costs. And that would mean that they don't gain access to this market for them to begin to view that largely this illegal behavior is not beneficial to them, and for them to even comprehend changing their behavior and doing something else.

Chair COONS. So finding some way to impose sustained costs on the beneficiaries of IP theft is something I suspect all of you would recommend.

[Witnesses nod their heads affirmatively.]

Chair COONS. Let me defer now to my Ranking Member, Senator Tillis.

Senator TILLIS. Again, thank you all for being here and the time you took to prepare for the hearing. I think, Mr. Cohen and Ms. Harrison, you touched on it particularly based on your professional history. But if you're an early stage innovator, and you have uncertainty, or you define a fairly short period for protection of your IP rights, what does that do to innovation at that level of the ecosystem? I mean, it would seem to me that it would make it very difficult for some of these innovators to even get some of the funding that they would need to move forward. Do you agree?

Ms. HARRISON. I guess I'll go ahead and take that.

Senator TILLIS. We'll go in reverse order.

Ms. HARRISON. The answer is, it depends. Right now, there are certain industries where there are a few patents for a product—pharmaceuticals, chemicals—where you are required to have a patent before you'll get funding. But in high-tech in particular, investors are in and out so quick. They're not around long enough for the patent to take place, and so they don't require it. And most small inventors aren't bothering to get it, not recognizing that it could be helpful——

Chair COONS. A downstream risk.

Ms. HARRISON. Well, it's not a tool that is currently helpful in their toolbox——

Chair COONS. Okay.

Ms. HARRISON [continuing]. And the technology is moving so fast.

Professor COHEN. If I may add, instability and duration are important concerns in the U.S. system. Certainly, 101 instability has been a concern, I think, in driving capital and new enterprise formation. I would also note that the U.S. system, the IP system, particularly patent filings, tend to be highly corporatized. Oddly enough, even though we think of, you know, China Inc., China has a larger cohort of small inventors, both as a percentage and in absolute terms than the United States. I think if you lined up the individual inventors in China, they would be greater than the total number of applicants than the USPTO in a given year.

So how do you incentivize those smaller enterprises to create and develop high quality IP is a really important issue for the future of this economy.

Senator TILLIS. Ms. Harrison, I think you did a good job of explaining at this early stage, our new innovators. But I can tell you that the lack of certainty and the risk of having your IP rights stripped has an absolute chilling effect on businesses. It has a chilling effect on innovation. And you all, at least two of you, maybe three, mentioned TRIPS waivers. That, to me—I want to hear from someone who thinks that TRIPS waivers are a good idea.

But I can tell you congressional action here, there's a direct map between congressional action and a dramatic reduction in research in the very space that we own a leadership position. That's in life sciences, biotech, pharma. We've seen actions in this Congress that has had a direct measurable impact on small molecule research, for example. I mean, really the holy grail for some of the most challenging diseases that American citizens are experiencing. And I think the TRIPS waiver is a bad policy. Is there anybody on the panel who thinks that there's a good version of a TRIPS waiver?

[Witnesses turn their heads negatively.]

Senator TILLIS. All right. Happy with that answer. How big of a threat do you see China's involvement with standard essential patents, SEPs, especially in light of their connection to critical international technical standards such as 5G? We'll start with you, Mr. Cohen.

Professor COHEN. Sure. So, much as China subsidizes patents——

Senator TILLIS. Your speaker may be off. Red means that it's off.

Professor COHEN. Yes, I got it. Sorry about that. Much as China subsidizes patent filing, it also subsidizes participation in standardization bodies. And certainly, China has also had goals to minimize its outpayments and royalties. Although, some companies like Huawei are starting to, you know, also receive royalties. So that's changing a little bit.

But for a very long time, I would say over 20 years, China has sensed that it has to dominate standard-setting bodies, file as many patents in these bodies as possible, reduce outbound royalty payments, and drive the narrative. And, I think, in some areas they've succeeded, or at least they've certainly increased their presence.

And we also have the threat of litigating in China and the possibility of anti-suit injunctions. That threat is diminished in recent

years. But it is a real problem for companies that could risk forfeiting their China market, or their ability to license in China.

Senator TILLIS. Anything to add, Mr. Turpin?

Mr. TURPIN. Yes, Senator. I think one of the critical points to keep in mind is that standard essential patents essentially form the operating system of how our world works. And fundamentally, the values, norms, and processes of how our international system will work and all of our technical standards are going to be set by certain ways in which companies approach them. And certainly, I think, the PRC views an open, democratic, transparent international system is something that they would want to adjust in the direction that is more fitting of their authoritarian model. Right? And therefore use those standard essential patents to——

Senator TILLIS. More closed and opaque.

Mr. TURPIN. Correct. That's how they see it. And so I think there's very much a very political aspect of their involvement in this.

Senator TILLIS. Well, thank you, all. I'm going to ask a few other questions. And the good news for you all is I love your testimony. The bad news is, I've got a lot of questions for the record. Thank you, Mr. Chair.

Chair COONS. Thank you, Senator Tillis. Chairman Durbin.

Chair DURBIN. Thanks. It's an honor to be here, and thank your Committee for its good work on a very important topic.

The INFORM Act was the result of a conversation I had 10 years ago with Home Depot, who said, "They're selling our own home drills—the drills that we make just for our customers—on the internet in volume. They are either stolen or counterfeit. They've got to be one of the two. We only make them in China and sell them in the United States." Well, you'd think if they were stolen or counterfeit, the vendor would like to know that, too? They didn't want to hear anything about it, and they refused to identify the source of that drill being sold on the internet.

It took us 10 years to create a law which we finally passed in December, which moves us in the right direction. Bill Cassidy was my Co-Sponsor on it. But it's an indication of what we have faced in the past and what American businesses faced in the past. Four minutes left. Not enough time to ask, let alone ask and answer the questions I have here. But I'll throw a few of them out there.

First one, are any other countries in the world engaging in economic espionage? Maybe you can think about that for a second. Please identify them if you know them.

Second, what is the impact of artificial intelligence on intellectual property? What is going to happen as we venture into this brave new world of AI and the information gathering that it's capable of?

Third, did anybody read Tom Friedman's article in The New York Times over the weekend—on China? Please do. He went to the largest chip manufacturer in the world, and the most respected in Taiwan, and said, "Why are you different? Why across the Taiwan Strait aren't the Chinese producing similar products?" And the owner of the company said one word, "Trust. Businesses come to us and believe they can trust us to follow through with the assignment, whatever it happens to be, without compromising the integ-

rity of their own property rights to that information. Trust. And they don't have it in China."

Which brings me to the final question. As I step back and try to reflect on the fact that we are just 50 years—a little over 50 years beyond ping-pong diplomacy, I'm trying to figure out what the hell happened in "Red China"? "Red China," we used to call it. Now we call it the Chinese Communist Party. What happened there? This wasn't supposed to happen. Not a market economy, not a democratic nation, and yet they are competing with this. Did they mandate innovation? Did they steal innovation? Is there something else going on there? What is happening in China now that makes them so competitive with the United States when they apparently have so many obstacles to overcome in an authoritarian government, nonmarket economy, and dealing with a democracy like our own and a capitalist economy? Just a few questions, and anybody who could be interested can tackle them.

Chair COONS. Thank you. And, Mr. Chairman, you'll be pleased to know we're going to have an entire hearing on the impact of artificial intelligence on patents and innovation.

But please take your time and answer Chairman Durbin's questions.

Mr. TURPIN. So, Chairman, maybe I'll take the first one and the last real quick. On the first one, I think it's pretty clear that the lion's share of it, of economic espionage, you know, as defined as a state actor pursuing it, is being conducted by the PRC. There are probably other examples, but in many ways those are quite minimal.

And then, sort of what happened, I think fundamentally our strategy of using economic engagement to drive political liberalization absolutely scared the Chinese Communist Party. And so, for them to adopt the kinds of things that we would expect to be a responsible stakeholder in a liberal rules-based international system, would undermine their rule.

And so, they have chosen to compete in a very different way. And that's the path, unfortunately, that we're down. I think we are on a pathway to a much more turbulent relationship with the PRC than even we see now.

Mr. KILBRIDE. If I may, Leader Durbin, thank you, again, for INFORM. Extremely important. It's application both to organized retail crime and the threat of counterfeits is really going to have an impact. We're looking forward to monitoring how it's being implemented by the June deadline and working with companies to share best practices in that space. In terms of—I'd like to speak to your question about AI.

I think, you know, initially we're going to see a real threat to our system in terms of rampant infringement. And ultimately, I would go on a limb to predict that we're going to see AI potentially become a savior of our system, because it's going to give us the technological tools to tackle some of the challenges that Ms. Harrison outlined that are extremely important in terms of being able to manage IP rights at the speed and scale that's necessary to reflect the technologies that we have today.

Chair COONS. If anybody else wants to comment on the Chairman's questions, please feel free.

Professor COHEN. I'd like to comment briefly, Mr. Chairman. A few points on this trust and what we missed with China. I think Taiwan is a unique model because of the fabless manufacturing for semiconductors that takes place there. That makes Taiwan a significantly large importer of U.S. technology that they pay for, or that is used to produce semiconductors on demand for manufacturers.

So to do that, you have to have a legal system that you can rely upon that trade secrets won't be stolen. By the way, there is a lot of trade secret theft intermediating through Taiwan, but Taiwan has a decent enough legal system to handle it. So it's really a unique example of how you can develop a good IP system using licensing, and technology, and cooperation with the rest of the world, especially the United States. China is not a good example of that. Historically, China was a highly underlicensed environment. Actually, China paid about as much for our technology as Taiwan did in a given year just a few years ago.

I think one of the reasons we went astray with China is we relied a lot on platitudes. Frankly, we assumed too much. We assumed that the internet would create democratic and open societies. That was not true. It can equally be used as a tool of repression. We assume that when a country begins to own IP, it would protect IP for everybody.

And this goes back to the question that Ranking Member Tillis raised about China. Which was that in a state-controlled economy, it's not necessarily true that improving IP will necessarily raise all the boats. It may only affect the domestic participants or favor them over the foreign participants. So, I think there are a lot of things that we missed the boat on simply because we applied general perceptions of the rest of the world of market-oriented economies, applied them to China, and we found that really did not quite work the way we anticipated. At least, that's my observation.

Ms. HARRISON. I would just add on to Mark's comments that we cannot use history to predict the future. And that's what we did with the Chinese IP system. Because every other country, when they created an IP system, followed the same predictable steps. And we expected China to do that, and they did not.

But what we can do is we have data. We have a lot of it. The USPTO has an immense amount of patent data, and we can actually begin to predict where the technology battles are going to be in the future. And rather than deal with them today, when we don't have very many tools in our toolbox, we can anticipate where they're going to be when we have time to make changes and actually stop the issue before it happens.

And that's what this future technology-oriented analysis type of technology can do. We are not leading in that technology. Actually, South Korea invented it. China is currently utilizing it and giving it to all of their companies. We do not. It is not clear where in the United States DOD system that's being created. It's certainly not using patent data to predict those technology battles. We need to do a better job of taking the data we have and utilizing it in ways that we need to do.

Chair COONS. Fascinating. Thank you all. Thank you to the members of the panel. Ms. Harrison, if I might just follow up on

what Senator Tillis was asking, and I think something implicit in what Chairman Durbin was just asking. How do we strengthen U.S. leadership in standard-setting bodies? Standard essential patents and standard-setting bodies are critical, and foreign governments have taken a stronger and stronger role in this, in particular, Chinese. How do we strengthen the United States' role in standard setting?

Ms. HARRISON. I think there are a few ways that we could actually do that. The first thing is, I think, we are naive and thinking that people that show up at standard-setting bodies are the people who we think they are. There's a real party and interest issue. We have nation-states packing the panels, packing what's being said in the voting, and we don't know, nor do we understand who people are really representing. That's something that needs to change.

Two, I think that we have a very hands-off approach to standard-setting bodies. That is not something that we've always done in our history. We've taken a more hands-on approach in prior administrations, and I think we need to reconsider what that actually means. And I think we really need to focus on ensuring that many of the activities that nation-states deal with in terms of standard-setting bodies happen outside of the body. There are special meetings held in their own countries packed with people that they know will vote the way they want, and those are used as precursors of opinions or guidance that come into the bodies.

Again, I think we need to really be careful of how that's happening and pay attention to that.

Chair COONS. Let me follow up on one other thing you mentioned about standing. I'm concerned that a country like China that has a coordinated, focused, nationally funded IP strategy can exploit the fact that there's no standing requirement in inter partes review in PTAB to swamp it, with basically unlimited resources. Flood the PTAB with a tax on U.S. patents in the same way they've been flooding the PTO with patent applications.

To counter this threat, would you support a standing requirement or limits on the number of PTAB petitions per patent than a particular party could file?

Ms. HARRISON. Thank you for the question. So, I think that standing is an important query as is real party and interest. I believe that that is the type of ambiguity that is a legal means which Chinese government and others exploit within our current systems. Yes, I would encourage a standing requirement.

I also think, in terms of going back to the IP narrative, why is it fair to allow people with no standing to bring suits against patent owners? That just is an equitable problem. And I think that is what the kinds of things that are having inventors lose faith with our system. And that's not what we want. We want our system to be fair and equitable.

Chair COONS. Professor Cohen, if I might, you referenced the critical issue around transparency, there being only curated insights into the outcome of litigation in China. You, in fact, cited lack of transparency as the most important reason. We know so little, really, about how China's IP system works. And you described that as the biggest missing tool in our IP arsenal against China. What could we do to ensure that China increases transparency so

right holders can actually protect their interests, and so we can make better informed policy decisions?

Professor COHEN. Well, there are a number of tools. I think, frankly, one of them is the WTO. The TRIPS Agreement says that cases of general application and final judicial decisions should be published. And the U.S. brought a case in 2007 which we didn't quite see to completion. We should have, I think, appealed that case, where we're trying to compel China to publish all cases since it had joined the WTO in 2001. So I actually think the WTO has an important role here.

China does publish a lot of cases. Cases are sometimes removed from the database for political or other reasons. And there are efforts among academics to try to track that. The cases themselves do provide insights. So it's not to be totally discounted. It's widely used. I think there's something like 140 million legal documents on the official China database right now. And there's well over—I forgot the exact number, but it's billions of page views. I mean, perhaps over 100 billion of page views since the database was set up.

So the database can be mined. And there are useful observations that come from it. I mentioned that non-compete agreements have a 66 percent chance of success. Trade secrets, 30 percent. That's drawn from that database. So even if it's curated, there's useful information to abstract from it. And I think at such time as we begin to have dialogue again with China, we should be working individually and with our partners, trading partners, to insist on greater disclosure.

It's not what makes China look good that matters in that database. Frankly, it's the exact opposite. And this goes against China's own inclinations to use cases as kind of a propaganda tool.

Chair COONS. Understood. Thank you, Professor. Senator Tillis.

Senator TILLIS. Thank you, Chairman. I wanted to come back to the non-competes as well. I think if you were to eliminate those, you would open a wide door of intellectual property theft. You would go away from maybe somebody that works for a firm for some number of years decides to move. Maybe they wade into a violation of their non-compete. But you'll have a whole cadre of people that will go work somewhere until such time they have the trade secret, and they move on. I mean, that to me, is about as obvious as the bad policy of the TRIPS waiver. I may have mentioned that before.

But approximately 80 percent of all espionage prosecutions brought by the DOJ alleged conduct that would benefit the Chinese state, and approximately 60 percent—so, 80 percent would benefit the Chinese state, 60 percent of all trade secret cases involve China. What steps can the DOJ do with the current tools they have, or what more do we need to do to enable them to address this challenge if you agree that it is a critical issue?

Professor COHEN. I believe, and I'm sure Mr. Turpin also has some observations, but let me just share my own observations from the time I was at the PTO. I think that the FBI, and the other law enforcement, and science and technology institutions in the Government should have a much more risk-based approach to technology misappropriation. China publishes its industrial policies. We

know what areas are targeted. We can even break it down sometimes by patent classification or subcategory of technology.

And I think focusing on those areas—and that would also mean not only bringing cases but educating our companies that they're under threat if they don't already know it. It has to be a big part of the toolbox. I doubt we can stop all trade secret misappropriation or IP theft, but we should really address it in areas that are of core critical concern to us.

Senator TILLIS. Yes. But if you want to open the door—I'm sorry. Go ahead, Mr. Turpin.

Mr. TURPIN. Yes, Senator. I mean, I think the DOJ obviously cannot be the sole entity that seeks to go after these things. There has to be a degree of linkage across other——

Senator TILLIS. I heard the whole-of-Government, I think, from Mr.——

Mr. TURPIN. Right.

Senator TILLIS. I think that that's critically important.

Mr. TURPIN. Absolutely. So understanding that you may not be able to essentially prove it in court because largely the PRC government is going to prevent you from having the transparency that would allow you to do that. But, of course, that isn't the bar that you have to cross to use other authorities on other departments. Right? So the Commerce Department has its own authority to be able to put sanctions on activities. The Treasury Department has.

And in this sense, the executive branch has to actually work together to pursue these things, as opposed to viewing an intellectual property or an economic espionage case as solely just something that is the purview of the Justice Department.

Senator TILLIS. Thank you, all. I see that Senator Padilla is here. So I'm going to live up to my promise of sending questions for the record. But I'd also like to reserve the right to maybe schedule some time to speak with you all in my office or over the phone. Whatever is most convenient for you.

[The information appears as submissions for the record.]

Thank you, Mr. Chair.

Chair COONS. Thank you, Senator Tillis. Senator Padilla.

Senator PADILLA. Thank you, Mr. Chair. Senator Tillis, if you would have taken a few more minutes then I would have had more time to ask more questions——

Chair COONS. I'm happy to ask another question, too.

Senator PADILLA [continuing]. But I'll do some follow-up in writing.

Good afternoon. Let me begin by thanking Chairman Coons for holding this hearing. We're here to speak about foreign threats to American innovation. But I'd be remiss if I didn't acknowledge a couple of areas where we're actually doing harm to ourselves.

First, we need to do more to ensure that our innovation ecosystem is welcoming and reflective of the creative capabilities of all of our communities, even within the United States. There are some communities, some populations, they're very active and represented in innovation, and others that we have by a long shot not begun to tap. Their talent, their creativity, and future expertise, and leadership.

We also need an immigration system that allows us to much more effectively not just recruit talent but retain talent. And that may be a worthwhile topic for a hearing another day.

I do want to jump into a specific item that I don't think gets as much attention as it deserves. And that's our efforts to fully understand the avenues that nation-state actors are using to take advantage of patents and our legal system. I think it's essential to identifying systemic vulnerabilities.

For example, it can be difficult to identify the direct financial interest at play in patent infringement litigation. What do I mean by that? Well, let me just say I'm concerned that the funding obfuscation may be shielding nation-state conduct that is meant to harass American firms or attempt to force the disclosure of sensitive information. So start with Professor Cohen. Do we know whether or how much, not just the Chinese government, but any foreign government for that matter, funds or subsidizes patent infringement litigation against American firms?

Professor COHEN. Thank you, Senator. If I may back up a little bit. I think we don't even know how much foreign ownership and investment there is in our patent and trademark applications. So the underlying rights themselves are not identified if there is a government subsidy or support. We do require that in Bayh-Dole. If there is a U.S. Government-funded patent application, then that would be disclosed and available on the PTO database. That does not apply to foreign applicants.

So I also think this is particularly critical. It's caused a lot of disruption in the PTO with government subsidies from China of trademark applications. And I think a disclosure requirement could be immensely helpful, at least, in identifying the magnitude of the risk. I do not think we have that data available for government-funded or subsidized patent assertion entities whether they're from China or elsewhere. And I think that would also be useful, again, in determining the risk. Although, I doubt that, you know, private entities have to disclose the nature of their investors either.

I would like to begin, really, with the right themselves. Personally, I think that's a very high priority because patents, as you mentioned, can be an agent of influence in our system. And right now, there is no disclosure requirement.

Senator PADILLA. So it sounds like you do agree that it would be helpful——

Professor COHEN. Yes.

Senator PADILLA [continuing]. Valuable to have this information. And if so, any other ideas or recommendations that you would urge Congress to consider?

Professor COHEN. I think disclosure of Chinese or foreign government investment, or support for the underlying research, or the application itself, if it's a patent or trademark, will be extremely useful.

Senator PADILLA. Okay. Mr. Kilbride, you seem eager to add here.

Mr. KILBRIDE. Thank you, Senator. I would just agree that we're concerned about the problem. In my case, I'll refer to foreign investment in U.S. litigation. So the problem of third-party litigation financing. And while we don't have good numbers to attach to that,

I think there's an increasing anecdotal body of evidence that we need to get our hands around it.

Senator PADILLA. Okay. And if the Chair would indulge me just one more question and that's regarding economic espionage and trade secret theft, this is something that Senator Tillis raised a few minutes ago.

The Department of Justice last year announced a shift from its earlier China Initiative to a broader strategy for countering nation-state threats. In announcing that change, Assistant Attorney General Olsen cited both concerns about threats from other countries—including Russia, Iran, North Korea—as well as concerns from the civil rights community, that the China Initiative fueled a narrative of intolerance and bias. At the same time, he stated, the government of China stands apart in threatening U.S. security through its considered use of espionage, theft of trade secrets, and other tactics to advance its interests.

What policy approaches would enable Congress to try to prevent foreign entities from gaining too much access to U.S. intellectual property and technical know-how while still fostering beneficial international research and business collaborations? Again, we'll start with Professor Cohen.

Professor COHEN. Research integrity is a critical issue, particularly vis-a-vis China. I think in the past, inadequate attention had been paid to that. And that includes not only the ongoing research itself but the follow-up research.

An example of that is China permits the filing of patents anonymously. So, in some cases, a trade secret could be misappropriated, and then the misappropriator can take it to China, file a patent anonymously, and the underlying technology is thereby disclosed. Sort of a double whammy. You own the technology that you've stolen and it's publicly disclosed.

So there are some issues we really do need to take up with China in terms of the environment, which sometimes does not foster legitimate technology cooperation. We had some improvements. We brought a WTO case on China's technology transfer rules which discriminated against foreigners.

But a lot of the integrity issues are really going to be left to the universities and companies that undertake them. And imposing higher standards, including best practices for separating out of technology, who gets cooperated, vetting of parties we collaborate with. China is leading the way in many areas. In many areas it's leading in laboratories and other facilities. So not engaging with China in certain areas could impair our technological competitiveness and has to be factored in as well.

Senator PADILLA. Thank you very much. Thank you, Mr. Chair.

Chair COONS. Thank you, Senator Padilla. Senator Hirono.

Senator HIRONO. Thank you very much, Mr. Chairman. Thank you for convening this panel and holding this hearing. Our IP system has long been the engine that drives American leadership and innovation, and we must ensure that our system encourages American innovation and does not allow bad actors to stifle or steal it. Unfortunately, we know that some of the bad actors at the head of that list is the Chinese government, as we have heard today.

It is important to deter Chinese government wrongdoing and prosecute espionage and theft, but our concern is with the Chinese government and not with the Chinese people. We must avoid misguided prosecutions like some of those undertaken by the previous administrations in their China Initiative.

Going after professors on shoddy evidence will hurt, not help, American innovation by sending the best minds elsewhere. Indeed, expanding the pool of innovators can only grow our economy. Which is why I have sponsored the IDEA Act, which many of my colleagues here have joined in on that would, on a voluntary basis, have the information that goes to who is actually applying for patents in our country.

And I do acknowledge, and I thank the panelists, and my colleagues also for acknowledging that there is a distinction that needs to be made against what the Chinese government is doing and not create a situation wherein Chinese people come under assaults and attack—not to mention prosecution—under the so-called China Initiative. So, thank you, Mr. Chairman.

The Chinese government—this is for all of the panelists—has undertaken a widespread and systematic campaign of stealing American intellectual property to advance the Chinese economy.

The Justice Department has initiated a number of prosecutions, some warranted and some misguided, as I mentioned. What proactive steps should our Government agencies be taking to protect American intellectual property and businesses? I know that you have noted some things, but what is one thing that we ought to be doing?

We'll just go down the list, anyone who wants—well, for all the panel.

Mr. TURPIN. Well, Senator, I'd say identify the ultimate beneficiaries of economic espionage and IP theft as opposed to focusing solely on those who might have been caught up in the conduct. But all too often, the benefits of that theft go back into a Chinese state-owned enterprise or within a Chinese entity. And then they gain significant material benefit from that theft, and we don't do enough to transfer costs onto those entities.

And largely, I think, they then conclude that this is an effective strategy. Right? That there is only minimal cost, and it's often paid by third-parties. And they benefit from this activity.

Senator HIRONO. So, you're basically saying it is the Chinese government itself, or certainly an entity that is supported by the Chinese government, that is the beneficiaries. Do the rest of the panelists agree that that is a very critical thing that we ought to identify, and somehow impose some costs, basically, onto the Chinese government? Do you agree with that?

Mr. KILBRIDE. I'll go ahead. Thank you, Senator. You know, I think it's important that the U.S. Government use the tools that are at its disposal. Some of those include imposing costs when bad actors from any source, you know, infringe our intellectual property. But I think what's most important to your initial question is that we get the system right at home. And I think we're very concerned that there's been a sort of political shift, and that IP has become out of fashion all of a sudden. And that's very alarming.

I think Ms. Harrison put it very well in her testimony that you've got this conflict between whether good patents are coming out of the USPTO, or the PTAB has it all wrong. And until we can resolve that, we're going to have a real dilemma in the United States. So I think it's critical that we restore the foundations of our own IP system. That's going to do more than anything that we can impose on foreign actors.

Professor COHEN. Thank you, Senator. I tend to agree with Mr. Kilbride's perspective. I think the first place to clean up is our home because it's more under control. It's more transparent. We know how to adjust it and titrate it as best we can. I think that utilization of the U.S. and even the Chinese system by small businesses in the U.S. is extremely low, and I think that contributes to a very large sense of frustration in that community.

Sometimes they have no presence in China, but they're affected by counterfeits or pirated goods coming into this market or into third markets. So with no revenue coming in, you don't have the resources to fight it. And I think having low cost mechanisms in the U.S. for small businesses to address infringement and to utilize the low-cost methods that exist in China.

Because, actually, China has very inexpensive methods of protecting IP if they fail to have government resources to support them. I'm a little worried about systems that say that we'll impose certain costs on China because who's going to adjudicate that——

Senator HIRONO. Yes.

Professor COHEN [continuing]. In the U.S.?

Senator HIRONO. The question of jurisdiction comes to mind.

Professor COHEN. Yes.

Senator HIRONO. Thank you. Ms. Harrison, would you like to add?

Ms. HARRISON. Yes.

Senator HIRONO. Do you mind, Mr. Chairman?

Chair COONS. No.

Ms. HARRISON. I was just going to say, I think that we should be focusing on our IP system because it increases our GDP, first and foremost. Right? Let's get our own house in order to make sure our numbers, and our economy, and our technology competitiveness are robust. So I think we really need to talk about how IP affects GDP.

The USPTO recently came out with some numbers from Professor Lisa Cook that said if we quadruple the number of inventors and we bring those inventions to market, we could increase GDP 4½ percent. That is a very large number. That's like a trillion dollars. And if we could add that to our economy, that's a massive engine of growth.

So first and foremost, get our own house in order. Second, companies are unwilling foot soldiers in this battle—they're the ones who are having to deal with nation-states. No company will ever win against a nation-state. They do not have enough resources. They do not have the money, know-how.

So one of the questions should be, knowing that nation-states are taking advantage of our companies, what mechanisms can we provide them to help them win that battle? Also, we have not told companies this is happening, that there's a defined concerted effort

by the Chinese government to go after them. So how do we expect them to be prepared? How can they know when they see certain activities in a marketplace whether that's a competitor company or whether that's a nation-state?

We must message this to them. We must give them tools. We must give them data. We must help them. We have no plan. We need to get one.

Senator HIRONO. Thank you, everyone. Just one more thing, Mr. Chairman. I would like to ask unanimous consent to enter into the record an op-ed that was written by Holly Fechner, who is the executive director of Invent Together. Wherein the title is, "To understand why America's lead in tech and innovation is eroding, look at China's investment in women inventors." And that is very much along the lines of Ms. Harrison.

Chair COONS. Thank you, Senator Hirono. Without objection, it will be entered into record.

[The information appears as a submission for the record.]

Senator HIRONO. Thank you.

Chair COONS. Senator Blackburn.

Senator BLACKBURN. And thank you, Mr. Chairman. And thank you all for your patience, as we have all been up and down and back and forth today during this hearing. But as a Tennessean, this is a very important hearing to us. Protecting against infringement and IP theft from the CCP and from Chinese companies.

And see, we see it not only in music, which the music industry loses about 12 and a half billion dollars a year because of this, but concert merchandise, sport team merchandise. You see it in guitars, you see it in aftermarket auto parts, and in some of the patents that are held for new eco-friendly automobile engines and different things.

So it is a frustration. And I think one of the things—and I'm glad that Senator Hirono mentioned the PTAB process. Because this is frustrating to see companies like ByteDance with TikTok using PTAB. Seeing Huawei, ZTE using PTAB, and filing their complaints.

And Ms. Harrison, you touched on this with getting things in order and strengthening our process. So I'd like to start with you. If you were sitting here and you said, "These are the things that we need to do"—because this is costing us billions and billions—tens of billions of dollars every single year. So what are the three things that you would first and foremost do?

Ms. HARRISON. Thank you very much for that question, Senator.

I think the first thing I would do is that I would ensure that every Government agency that deals with IP and the Government has the same view and is employing the same yardstick to measure success.

Senator BLACKBURN. So consistency across——

Ms. HARRISON. Consistency across——

Senator BLACKBURN [continuing]. All agencies.

Ms. HARRISON [continuing]. All agencies. And that national security and economic and technological competitiveness are the metric we should be using.

Two, I think that we have long held and allowed the judiciary to make decisions about intellectual property cases. Oftentimes, by

the time they go to the Supreme Court, they're corner cases that have been informing our innovation policy. That is not the appropriate place for innovation policy to happen. I think Congress should take a very proactive approach in deciding how we want to use our innovation ecosystem to our economic advantage. That would be the second thing.

And the third thing would be to look at all of our choices, PTAB, the USPTO, other things, and say, are we holistically achieving what we're trying to do? We have 200-plus years of an intellectual property system that we have been making incremental changes to over time, and no one has looked at the entire system and says it doesn't meet our needs. Why don't we take a new look and actually come up with some comprehensive viewpoints about what is required for this new metric?

Senator BLACKBURN. Okay. Anyone else want to add something to that? Mr. Cohen.

Professor COHEN. Thank you, Senator. It's an excellent question and obviously one that's hotly debated. Just a few observations. One is that I think when it comes to issues involving state actors, particularly from China PTAB proceedings, I think it's very difficult for ALJs to balance those foreign policy interests, to recognize what is the significance of a state-owned enterprise, to recognize whether a particular industry in the United States might be targeted. I think those kinds of issues might be more appropriately decided by an Article III judge just due to the complexity and the fact that it extends beyond the narrow confines of a patent.

I would also note that with regard to these concerns about the real party of interest or standing issues in PTAB proceedings, that there is a phenomenon in China in IP. And frequently, Chinese phenomena appear in the U.S. where sometimes there's artificial litigation or straw men litigation in administrative proceedings. Artificial litigation is a case where the parties are not really adverse. They want the court to make a decision that would benefit one of them. Perhaps the plaintiff or perhaps the defendant.

I sometimes wonder whether the *Huawei v. ZTE* case in the EU involving standard essential patents may have been an artificial case in order to obtain a certain decision from the European Union that would benefit China, in China, in Europe, the United States, and others countries.

Senator BLACKBURN. Okay. In that regard, let me ask you this. Last year, the WTO gave a TRIPS waiver when it came to manufacturing COVID vaccines. Do you see it as a wet blanket, or do you see that as unfriendly to fostering innovation if somebody producing a vaccine without the rights holder being able to take that and move forward?

Professor COHEN. Yes. I think earlier in this panel we were tallied for who supported that. I think no one raised their hands both with respect to the TRIPS waiver and the proposed extension to diagnostics and therapeutics. Obviously, unfriendly to IP rights, and also a door opener to a range of other concerns, whether it's green technology, non-COVID vaccines, or certain forms of technology that may have other applications other than in dealing with the pandemic. Addressing the pandemic itself, obviously, an international public health concern, and the remedies for that are not

limited to and not necessarily dependent upon violating our IP rights.

Senator BLACKBURN. All right. Thank you all. Thank you, Mr. Chairman.

Chair COONS. Thank you very much, Senator. I understand there may be one other Senator seeking to join us, but the Ranking Member said if there wasn't by the time I finished my last question, I was welcome to simply gavel us to a close. Let me ask just a few closing questions, if I could, of the panel about ways in which, I believe, that our IP system has been strengthened—excuse, has been weakened, and proposals that might strengthen it.

I'd just be interested in hearing, if I could, Ms. Harrison, about what role you think an intellectual property enforcement coordinator could play, the urgency of filling that position, whether it be important to have a coordinator across the administration. You talked about identifying a central role in the PTO. In my view, this currently unfilled position is an important one, but I wondered if you had any views on that.

Ms. HARRISON. Thank you, Chairman. I think that it's an important role to fill because it is the closest role to the White House that deals with intellectual property. It has not historically had a unified view with the USPTO, or with other USTR, and other organizations about how to handle IP in the economy.

And so, I think that, you know, what we're hearing today is IP is becoming more important to what's happening to our Nation. And so it needs to be at a higher level position and discussion within the administration. So I think filling that is our only hope at this moment. But I do think that having more coordination between the USPTO and that position would be helpful.

Chair COONS. Based on your previous testimony, I assumed you would say that having USTR, PTO, commerce broadly, and the IPEC have a common view about the value of strengthening U.S. IP is as important, if not more important, than actually filling the position.

Ms. HARRISON. Correct.

Chair COONS. Mr. Cohen, if I might—Professor Cohen, what's been the impact of the *eBay* decision which made it difficult to get injunctive relief in terms of strengthening the fundamental rights of patent holders?

Professor COHEN. Thank you very much. It's a critical question. And again, you know, my area of expertise is comparative. And I can tell you that in China, injunctions are automatic. Injunction rates are 95 percent or higher, and the only reason they're not 100 percent is sometimes the patents are no longer in effect by the time the court decision comes down. So, basically, it's a rare instance where an injunction is not granted for any kind of IP infringement.

This is a comparative disadvantage for the U.S. because it's not a certainty that an injunction will be awarded. Our damages are high, but litigation takes time in the U.S. and it's quite expensive. In China, you're 6 months first instance, 3 months appeal—so, 9 months and your case is done. In most cases in the U.S., they haven't initiated discovery at that point. So you have an injunction, and if you have a global litigation scenario, that injunction—if the goods are manufactured or sold in China—could be extremely valu-

able, not only in compelling a resolution in China but a global resolution. And this has happened many times.

Chair COONS. And would having a restored right to injunction or an assumption of injunctive relief in the United States help balance that out?

Professor COHEN. Well, I think it would certainly. But it wouldn't necessarily collapse the amount of time till a final adjudication, but the availability of a preliminary injunction could certainly help in that regard.

Chair COONS. There's also been reference here, and in the previous hearings that I've held with then-Chairman Tillis, about the impact of a lack of clarity about patent eligibility. To be generous, the Supreme Court's jurisprudence has wandered a bit in terms of clarity. What are the consequences of having a yawning lack of clarity about patent eligibility?

Professor COHEN. Well, lack of clarity decreases the attractiveness of patents as a basis for investment and capital formation, manufacturing, everything else attendant to that. I view lack of clarity as, at least, as big a problem as the substantive eligibility issues. Again, to make the comparison, China generally grandfathers prior decisions that are more respective of property rights.

So they will rarely run into this problem where their court has made a decision that is uncertain and narrows rights because you'll generally be grandfathered, at least, with respect to the rights you have. But if you have instability, it not only affects you prospectively but for previously granted rights, they could be invalidated.

Chair COONS. Thank you, Professor Cohen. I'm about to close the hearing. Any other concluding comments? Mr. Kilbride.

Mr. KILBRIDE. Thank you. Because I think your last question was so important, I want to say how important, I think it is to afford our intellectual property the characteristics of a private property right with all of the, you know, all of the benefits that accrue to that.

If you want to think about why that's so important, we need only ask ourselves how much would any of us pay for a car if we had to leave it on the curb with the keys in it every night? You know, probably just enough to use it for a few hours. And that's exactly how much, you know, American entrepreneurs and creators will invest in their innovation and creativity if we allow our intellectual property rights to continue to be eroded.

Chair COONS. That is a good and frankly, in some ways, painful metaphor in which to close, Mr. Kilbride. I view it as a constitutionally created and worthy-of-protection property right.

Thank you to all four of you. I appreciate your time and your diligence, your patience with our delayed start because of votes. I'm also grateful to the Members and their staff who attended, to my own staff who helped prepare me for this, and to Ranking Member Tillis for being a great partner in choosing such capable and talented witnesses and holding this hearing today.

I think it's important for us to understand that although nation-states use both legal and illegal means to threaten our IP, they are seeking to unseat us as the world's innovation and technological leader. And in some cases, they are succeeding. And so, you've of-

fered us some pointed answers about how we should respond to that. You've reinforced there's much more we can do to maintain our competitive edge, to strengthen our own IP rights, and to get our own house in order.

I am in a wrap-up, Senator Tillis, my Ranking Member. If you have any closing comments, you're welcome to make them as well. I look forward—I was just saying—to working with my colleague, Ranking Member Tillis, on solutions that will allow us to both think critically about the important role IP plays in our national security and our economy and to address some of the critical ways in which our own IP system has been weakened in recent years.

Members can submit questions for the record for the witnesses due at 5 p.m., 1 week from today, on April 25th. I know the Ranking Member has a number he intends to submit. Any other closing comment? Senator Tillis.

Senator TILLIS. Yes. And actually, we may be able to make that easier rather than having you all respond to the written questions, we can just get on a conference call. Maybe we'll do that, and submit some other ones where you don't have an immediate response.

But I really do—I just had to step out briefly for an interview, and surprisingly, it was about China. It was about TikTok, actually, and the exploitation of the Chinese Communist Party of about 120 million—potential exploitation of 120 million U.S. citizens who are users of TikTok—a third of our country. And I really believe that that idea of the whole-of-Government when it comes to enforcement, when it comes to commerce, that we need to sit down and stop playing checkers and start playing Go.

The Chinese Communist Party is extraordinarily sophisticated. And we are playing an old game and old rules. And we have to think creatively about how we can—in an area like this where we have bipartisan consensus, as we often do in the IP Subcommittee, we need the best minds and perspectives on what actions we need to take. And we look forward to your continued engagement. Thank you all for being here.

Chair COONS. I agree. I look forward to working with you, Senator Tillis. I agree. We need to change the narrative about American intellectual property but we also need to change the trajectory, coordination, enforcement, and taking the initiative. I look forward to our next hearing and with that, this hearing is adjourned.

[Whereupon, at 4:04 p.m., the hearing was adjourned.]

[Additional material submitted for the record follows.]

APPENDIX

ADDITIONAL MATERIAL SUBMITTED FOR THE RECORD

Witness List
Hearing before the
Senate Committee on the Judiciary
Subcommittee on Intellectual Property

"Foreign Competitive Threats to American Innovation and Economic Leadership"

Tuesday, April 18, 2023
Dirksen Senate Office Building, Room 226
2:30 p.m.

Mark Cohen
Asia IP Project Director, Berkeley Center for Law & Technology
University of California Berkeley School of Law
Berkeley, CA

Patrick Kilbride
Senior Vice President, Global Innovation Policy Center (GIPC)
U.S. Chamber of Commerce
Washington, D.C.

Matthew Turpin
Visiting Fellow, Hoover Institution
Senior Advisor, Palantir Technologies
Washington, D.C.

Suzanne Harrison
Founder and Principal, Percipience LLC
Chair, Patent Public Advisory Committee
San Francisco, CA

Statement of Mark A. Cohen, Director and Distinguished Senior Fellow

Berkeley Center for Law and Technology

University of California, Berkeley Law School

Engaging and Anticipating China on IP and Innovation

Before the Senate Committee on the Judiciary, Subcommittee on Intellectual Property

hearing on

Foreign Competitive Threats to American Innovation and Economic Leadership

April 18, 2023

Chairman Coons, Ranking Member Tillis, Members of the Senate Judiciary Committee, staffers and guests, it is an honor and a pleasure to appear before the Senate today on the important issues confronting the US government in addressing intellectual property protection in China.

My topic today is on *Engaging and Anticipating China on IP and Innovation*.

By way of background, I had worked for nearly 15 years at the USPTO and the State Department on China intellectual property issues, and have over forty years of experience studying and practicing Chinese law and IP law.

During my tenure at USPTO, I helped to restructure many aspects of how the USPTO engages with China. These included establishing a USPTO presence at the US Embassy in China as the first USPTO IP Attaché appointed to handle IP issues in a foreign country, creating a position of Senior Counsel for China in the Office of Policy and International Affairs, establishing an IP Resource Center to provide empirical research support for policy initiatives, and participating in nationwide China IP roadshows to educate US businesses.

I am a recipient of the Meritorious Honor award from President Trump for my work on technology transfer with China, and a Gold Medal Award for promoting rule of law through intellectual property from former Commerce Secretary Gutierrez, which are the highest awards that can be given by the President or the Secretary, respectively. I participated actively in the two cases filed by the United States at the WTO against China. The State Department has rated my Chinese language ability as sufficiently proficient to serve as a translator for the US government.

After leaving the USPTO in 2018, I joined the law faculty at the University of California at Berkeley as Distinguished Senior Fellow and Director of its Asian Intellectual Property and Technology Project. I teach the only comprehensive class in North American on intellectual property law in China, in addition to organizing courses and conferences on international trade,

technology transfer, antitrust and related issues. Outside of these efforts, I also established a Track II Dialogue with China on IP issues under the leadership of Patrick Kilbride and the US Chamber of Commerce, which continues to this day. I also maintain a blog www.chinaipr.com, which you are cordially invited to subscribe to.

I have received numerous private sector awards from organizations such as PhRMA, the US Chamber of Commerce, and the National Law Journal for my work on intellectual property issues in China. In addition to my role at UC Berkeley, I am a member of the National Committee on US-China Relations, an advisory board member of the Aisia Society of Northern California, and a non-resident fellow at: the University of California-San Diego; the National Bureau of Asian Research; the Sunwater Institute; and the Hinrich Foundation. I also have helped draft, and continue to serve, on numerous white paper projects advising course corrections in different aspects of US China technology and trade policy.

Of course, the opinions I express here are my own.

I. Background to the China Challenge

I would like to begin with an explanation of why we continue to know so little about China's IP system. These deficiencies in our knowledge sources also highlight some of the pathways that are available to developing sounder policy.

A. *The Chinese system is dominated by Chinese parties, with foreigners playing an increasingly small role.*

Sadly, many Americans assume to this date that our frustrations are due to our robust involvement in China's IP legal regime. That is simply not the case.

According to official Chinese data, foreign related litigation has long hovered at below 1% of the total. Unlike the USPTO, where foreign applicants are at a rough parity with domestic applicants, Chinese companies and individuals dominate China's patent and IP regimes in all areas. For some types of patents, foreigners file less than 1% of the applications. The consequence of this lopsided arrangement is that foreigners surprisingly know very little about how the Chinese IP system works in practice.

As one example, only about 5 of 621 reported trade secret cases over the past 10 years involved a foreigner as plaintiff, which is about in line with the overall foreign role in IP litigation in China.[1]

This low utilization of the Chinese civil legal system, however, is not indicative of all aspects of China's IP regime. Historically, foreigners actively used China's extensive administrative enforcement regime for trademarks to curtail local infringement activity. In addition, foreigners

[1]Jyh-An Lee, Jingwen Liu, and Haifeng Huang, *Uncovering Trade Secrets in China: An Empirical Study of Civil Litigation from 2010 to 2020,* 17 J. INTELLECTUAL PROP. L. & PRACTICE, at p. 21 (2022), available at: http://dx.doi.org/10.2139/ssrn.4225187, at p. 21.

disproportionately utilize China's court system to bring administrative challenges to final patent and trademark office decisions. We cannot therefore say that whole legal system lacks the confidence of foreign rightsholders.

Low utilization necessarily leads to limited experience and knowledge of the Chinese IP system. One way of addressing the problems caused by low utilization would be to create an ex parte remedy in the United States for trade secret misappropriation or other forms of infringement undertaken by foreign agents. Another, long standing tool, is to conduct a Section 337 investigation to exclude infringing products from entering the United States market. If the infringer is physically located in the United States, conventional IP infringement litigation can also bring some measure of success.

In an ideal world, one would want to stop infringing activity that affects domestic and global markets efficiently by suing to stop manufacturing or sales at the source. During the past several years, many companies have sought to bring litigation outside of China, rather than uitilize the Chinese system perhaps out of lack of experience or concern about its inherent unfairness.

Among the alternatives to bringing litigation in the United States or China, I am concerned that creating an ex parte remedy without requiring that the litigants first try to resolve their matter through legal procedures in the United States, China or elsewhere does little to advance the Chinese IP system. Moreover, the data that we have on certain aspects of China's IP regime is often inadequate to reach a determination that the current system is necessarily ineffective. This is especially true of trade secret litigation. In the Phase 1 Trade Agreement, China committed to reverse the burden of proof in trade secret civil cases by imposing a burden of disproving misappropriation on the accused infringer after the plaintiff has made out a prima facie case of "a reasonable indication" of trade secret misappropriation. Although initial indications are that this system is working well, we still need to wait to fully confirm that this system is working fairly.

I believe that a better approach with respect to trade secret protection and similar sources of frustration would be to encourage utilization of available legal remedies in China (including the improvements mandated by the US-China Phase 1 Agreement), closely monitoring the outcome of these cases by the US government as well as non-governmental actors (such as the Track II Dialogue), requiring publication of decisions, providing for more effective US legal remedies, and consultation with the Chinese government or bringing a WTO case when there is a miscarriage of justice.

I am not saying that ex parte remedies are always ill-advised, only that they should be a last resort and they should not take the place of utilization of the legal system.

I should note that the Track II Dialogue that I have been involved in, has been instrumental in helping to address some long-standing IP issues in China, including helping Michael Jordan to

obtain trademark protection for his brand, ensuring copyright protection for sports broadcasts and advancing a pharmaceutical patent linkage system.

B. *China has a very limited presence of US IP service providers in China, including US lawyers and IP experts.*

According to USPTO data, in China today there are only 39 enrolled patent agents and attorneys from USPTO resident in China.[2] China-based US patent agents constitute about 0.078% of the 49,932 USPTO-admitted patent attorneys and agents (36,701 attorneys, 13,231 agents).[3] This number is also low in comparison to the legal profession generally. By comparison, there are 2,868 New York-admitted attorneys who are resident in China, out of 314,712, or about 0.86% of attorneys admitted in New York State. New York State-admitted lawyers account for nearly 74 times more lawyers in China than the number of USPTO-enrolled patent lawyers, and over 10 times more as a percentage compared to the total number of registered attorneys in New York State when compared to USPTO.[4] To further underscore the limited role played by these 39 US IP professionals in China, there are 61,909 recorded trademark agencies, and 10,614 recorded law firms at China's patent and trademark office.

The small presence of American patent agents and attorneys in China contributes to the limited knowledge of China's IP regime, on the group experience of China's IP regime and is typical of other low levels of resident professional engagement on China-related IP issues. For example, in 2013 US inquiries into the Chinese patent office Chinese language database constituted only 0.95% of total inquiries, or about one eleventh of European inquiries.

On a positive side, due to the limited presence of US IP practitioners in China, the USPTO IP Attaché program, with offices in Beijing, Guangzhou, and Shanghai, is of critical importance to US companies trading with or operating in China. I am proud of the support that has been received for that office, as well as of the USPTO China team, which consists of over 20 professionals with over 200 years of collective experience on Chinese IP matters. I urge the Senate to continue supporting this important effort.

C. *The most important reason is a lack of transparency*.

Transparency is the biggest missing tool in our China IP arsenal. Increased transparency by China would enable rightsholders themselves to take steps to protect their own interests. It would permit the US government to make more informed policy decisions. It would also ensure accountability by IP agencies, the courts, and government institutions. To my great dismay, the Phase 1 Trade Agreement did nothing to improve transparency in China's IP regime. The Phase 1 Agreement effectively left it to the US government to monitor the IP aspects of

[2] https://oedci.uspto.gov/OEDCI/practitionerSearchEntry.
[3]. *New York State Registered Attorneys*, OPENGOVNY https://opengovny.com/attorney [https://perma.cc/TQ8J-8F7C] (last visited: Dec. 20, 2022).
[4] *See* PAR, *supra* note 143.

that agreement. However, neither USTR nor the USPTO can file patents or bring civil litigation on behalf of US rightsholders, and government to government relations between the United States and China are currently difficult to sustain. Moreover, the overwhelming majority of IP enforcement in China is not brought by the government, but by parties suing one another. Transparency is critical because we need to ensure that our companies have the right tools and the right information.

Notwithstanding problems with transparency, business surveys generally show that most US companies are satisfied with China's IP regime, with only a minority claiming unfair treatment.[5] There have also been reports of notable improvements in civil enforcement in many contentious areas. For example, Microsoft achieved "win rates" of 100% in the 63 software piracy cases filed between 2010-2019.[6] Academics and professionals have also reported on high win rates in trademarks and patent litigation. Prof. Bian Renjun at Peking University estimated that the "win rate" in the overall civil patent docket for foreign patent litigants was 80%, while the injunction rate was 90%. These win rates for foreigners are higher than for Chinese litigants in China. Damages for foreign patent litigants in China during the period that she studied, although small, were three times higher than for domestic litigants.[7] There have been numerous other studies documenting these trends.

Here is what some of the data looks like across a range of IP rights, as analyzed by different scholars:

[5] *See* AmCham China, 2023 China Business Climate Survey Report, fig. 40 (19% of respondents claimed unfair treatment by China's IP regime); fig. 57 (21% of respondents claimed that insufficient protection of intellectual property is a barrier to innovation); fig. 60 (36% of respondents report an improvement in intellectual property); fig. 61 (49% of tech and R&D respondents report that intellectual property concerns are limiting their investments in China).

[6] Mark A. Cohen, *An Update on Data=Driver Reports on China's IP Enforcement Environment*, China IPR (July 13, 2020), https://chinaipr.com/2020/07/13/an-update-on-data-driven-reports-on-chinas-ip-enforcement-environment/.

[7] *Id.*

Table 3: Comparison of win rates for selected foreign software copyright plaintiffs (1st instance, 2010-2019, N= 271)

Company Name	Cases	Wins	Win rate
Rhino Software Company	113	83	73.5%
Alt-N Technologies	67	58	86.6%
Microsoft Corporation	63	63	100.0%

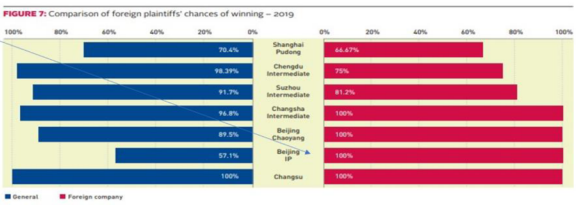
Company Name	Cases	Wins	Win rate
Siemens Product Lifecycle Management Software Inc	12	12	100.0%
Autodesk, Inc	10	10	100.0%
Dassault Systèmes	6	6	100.0%

How Good?

"In 2015 (the most recent year that complete data is available) Plaintiffs in Civil IP infringement cases [at the Beijing IP court] won 72.34% of their cases, while the success rate for foreign plaintiffs was 100% across a total of 63 civil cases , prompting foreign firms to reevaluate their prospects in China's civil IP litigation environment." (Goldberg)

Trademarks

Sources: Bailey and Clark (2020), Goldberg (2017), Xia (2020) .



In addition to these empirical studies, there are numerous other positive, well-documented examples from big companies[8] and small.[9]

On the other hand, due to a lack of systemic transparency, it remains difficult to assess objectively how much foreign companies may be disadvantaged by China's IP regime. The problem of unpublished or censored cases haunts any analysis.

For example, certain major cases, such as the largest patent judgment in China, involving Schneider Electric as a defendant, have never been reported. Another major decision that was not reported involved the granting of a preliminary injunction in a patent dispute against Veeco, a United States semiconductor manufacturing equipment supplier, at the request of AMEC, a pillar of China's efforts to achieve independence in the semiconductor sector.[10] China's vast administrative enforcement system, which authorizes its IP agencies to issue fines and order a cessation of infringement, is highly opaque. Most of the patent linkage litigation in China to date has been through that opaque administrative system. These opaque actions by

[8] See statement of Sharon Barner in "Fact and Fiction in US-China Intellectual Property Trade War" (Oct. 8, 2020) https://asiasociety.org/northern-california/events/webcast-fact-and-fiction-us-china-intellectual-property-trade-war. Ms. Barner is Vice President and Chief Administrative Officer of Cummins, Inc., and was the former Deputy Director of the USPTO.

[9] See Marketplace, Episode 900: The Stolen Company (March 15, 2019), concerning Abro Industries, Inc. https://www.npr.org/sections/money/2019/03/15/702643451/episode-900-the-stolen-company.

[10] Mark A. Cohen, *Semiconductor Patent Litigation Part 2 – Nationalism, Transparency and Rule of Law*, (July 4, 2018), https://chinaipr.com/2018/07/04/semiconductor-patent-litigation-part-2-nationalism-transparency-and-rule-of-law/.

China in high profile cases have had the impact of driving out the good news about the improvements in China's IP regime and impeding objective analyses about China's IP system.

In my view, insufficient transparency on IP cases is the single biggest problem in US-China IP relations. Transparency is often adversely affected by bilateral developments. For example, publication of IP cases stopped during the recent trade war, as this chart demonstrates:

US IP Cases Published inChina (2014-2019)
Jan 2014-June 2019 (purple is patents, left is numbers of cases published)

Source: Iphouse.cn

II. China's Challenge to the US IP Dominance and Its Potential Consequences

A. China's Growth as a Peer IP System

China today presents a peer-level economic and security threat both in terms of its ability to innovate and of its military and economic strength. Concerns over economic espionage, hacking and other forms of IP theft are real. However, the risks they pose have often been misapprehended, which has often led to misplaced priorities.

Unlike most market-based economies, China's economy is governed by industrial policies. These policies typically govern the full range of legal, social and economic issues in IP, including brand development, development of copyright industries, technological development, standards essential patents, and even certain aspects of China's legal infrastructure. Industrial policies may be adopted at national, provincial and local government levels. In recent years, American officials have paid particular attention to such policies as Made in China 2025.

However, there are a host of other industrial policies. In addition, there are often specific policy goals related to IP, which typically are linked to number of domestic or foreign patents per 10,000 people, or numbers of trademarks per 10,000 enterprises. The scale and breadth of China's use of industrial policies to develop its intellectual property system are often difficult for Americans to comprehend as we expect that IP to be fully market oriented. In fact, the TRIPS Agreement in tis preamble characterizes IP as a private property right. China, however, has a long history as incorporating IP into its national development plans with an active role ofr the state in the procurement, management and enforcement of intellectual property.

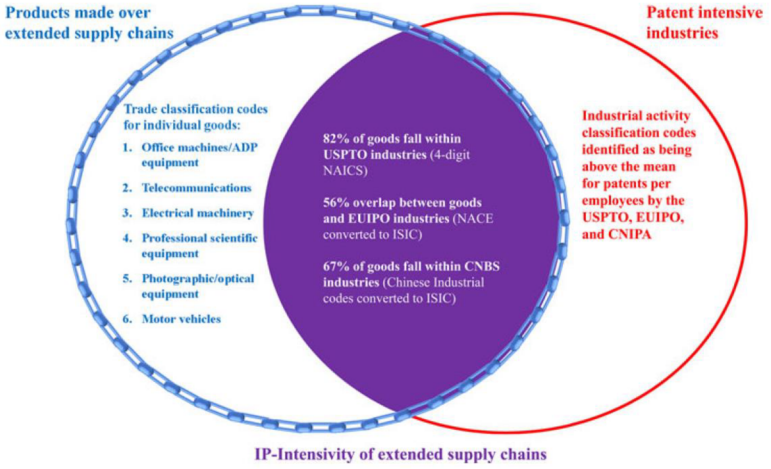
As part of its intellectual property development goals, China has also developed a leading-edge national system of IP tribunals and courts, with over 2,000 IP judges, many of them trained at specialized IP law faculties, and a nationwide annual court docket of about 600,000 civil cases last year. The Chinese patent and trademark office also receive applications that are several multiples of those received by USPTO. China has looked at the US IP judicial system, including the role of our Federal Circuit, and developed its own nationwide system of IP tribunals and courts. China has also recently elevated the role of its patent and trademark office, the China National IP Administration (CNIPA), to a State Council level agency. This is roughly equivalent to CNIPA becoming a cabinet-level agency. IP has also been incorporated into industrial planning, including a national IP strategy, but also in metrics and expectations for a wide range of national and local industrial policies. China has undertaken major revisions several times over the past 20 years to all its IP legislation, including to related laws such as the Civil Code, Criminal Code and Civil Procedure Law, to ensure that its laws respond to China's changing economy and changing technologies and to ensure that its laws implement national industrial policy goals.

Among other indications of the domestic importance of intellectual property, leading Chinese IP judges and officials have been elevated to the highest rank of Chinese political society, including serving as justices of China's Supreme People's Court. China's leadership routinely is briefed on and gives speeches on intellectual property in China. Unlike the United States, where the general direction has been to progressively restrict the granting and exercise of IP rights, China has also generally favored more liberal granting of rights and more deterrent remedies over the last several years.

The consequences of these changes in China's domestic system are observable in many aspects of China's society, including in the increasing sophistication of China's courts. In certain areas of the law, such as AI and copyrightability, molecular markers for plant variety protection, use of AI and other tools to detect online infringement, and the use of civil remedies to address bad faith trademark registrations, I believe that China has the *potential* to be the on leading edge of IP developments in the world. China's politicization of the judiciary and transparency concerns makes such a leading role much less likely in many areas.

China has also continued to use free trade agreements to advance IP protection in its own interests, including the Regional Comprehensive Economic Partnership Agreement (RCEP), as

well as by expressing a desire to join the Comprehensive and Progressive Agreement for the Trans-Pacific Partnership (CPTPP), which had originally been launched by the United States. China has also expanded its IP system to provide for better protection across its supply chain. In addition to RCEP, China has launched a specialized IP court in Hainan intended to handle disputes arising from its trading partners, and has also shown an increasing interest in become a center for global intellectual property litigation. China's view that IP protection is critical to supporting stable extended supply chains is supported by research that we have undertaken at Berkeley, which shows a close correlation between the extended supply chain products and their IP-intensity. Although it may be politically unpopular to say this in Washington, DC, I believe that we should consider new forms of free trade agreements with our trading partners to ensure greater reliability of these supply chains, which would include support for their IP systems to mitigate risks of IP theft, and to encourage greater reliability in cross-border manufacturing of critical goods and materials.



(Source: Mark Cohen and Philip Rogers, "When Sino-American Struggle Disrupts the Supply Chain: Licensing Intellectual Property in a Changing Trade Environment" (World Trade Review, 2020))

B. Inclusiveness of the Chinese IP System

In terms of accessing the inclusiveness of the IP system, during my tenure at USPTO, former Director Michelle Lee and I had convened a program in Beijing on women and inventorship that was hosted by Columbia University. I believe the US attendees were all pleasantly surprised to learn of the active role enjoyed by Chinese female patent examiners, scientists, and patentees

in China's innovation system. In fact, China has long conducted extensive outreach on IP issues to a range of stakeholders, including individual inventors to supports its national goals of encouraging mass innovation and reduce barriers to access by less wealthy communities to the IP system. Generally, the small inventor cohort of China's IP system is significantly larger in absolute and percentage terms than that of the United States.

I also strongly support the IDEA Act as a positive step in making the IP system more accessible to minority communities and enhancing US innovative capacity. I am less sure that these disclosures by themselves are sufficient to both increase the inclusiveness of the US IP system and address the competitive challenges posed by China.

To address the challenges posed by non-market support of intellectual property filings and litigation, I also believe that Congress should consider mandating disclosure concerning foreign government funded or subsidized patents or trademarks, or subsidized IP litigation. [11]

We currently require such disclosure of recipients of US government grants under the Bayh-Dole Act. Additional disclosure requirements would be helpful to better address risks posed to our IP agencies and courts. We also need to require disclosures for trademark applications due to their demonstrated ability to disrupt US government operations through subsidized applications.[12] This information is essential to anticipating threats posed by subsidization and other distortionary programs of foreign governments, including China.

D. The Challenge of IP Theft

During the past several years, we have heard repeatedly that this "IP Theft" costs the United States 600 billion dollars per year. Stephen S. Roach, who was formerly Chief Economist at Morgan Stanley, criticized these loss figures as "rest[ing] on flimsy evidence derived from dubious 'proxy modeling' that attempts to value stolen trade secrets via nefarious activities such as narcotics trafficking, corruption, occupational fraud, and illicit financial flows. The Chinese piece of this alleged theft comes from US Customs and Border Patrol data, which reported $1.35 billion in seizures of total counterfeit and pirated goods back in 2015."[13] I have also criticized the sources of this data and how it has been manipulated over time.[14]

Part of the challenge of quantifying losses due to IP Theft is that "IP Theft" does not typically encompass only intellectual property, nor does it necessarily address thievery. According to the FBI, IP Theft "focuses on the theft of trade secrets and infringements on products that can impact consumers' health and safety, such as counterfeit aircraft, car, and electronic parts."

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[11] Bob Goodlatte, *State Attorneys General Raise Concerns About Threats Raised by Litigation Funding,* Patent Progress (Jan. 18, 2023), https://www.patentprogress.org/2023/01/state-attorneys-general-raise-concerns-about-threats-posed-by-litigation-funding/.

[12] U.S.-China Econ. Sec. Rev. Comm'n, 2022 Report to Congress, at 177.

[13] Stephen Roach, America's False Narrative on China, *Project Syndicate* (April 26, 2019), https://www.project-syndicate.org/commentary/america-false-china-narrative-by-stephen-s-roach-2019-04 .

[14] https://chinaipr.com/2019/05/12/the-600-billion-dollar-china-ip-echo-chamber/.

This definition would exclude copyright and patent infringement, as well as other actions by the Chinese government that could force technology transfer.[15] In addition, the definition fails to take into account other mechanisms used by governments such as China to reduce the value of intellectual property, such as by restricting market access for copyrighted content, restricting insurance reimbursements for innovative medicines, aggressive use of antitrust, and licensing or regulatory barriers.

The U.S. International Trade Commission, in a well-researched report, China: Effects of Intellectual Property Infringement and Indigenous Innovation Policies on the U.S. Economy, (2011)[16] calculated these losses quite differently. It estimated that the theft of U.S. IP from China alone was equivalent in value to $48.2 billion in lost sales, royalties, and license fees for 2009. Of the $48.2 billion in total reported losses, approximately $36.6 billion (75.9%) was attributable to lost sales, while the remaining $11.6 billion was attributable to a combination of lost royalty and license payments as well as other unspecified losses. The number or reported losses is still significant but it is also much less than estimates of $600 billion dollars or more in annual losses.

In addition to methodological issues, the current focus on "theft" of IP also does not align well with how intellectual property is formally enforced in China, the United States and throughout the world. Intellectual property, as a private property right, primarily relies upon civil remedies.[17] The United States does not have a criminal patent remedy. The WTO does not require criminal trade secret remedies of its members. Civil or criminal prosecution of trade secret cases are difficult both in the United States and in China. Characterizing problems as "theft" also does not fully address forced technology transfer for foreign investors, restrictive market access requirements, and many forms of IP infringement.. In fact, a focus on public law remedies such as antitrust and criminal enforcement generally supports more state management of intellectual property, which is a strength of the Chinese system. We need to encourage China to protect IP as a private property right.

E. Self-Strengthening

As a first step to ensure our technological edge, we need to fill vacant positions, including an IP Enforcement coordinator in the White House. We also need a Deputy USTR for Innovation and Intellectual Property. I believe that we also need a Deputy Director for International Affairs to assist the Director of the USPTO and elevate the importance of the USPTO in international negotiations involving intellectual property. Currently the PTO Director is assisted by only one

[15] FBI, Intellectual Property Theft, https://www.fbi.gov/image-repository/ipr-500.jpg/view#:~:text=It%20specifically%20focuses%20on%20the,%2C%20car%2C%20and%20electronic%20parts.
[16] https://www.usitc.gov/publications/332/pub4226.pdf.
[17] *See* Mark A. Cohen, *The Criminal Bias in US Intellectual Property Diplomacy*, the National Bureau of Asian Research (July 22, 2021), https://www.nbr.org/publication/the-criminal-bias-in-u-s-intellectual-property-diplomacy/.

Deputy Director, which is not enough for the front office to focus on international concerns and to interact with the interagency at a sufficiently high political level.

Here are some additional steps that should be considered:

1) Permitting non-competes in an international context. The proposed FTC rule banning non-compete agreements, in my view, could have serious negative implications for protection of US trade secrets overseas, including in China. As I noted in my comments to the FTC on non-compete agreements (attached here), a party seeking relief from trade secret misappropriation in China is more than twice as likely to win if the employee has signed a non-compete agreement. Success rates for enforcing non-compete clauses are approximately 66%, while success rates were 32.4% for trade secret misappropriation cases in first instance cases.[18]

US employers should be able to craft non-compete agreements in compliance with foreign law without violating any final FTC rule.

2) Limiting 28 USC 1782 to minimize IP misappropriation by foreign countries

The Judiciary Committee should consider revising 28 USC Section 1782, which provides evidentiary assistance to foreign and international tribunals and to litigants before such tribunals by US courts. Congress should insist that foreign courts or litigants seeking access to US-produced evidence should prove that they are able to provide equivalent protections to confidential information as US courts. Currently, Section 1782 poses a risk of legalized trade secret misappropriation by foreign countries.

3) Revisiting Section 101 based on competitive impact

During the years when the United States sought to better "balance" our IP system through restricting patent-eligible subject matter in such areas as software enabled inventions, AI, fintech, biotechnology and medical diagnostics, China was taking contemporaneous steps to strengthen its system to expand eligibility through amendments to its examination guidelines. Patent applications have been refused by the USPTO as being ineligible under Section 101 but granted in China and/or Europe.[19] The declining scope of patent eligible subject matter has affected US competitiveness with other countries, created instability in our patent system, and potentially affected follow-on investment. As I discuss in my comments on the FTC non-

[18] *Compare* Hui Shangguan, A Comparative Study of Non-Compete Agreements for Trade Secret Protection in the United States and China, 11 WASH. J.L. TECH & ARTS 405 (2016) (looking at all final Chinese judgments on non-compete cases decided by intermediate or higher courts from March 2014 to February 2015 and finding "[t]hirty-six of these cases were related to the validity of the non-compete; twenty-four of which were regarded by courts as 'valid and enforceable.'" In other words, two out of three non-compete cases were held to be "valid and enforceable" by Chinese courts).

[19] Kevin Madigan and Adam Mossoff, *Turning Gold to Lead: How Patent Eligibility Doctrine Is Undermining U.S. Leadership in Innovation*, 24 GEO. MASON L. REV. 939 (2017).

compete rule, it also encourages innovators to rely on trade secrets in the United States which may thereafter be subject to trade secret misappropriation overseas.

I encourage this Subcommittee to investigate the impact of Section 101 jurisprudence on international competitiveness and to undertake appropriate reform efforts in the context of its consideration of the Patent Eligibility Restoration Act.

4) Reviewing eBay based on erosion of the United States as a destination for cross-border litigation.

The Supreme Court's decision in *eBay Inc. v. MercExchange* (2006)[20] limiting injunctive relief in US IP cases has made the United States a much less attractive destination for cross-border IP litigation involving China. Injunctive relief is available in nearly all cases to successful litigants in IP cases in China. Moreover, the recent deployment of China's social credit system has greatly increased compliance with Chinese judgments ordering injunctions. Greater availability of injunctive relief, such as is proposed in the Stronger Patents Act is an important step in the direction of providing meaningful protection for IP. In that context, I urge the Senate to consider the impact of eBay on litigation strategy for cross-border infringement, including the availability of injunctive relief against state-sponsored infringers.

5) Developing Better Data Tools.

As my colleague and friend Suzanne Harrison will shortly discuss in this hearing, the US government should develop and implement tools like those that our competitors are using to anticipate future technological developments.[21] The adoption of Future Oriented Technology Assessments and related tools as applied to civil technologies can be especially critical when possible security threats are posed to the United States by "civil-military fusion." These analytical tools can also assess competitive risks from China in emerging technologies that are of concern to US economic and national security. USPTO, with the most extensive resources on all varieties of civil technology, is well-positioned to make a significant contribution to such an effort.

With this data in hand, Congress should also actively encourage the USPTO, as an expert agency in civil technology, to become more involved in assisting on trade and economic sanction determinations.

III. Conclusion: We Need to Reimagine IP and Technology and How We Understand China

We need to reimagine technology and IP for a new technological era. We need to undertake a major strategic effort to sustain our technological and intellectual property advantages. We need to vastly improve our responses to the challenges of China's IP system.

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[20] *eBay Inc. v. MercExchange, LLC,* 547 U.S. 388 (2006).

[21] Jeanne Suchodolski, Suzanne Harrison, and Bowman Heiden, *Innovation Warfare*, 22 N. C. J. L. & Tech. 175 (2020).

In this context, I regret to inform this subcommittee that my educational and research efforts on Chinese IP matters at Berkeley have been defunded effective September 30, 2023. After this semester, I do not know if another similar effort will be offered at a North American law school.

Thank you for your invitation to speak here today, and I look forward to your questions.

Sincerely,

Mark A. Cohen

APPENDIX

Comments of Mark A. Cohen

Director and Distinguished Senior Fellow

Berkeley Center for Law and Technology

University of California, Berkeley Law School

"The Federal Trade Commission's Notice of Proposed Rulemaking on

A Non-Compete Clause Rule and Its International Impact"

These comments are respectfully submitted by the undersigned in his personal capacity in response to the January 5, 2023, Federal Trade Commission (FTC) Notice of Proposed Rulemaking (NPRM) on a Non-Compete Clause Rule.[22]

I am a former career US government official who led the China intellectual property team at the US Patent and Trademark Office and served at the US Embassy in Beijing as its first IP Attaché. I currently teach Chinese intellectual property law at UC Berkeley, where I serve as Distinguished Senior Fellow at the Berkeley Center for Law and Technology, and I direct the law school's Asia Intellectual Property Law Project. I have no personal commercial interest in this rulemaking, nor am I currently subject to any form of non-compete agreement.

I take no position in these comments on the impact of the NPRM on domestic competition in labor markets in the United States. These comments are directed exclusively to the NPRM's failure to consider the international consequences of a nationwide ban on non-compete agreements.

In my view, the FTC should promptly consider issuance of another NPRM directed to the international consequences of its proposed rulemaking. The current proposed rule would seriously undermine US trade secrets protection and compromise economic security internationally in three related ways: (a) by facilitating large-scale misappropriation of trade secrets by China or other hostile economic competitors, (b) by impairing the global innovation position of the United States, and (c) by impairing the ability of the United States to achieve its goals in semiconductor self-sufficiency. These issues are discussed, in seriatim, below.

(A) Non-Compete Agreements and Trade Secret Protection in China

The FTC's focus on domestic competitive consequences in the NPRM has led it to conclude that it "is not aware of any evidence [that] non-compete clauses reduce trade secret

[22] Notice of Proposed Rulemaking, Non-Compete Clause Rule 88 Fed. Reg. 3482 (Jan. 19, 2023) (to be codified at 16 C.F.R. § 910 (2023) (hereinafter, NPRM).

misappropriation or the loss of other types of confidential information."[23] At least with respect to the protection of United States trade secrets in China, there is both qualitative and quantitative evidence to the contrary.

It is well-understood by Chinese judges, legal practitioners, and academics that a well-drafted non-compete agreement can be of critical importance to protecting trade secrets in China and many other regions of the world.[24] This assumption has been supported by the experience of numerous judges and attorneys in protecting trade secrets in China, by surveys among various jurisdictions in the world,[25] as well as by limited but important empirical data.

The use, in China, of non-compete agreements to protect trade secrets is well-acknowledged as a critical tool to protect technological trade secrets. Cao Jianming, a former Justice of China's Supreme People's Court who later became Supreme People's Procurator (Attorney General), stated in 2005 that trade secret enforcement was the area with the "greatest difficulties" for the courts. A major Chinese treatise on judicial protection of trade secrets written by several of China's most prominent intellectual property judges, including Kong Xiangjun (China's former Chief IP Judge), has noted that a non-compete agreement has a "utility when compared to other common measures of protecting trade secrets that is especially strong" and that it also "reduces the litigation burden" on the parties.[26] Benjamin Bai, a well-known China intellectual property lawyer, has similarly noted that "[e]nforcement of non-compete [agreements] is much

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[23] NPRM, p. 92.

[24] *See* Catherine L. Fisk, *Working Knowledge: Trade Secrets, Restrictive Covenants in Employment, and the Rise of Corporate Intellectual Property,* 52 HASTINGS L.J. 441 (2001); Jay D. Marinstein and Carl J. Rycheik, *Strengthening Your Clients' Non-Compete Agreements: Important Checkpoints*, Allegheny County Bar Association's Lawyers Journal, Oct. 12, 2007, at p. 7, available at https://www.foxrothschild.com/jay-d-marinstein/publications/strengthening-your-clients%E2%80%99-non-compete-agreements-important-checkpoints (regarding careful drafting of key provisions of agreements); Marisa Anne Pagnattaro, *The Google Challenge: Enforcement of Noncompete and Trade Secret Agreements for Employees Working in China*, 44 AM. BUS. L.J. 603 (2007) (hereafter "The Google Challenge"); Marisa Anne Pagnatarro, *Protecting Trade Secrets in China: Update on Employee Disclosures and the Limitations of the Law*, 45 AM. BUS. L.J. 399 (2008).

[25] Association of Corporate Counsel, Multi-Country Survey on Covenants not to Compete (2018), available at https://www.gtlaw.com/en/-/media/files/insights/alerts/2018/3/gtnoncompeteeuroinfopak.pdf; World Law Group, Global Guide to Non-Competition Agreements (Oct. 2018), available at https://www.theworldlawgroup.com/writable/documents/news/119001_118937_P1623-WLG-Non-Competition-Guide-2-TD-V3.pdf; DLA Piper, Post-Termination Restraints, available at: https://www.dlapiperintelligence.com/goingglobal/employment/index.html?t=15-post-termination-restraints; Meritas, Guide to Employee Non-Compete Agreements in Europe, Middle East and Africa (2017), available at: https://assets.website-files.com/5fed988aacad01db88e78ec3/600ed66aa9f70329ab00ffee_80-dpc-meritas-guide-to-employee-non-compete-agreements-in-emea-2017-773.pdf; White & Case, Non-competes and other restrictive covenants in a foreign jurisdiction (2012), available at: https://www.lexology.com/library/detail.aspx?g=1f5a21c4-88bd-4de8-b9fa-97ff12e04849; Schneider Attorneys, Non-competition clause (Art. 2089 and 2095 of the Civil Code of Québec), https://schneiderlegal.com/labour-law/non-competition-clause/.

[26] Jianjun Yao, Zhongguo Shangye Mimi Baohu Sifa Shiwu (商业秘密司法保护实务) [Judicial Practice of Trade Secret Protection in China] 28, 238 (2012) , see also Mark Cohen, China's Judiciary Publishes Its Views on Trade Secret Protection (July 5, 2013), available at https://chinaipr.com/2013/07/05/chinas-judiciary-publishes-its-views-on-trade-secret-protection/.

more straightforward than misappropriation of trade secrets," including providing for "injunctions and damages."[27] An intellectual property consulting firm, Rouse, has similarly noted that, in 89% of the trade secret cases where the plaintiff prevailed, "there [were] one or more protective agreements in place, such as NDA's and confidentiality clauses in employment contracts."[28] Mary Pagnattaro, a professor at the University of Georgia's business school, in reviewing Chinese cases on trade secrets and non-compete agreements, has observed that "[t]aken together, these cases create some sense that Chinese courts will uphold noncompete and secrecy agreements. The cases underscore the importance of documenting steps to keep proprietary information secret. At a minimum, all employees with access to trade secrets should be required to sign agreements."[29]

A recently published study of Chinese trade secret protection by the University of Hong Kong law faculty has also noted that "non-competition clauses are now widely adopted by employers in employment contracts with core technicians and senior management—all in a bid to protect valuable trade secrets."[30] Academics and observers have also observed that "former management-level employees with access to proprietary know-how and confidential information are often lured to work for competitors in China."[31] Two attorneys from Rouse have observed that Chinese trade secret law, unlike Chinese practice involving non-compete agreements, "is more suited to addressing compensation after infringement has occurred, when the damage may be irrevocable." The likelihood of irreversible damage in trade secret enforcement in China is especially likely "[g]iven the rarity of preliminary injunctions to prevent damage from trade secret leakage before it happens." These attorneys based their conclusions on a case involving "white hot" lithium battery technology misappropriation.[32]

High labor mobility, in addition to fair restrictions on competition, may be responsible for China's success as an innovator in lithium batteries and other fields. Dan Wang has recently written in *Foreign Affairs* that it is "process knowledge," namely, "skills that can only be learned by doing," that "are part of what has helped China become a major tech innovator." Furthermore, in Dan Wang's view, "the rise of Shenzhen as a global tech center is itself a validation of process knowledge."[33]

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[27] Benjamin Bai, *Protecting Trade Secrets in China, Tips and Lessons Learned*, Allen & Overy (Apr. 2013), available at: https://www.uschina.org/sites/default/files/tradesecrets.pdf.
[28] CIELA, Trade Secret Litigation in China, Rouse, at p. 1, available at https://rouse.com/media/n5uadjtn/ciela-trade-secret-litigation-in-china.pdf (hereinafter "Trade Secret Litigation in China").
[29] The Google Challenge, *supra* n. 3, at p. 631.
[30] Jyh-An Lee, Jingwen Liu, and Haifeng Huang, *Uncovering Trade Secrets in China: An Empirical Study of Civil Litigation from 2010 to 2020*, 17 J. INTELLECTUAL PROP. L. & PRACTICE (2022), available at: https://dx.doi.org/10.2139/ssrn.4225187 (hereinafter Uncovering Trade Secrets).
[31] Daniel C.K. Chow, *Navigating the Minefield of Trade Secrets Protection in China*, 47 VANDERBILT L. REV. 1007, 1014 (2021).
[32] Sophia Hou and Chris Bailey, "Building a Trade Secret Barrier Through Non-Competition Agreements: A review of China's Leading Battery Maker's Suits Against Former Employees" (Dec. 20, 2022), available at https://rouse.com/insights/news/2023/building-a-trade-secret-barrier-through-a-non-competition-agreement.
[33] Dan Wang, *China's Hidden Tech Revolution*, 102 FOREIGN AFFAIRS 65, 71, 73 (2023).

Chinese data also demonstrates that a party seeking relief from trade secret misappropriation is more than twice as likely to win if the employee has signed a non-compete agreement. Success rates for enforcing non-compete clauses are approximately 66%, while success rates were 32.4% for trade secret misappropriation cases in first instance cases and 44.3% of the cases decided by appellate courts.[34] Success rates in trade secret cases litigated in Taiwan have historically been even lower. Before Taiwan amended its Trade Secrets Act in 2013, the plaintiffs' win rate at the trial courts was 24.8% in civil cases and 30.8% in criminal cases.[35]

As Benjamin Bai has noted, the "evidentiary burden for a plaintiff to bring a trade secret misappropriation case in Chinese courts is relatively high."[36] Generally speaking, China, like most civil law jurisdictions, does not utilize discovery procedures to compel production of evidence from an adversary. The lack of discovery makes it especially difficult to prove that an adversary has misappropriated a victim's trade secrets, and places additional burdens on plaintiffs unless the burdens of proof are reversed. Data that is easily and freely accessible from the popular Chinese IP litigation database www.ciela.cn shows that trade secret litigation in China has the lowest "win rate" of any IP right in civil litigation.[37] In China these historically low trade secret win rates may have been partially mitigated by recent amendments to China's Anti-Unfair Competition Law, which require that the plaintiff make a "reasonable showing that its trade secret has been infringed upon" and that the defendant thereafter prove that a trade secret does not subsist.[38] As these changes to China's law are recent and most trade secret cases are not published, it is difficult to determine at this time whether these changes in the law will improve plaintiff litigation outcomes. These difficulties in assessing the impact of recent legal changes are compounded by the low utilization by foreigners of China's civil trade secret litigation system. To date, only 5 civil cases of 621 published trade secret cases involved a foreigner as plaintiff.[39]

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[34] *Compare* Hui Shangguan, A Comparative Study of Non-Compete Agreements for Trade Secret Protection in the United States and China, 11 WASH. J.L. TECH & ARTS 405 (2016) (looking at all final Chinese judgments on non-compete cases decided by intermediate or higher courts from March 2014 to February 2015 and finding "[t]hirty-six of these cases were related to the validity of the non-compete; twenty-four of which were regarded by courts as 'valid and enforceable.'" In other words, two out of three non-compete cases were held to be "valid and enforceable" by Chinese courts) and Uncovering Trade Secrets, supra n. 9.

[35] Jyh-An Lee and Jerry G. Fong (李治安&馮震宇), Taiwan Yingye Mimi Chinhai Susong Zhi Shizhong Yanjiu (臺灣營業秘密侵害訴訟之實證研究) [An Empirical Study of Trade Secret Litigation in Taiwan], 216 TAIWAN L. REV. 151, 154 (2013).

[36] J. Benjamin Bai and Guoping Da, Strategies for Trade Secrets Protection in China, 9 NW. J. TECH. & INTELL. PROP. 351 (2011), available at https://scholarlycommons.law.northwestern.edu/njtip/vol9/iss7/1.

[37] For example, CIELA data demonstrates that for the cases it collected, trade secret litigation in China is won at a 54% rate compared to 77% for patents of all types, and 85% for copyright cases, https://www.ciela.cn/en/analysis. (research completed on March 1, 2023).

[38] Anti-Unfair Competition Law of the People's Republic of China (promulgated by the Standing Comm. Nt'l People's Cong., Apr. 23, 2019, effective Apr. 23, 2019) Arts. 32. Such reversals of burdens of proof in trade secrets are a rarity in global trade secret litigation.

[39] Trade Secret Litigation, supra n. 9 at p. 1; Uncovering Trade Secrets, supra n. 9 at p. 21.

Violation of non-compete agreements are a valuable alternative cause of action to trade secret litigation to mitigate deficiencies in civil procedure rules for litigating trade secret misappropriation in China. Another important use of non-compete agreements and non-disclosure agreements in China is that the courts use them to satisfy requirements that a company has taken necessary steps to protect trade secrets.[40]

Plaintiffs also run increased risks of secondary disclosure in trade secret cases through the release of their confidential information to the alleged perpetrator's counsel, witnesses, and experts. Non-compete clauses may not demand a similar disclosure of confidential information. Chinese practices regarding protection against secondary disclosure are also still comparatively non-developed. Dr. Li Chong, a scholar in Chinese law and procedure, was unable to find a single case involving protective orders in his study of confidentiality measures in Chinese civil litigation. Dr. Li further noted that "the standards for issuing protective orders in practice are relatively vague, and a unified view has not yet been formed."[41]

As an example of this vague judicial practice regarding Chinese protective orders, the Jiangsu High Court in 2021 issued the revised "Guidelines for Trade Secret Infringement Case Adjudication" (侵犯商业机密案件审理指南). These guidelines devote one scant paragraph (Art. 8.1) to the issuance of protective orders and may not apply outside of trade secret misappropriation cases. Most courts do not even have this type of limited guidance in place, nor are copies of case decisions on protective orders available. In fact, the Chinese government has recently taken the position at the World Trade Organization that "there is no such obligation… for China to respond" to a European request to produce interim "behavior preservation orders," which are similar to protective orders.[42] The United States government has joined in this case along with 18 other countries, as part of a formal WTO dispute initiated this year.[43]

Chinese trade secret cases risk involuntary secondary disclosure to local competitors, the government, or the Communist Party. These risks increase in judicial proceedings due to the

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[40] See, e.g., Guangzhou Tinci Materials Technology Co., Ltd et al. vs Anhui Newman et al, (2019) SPC Zhi Ming Zhong No.562 （广州天赐公司等与安徽纽曼公司等侵害技术秘密纠纷案[（2019）最高法知民终 562 号，最高人民法院）（listed as a typical case for punitive damages by the Supreme People's Court for 2021）; *Guilin Peizheng Culture and Languages Training School v. Li Lifei et al*., Guilin Intermediate People's Court, (2016) Gui 03 Min Zhong No. 109, (砼林市培正文化语言培训学校与桂林市斯坦教育咨询有限公司、李立飞侵害经营秘密纠纷二审民事判决书) （2016）(桂 03 民终 109 号).

[41] Li Chong, *Shangye Mimi Anjian zai Minshi Susong Jieduan de Baomiling Zhidu zhi Goujian – Yi Zhongmei Bijiaofa Yanjiu wei Shijiao* (商业秘密案件在民事诉讼阶段的保密令制度之构建—以中美比较法研究为视角) [The Construction of a Protective Order System in Commercial Secret Cases in Civil Litigation Stage– Based on the study of comparative law between China and the United States], Jingheng Research (2021) available at: https://mp.weixin.qq.com/s/AaZTtkwUEJzImzQnM3qDWw.

[42] Mark Cohen, China Responds to EU Article 63 Request (Sept. 8, 2021) available at: https://chinaipr.com/2021/09/08/china-responds-to-eu-article-63-request/.

[43] Dispute Settlement, China – Enforcement of intellectual Property Rights, WTO Doc. WT/DS611 (panel established on March 28, 2023). Information on this case is available from the WTO website at https://www.wto.org/english/tratop_e/dispu_e/cases_e/ds611_e.htm.

presence of judicial governing entities, "Adjudication Committees," in each court. Adjudication Committees are typically composed of senior judges and party officials who are authorized to review the evidence and make final decisions on cases. According to Susan Finder, a well-known expert on the Chinese judicial process, Adjudication Committees are also more likely to play a role in cases that are "sensitive, major, and difficult," including high-profile foreign IP cases.[44] Due to China's great interest in acquiring US technology, it would not be surprising if members of an Adjudication Committee took considerable interest in a US trade secret case in a technology area of concern to the Chinese government, such as semiconductor technology.[45] The risks of having to identify confidential information are more circumscribed if a plaintiff is only claiming breach of a non-compete agreement.

Studies such as those cited by the NPRM, which have sought to analyze the impact of non-compete agreements on trade secret protection in the United States, are primarily relevant to the circumstances prevailing in the United States and may have little relevance to determining how foreign litigants in China could protect their trade secrets. The United States legal system provides robust protection to trade secrets on a nationwide basis. The United States system also afford due process to all litigants. Judgments from any state are entitled to full faith and credit in another state, ensuring greater finality and economy of judicial decisions. United States counsel can be admitted pro hac vice before other state or federal courts, ensuring that there is an efficiency of enforcement in handling an issue that crosses state borders. Extensive discovery is available. The federal judicial system often provides an alternative jurisdictional basis to state courts to minimize bias in favor of local plaintiffs when jurisdictional thresholds are satisfied. The use of protective orders is widely understood. United States courts will also decline to take jurisdiction over trade secret matters where there is a more appropriate venue for the proceeding. Preliminary injunctions are available and are published for the public to understand their impact. Substantive trade secret laws and procedures are well-harmonized between the states. Even in the absence of an effective non-compete agreement, US companies have fair, if expensive and time-consuming, measures available to protect trade secrets anywhere in the federal or state judicial systems. Whatever the challenges that might exist in California due to the absence of effective non-compete agreements, when a California employee has relocated to another state, the availability of judicial venues within the United States to fairly litigate trade secret matters means that the employer/trade secret holder is still likely to be fairly treated in that out-of-state court despite the invalidity of a non-compete agreement under applicable California law.

American companies seeking to protect their trade secrets in China encounter a wide range of challenges that are not present in inter-state litigation. For example, in contrast to the US civil

[44] Susan Finder, SPC Updates its Guidance on Judicial (Adjudication) Committees (Oct. 4, 2019) https://supremepeoplescourtmonitor.com/2019/10/04/spc-updates-its-guidance-on-judicial-adjudication-committees/.

[45] Christopher Wray, The Chinese Communist Party—believes it is in a generational fight to surpass our country in economic and technological leadership, FBI News (July 7, 2020) https://www.fbi.gov/news/speeches/the-threat-posed-by-the-chinese-government-and-the-chinese-communist-party-to-the-economic-and-national-security-of-the-united-states.

process, trade secret litigation in China is handled by a judiciary that is not politically independent from the Communist Party and that views itself as an instrumentality of the state and Party. Civil judgments are not easily enforced between the United States and China. Substantive law and civil process vary greatly from practice in the United States. Very few American lawyers read or speak Chinese and even fewer have a rudimentary understanding of the Chinese legal system. Lack of discovery in Chinese civil process requires that plaintiffs extensively prepare for proposed litigation in advance. If a plaintiff is foreign, documentation will need to conform to Chinese judicial formalities, including potentially time-consuming notarization and legalization requirements.[46] Chinese domestic evidence, when available, may also need to be prepared by a civil notary. Litigation involving foreigners can extend for much longer periods of time than domestic litigation. Court cases are not fully available to review in making strategic plans about enforcement. Interim decisions on protective orders are particularly opaque. Fraught geo-political relations and industrial policy goals are also more likely to influence judicial decision making. Despite recent improvements, China's trade secret regime is also relatively new, and judicial procedures are being developed. Certain aspects of China's trade secret regime also remain biased against foreigners as a matter of law. For example, China's extensive administrative system for trade secret protection does not afford protection to foreigners seeking protection from misappropriation of their trade secrets,[47] nor do changes appear likely based on proposed amendments to China's trade secret administrative enforcement regime.[48]

The NPRM identifies federal criminal prosecution of trade secrets as another important alternative for protection trade secrets in the United States, and states that "intellectual property law already provides significant legal protections for an employer's trade secrets".[49] However, there is no international obligation for WTO members to have an available criminal trade secret remedy. WTO members are only required to have criminal remedies to address "commercial scale" copyright counterfeiting and trademark counterfeiting.[50] The NPRM does not cite any relevant data to justify the wide-spread availability of federal or state criminal remedies for trade secret violations in the United States. According to China's own official adjudication statistics, criminal trade secret cases, in fact, are quite rare. Criminal trade secret cases constituted only 61 out of 6,046 criminal intellectual property cases concluded in 2021, or about 1% of the criminal IP docket, and about .01% of the civil intellectual property docket of 550,263 cases.[51]

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[46] On March 8, 2022, China joined the "Convention Abolishing the Requirement of Legalisation for Foreign Public Documents." Accession may ultimately simplify some of these requirements. It will enter into force November 7, 2023.

[47] World Trade Organization, Review of Legislation, WTO Doc. IP/C/W/374 at p. 44 (2002) (question posed concerning why foreigners are denied national treatment in China's trade secret administrative enforcement regime).

[48] Mark Cohen, SAMR Releases Draft Trade Secret Rules for Public Comment, China IPR (Sept. 12, 2020) https://chinaipr.com/2020/09/12/samr-releases-draft-trade-secret-rules-for-public-comment/ .

[49] NPRM, at pp. 96, 98.

[50] World Trade Organization, TRIPS Agreement, Art. 61.

[51] China National IP Administration, Er Yilingyinian Zhongguo Zhishi Chanquan Baohu Zhuangkuang (二〇二一年中国知识产权保护状况) [The State of Intellectual Property Protection in China in 2021] (2022), at p. 4.

The NPRM notes that "trade secret law may serve as an alternative to the patent system."[52] International differences in the scope of patent protection may force companies to rely on different approaches to protecting their innovations in different countries. The uncertain scope of patent protection in some key technology areas in the United States, such as software patenting, fintech, and genomics, in the words of one former International Trade Commission official, may also "induce firms to rely more on trade secrets."[53] This may also increase reliance on trade secrets for leading technologies in both the United States and China, as the disclosure in China of a patent would invalidate the protection afforded by the trade secret in the United States.

Weak trade secret protection in China and Chinese government rewards for filing patents may incentivize individuals conducting research in the United States to disclose trade secrets in China, thereby jeopardizing the confidentiality of the trade secret infromation and causing significant financial harm to the innovator company in the United States. In one of several well-known cases[54] in the United States involving the filing of a patent in China on confidential United States technology, a scientist working at Virginia Tech was alleged to have violated the terms of his "non-disclosure clause, non-communication clause, and covenant not to compete" by anonymously filing a patent application in China that was "nearly identical" to the trade secrets of the United States innovator. Chinese law permits anonymous patent filing, which in this case was used to minimize detection by the plaintiff.[55]

Internationally, patents are often a poor substitute for trade secret protection, as patent applications require disclosure of the underlying technology to the public. In addition, China may decline to grant patents due to political pressure in accordance with Chinese industrial policies. If patents are not available, and trade secret success rates are low, non-compete agreements may be the default and only effective avenue for enforcement.

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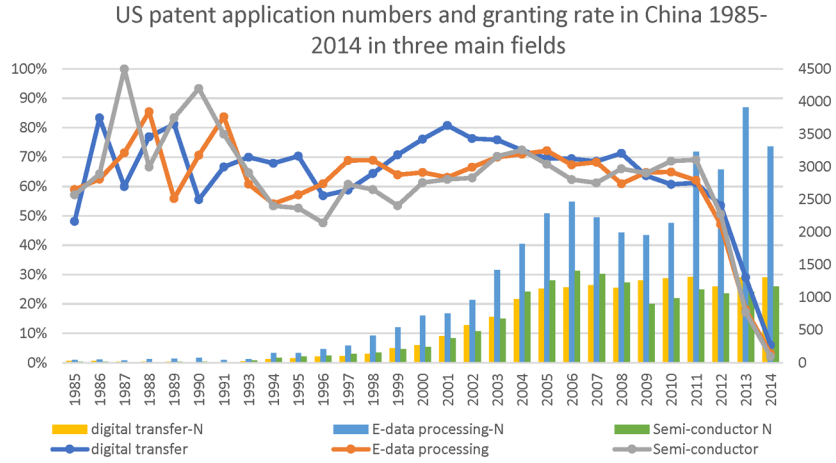
[52] NPRM at p. 94.

[53] Katherine Linton, *The Importance of Trade Secrets: New Directions in International Trade Policy Making and Empirical Research* , J. INTL COMM. & ECON., at p. 4 (2016).

[54] See, e.g., USDOJ, Chinese Citizen Convicted of Economic Espionage, Theft of Trade Secrets, and Conspiracy (June 26, 2020) (semiconductor technology), available at https://www.justice.gov/opa/pr/chinese-citizen-convicted-economic-espionage-theft-trade-secrets-and-conspiracy; see also speech by Christopher Wray at the Hudson Institute, *The Threat Posed by the Chinese Government and the Chinese Communist Party to the Economic and National Security of the United States* (July 7, 2020), available at https://www.fbi.gov/news/speeches/the-threat-posed-by-the-chinese-government-and-the-chinese-communist-party-to-the-economic-and-national-security-of-the-united-states; see also statement of Rep. Darrell Issa, "There are countless examples of that including Qualcomm, Intel, and Google, and Apple who have been the victims of technology developed, trade secrets developed, simply going to another country. And again, if they go to China, they often end up in patents that are the fruit of that -- that otherwise unknown or developing technology." House Judiciary Committee, Courts, Intellectual Property, and the internet Subcommittee Hearing: "Intellectual Property and Strategic Competition with China: Part I" (March 8, 2023), available at https://youtu.be/4RcagM1DtQA.

[55] *Bonomous Biochem, LLC. v. Yiheng Percival Zhang et al*, Civil Action No. 3:17-cv-00033 (W.D. Va. 2018) (May 21, 2018), available at http://www.vawd.uscourts.gov/OPINIONS/HOPPE/bonumose%20biochem%20llc%20v%20zhang%20et%20al.pdf.

The case for patents as an alternative to trade secret protection in China is also weakened by the politicization of China's patent system.[56] Research done by Dr. Su Li at the University of California at Berkeley[57] demonstrated a marked decline in the availability of patent protection for foreign applications in three key patent classifications of semiconductor-related technology from 1985-2014 to less than a 10% grant rate:



Dr. Li's study demonstrates that it can be more difficult to obtain a semiconductor patent, with a low 10% or less grant rate, than it is to protect trade secrets, where there was an already low 32.4% chance of success in first instance trade secret litigation in China.[58] Of course, even if the semiconductor patent were granted, the patentee might still encounter difficulties in enforcing the patent against a Chinese infringer, as has been the experience of US companies in other semiconductor-related patent cases. Data on these cases could be incomplete because of China's reluctance to publish cases that may have been decided for political reasons.[59] Nonetheless, data that I had compiled in 2018 revealed a semiconductor patent litigation success rate of 38.34%, which is considerably lower than

[56] See Gaetan de Rassenfosse, and Emil Raiteri, *Technology Protectionism and the Patent System: Evidence from China*, J IND. ECON., 70: 1-43 (2022), available at: https://doi.org/10.1111/joie.12261.

[57] Dr. Su Li, "Does China's Industrial Policy Affect US Patents' Approval Rates in China?" 13 pp., figure 2 at p. 10 (2018) (unpublished paper on file with the author).

[58] See text at n. 13, supra.

[59] Mark Cohen, Semiconductor Patent Litigation Part 2: Nationalism, Transparency and Rule of Law, www.chinaipr.com (July 4, 2018), available at https://chinaipr.com/2018/07/04/semiconductor-patent-litigation-part-2-nationalism-transparency-and-rule-of-law/ (describing *Veeco v. AMEC*, a patent dispute involving the company founded by Gerald Yin [AMEC], a United States company [Veeco], the United States and Chinese courts, and Chinese customs, where many of the underlying decisions by the Chinese government were not disclosed to the public).

national averages for other patent technology areas of approximately 80%.[60] Owing to the increased political focus of China's leadership on semiconductors, it is not surprising that the case databases may not adequately reflect the full scope of semiconductor-related IP litigation.[61]

I encourage the FTC to draw on the full range of data on non-compete and non-disclosure agreements, trade secret protection, patent protection and patent enforcement, from the numerous countries that already enforce non-compete agreements to reach a more balanced conclusion on the international consequences of making non-competes illegal. As the above data indicates, there is no basis at this time to assume that the experience in the United States litigating trade secret matters, including alternative protection mechanisms such as criminal procedures or patent protection, will be matched in foreign jurisdictions to protect confidential technological information. In some cases, a non-compete agreement may be the only reasonable alternative for enforcement in the United States or overseas. The FTC needs to carefully consider the international implications of its rulemaking to protect US economic and national security vis a vis China and other countries.[62]

(B) The Role of Non-Compete Agreements in Facilitating Innovation in the United States

The NPRM singles out California as a jurisdiction that has declined to enforce non-competes since 1872 and that nonetheless is highly competitive in technology and labor markets. It has also relied extensively on a 2021 study by Prof. Zhaozhao He, which studied the impact on patenting activity in Michigan.[63] In the FTC's view, the study "suggests innovation is largely harmed by non-compete clause enforceability" and that "increased non-compete clause enforceability broadly diminishes the rate of innovation."

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[60] Mark Cohen, A Data Download on Semiconductor Patent Litigation in China (June 25, 2018), available at https://chinaipr.com/2018/06/25/a-data-download-on-semiconductor-patent-litigation-in-china/.

[61] A search conducted by this author on March 19, 2023 on Iphouse.cn for semiconductor (半导体) and integrated circuit （集成电路）invention patent and utility model patent litigation on the Chinese IP litigation database did not reveal win rates for cases semiconductors, or integrated circuits. There were also no trade secret cases reported for semiconductors or integrated circuits involving Americans, which may suggest that such cases were never published or removed from official databases. There were no semiconductor patent cases of any kind reported after June 1, 2021. There have, however, been several high-profile cases involving Chinese companies such as Fujian Jinhua and Micron and AMEC and Veeco. As I noted in a 2018 blogpost, "[t]he AMEC case now joins a short list of not-so-distinguished cases involving foreigners, where the court has yet to publish or has significantly delayed publishing the final decision." Mark Cohen, Semiconductor Patent Litigation Part 2: Nationalism, Transparency and Rule of Law (2018), supra at n. 38.

[62] Mark Cohen, Are Chinese Courts Out to "Nab" Western Technology - An Inconclusive WSJ Article, China IPR (Feb. 24, 2023) https://chinaipr.com/2023/02/24/are-chinese-courts-out-to-nab-western-technology-an-inconclusive-wsj-article/.

[63] Zhaozhao He, Motivating Inventors: Non-Competes, Innovation Value and Efficiency, at 21 (May 15, 2021) https://ssrn.com/abstract=3846964.

The FTC's reliance on the study by Dr. He is surprising, as the NPRM also notes that patents "may or may not reflect the true level of innovation."[64] The FTC's description of the role of patenting and its critique of the various studies is both confusing and contradictory. It appears to support the indiscriminate use of patents as a measure of innovation without regard to field of use, while dismissing a more discriminate use of patents in the cited literature based on field of use or exploratory nature of the invention.[65] As further evidence of this inconsistent approach, the FTC seems to support Prof. Gilson's endorsement in his 1999 article of what he calls "knowledge spillovers" from labor mobility in technology clusters that are unimpeded by non-compete agreements.[66] However, Prof. Gilson was far more attentive to the selective need to protect intellectual property than is reflected in the NPRM. The conclusions reached in his study were that "policymakers in other states should consider the characteristics of local industries, weighing the advantages to those industries of knowledge spillovers against the reduced incentives for initial innovation." I agree with his assessment that invalidating non-compete agreements as a one-size-fits-all approach to addressing trade secret misappropriation is fraught with potential for harm. This approach has also been adopted by other researchers, who reject a one-size-fits-all approach of the type advocated by the FTC.[67]

Among its other deficiencies, the FTC does not: (a) use any qualitative data, (b) evaluate the impact on overseas labor mobility, (c) consider the legal challenges arising from cross-border misappropriation of trade secrets (the words "China," "CHIPS Act," "international" and "semiconductor" do not appear in the NPRM), (d) discuss the impact of non-compete agreements on a nation's ability to innovate, nor (e) consider how revisions to US practice by affording compensation to an employee for the duration of a non-compete might impact non-compete enforcement.

In order to judge the effect on innovation, the NPRM cites Gilson's study on California innovation clusters[68] to the effect that "researchers have posited that high-tech clusters in California may have been aided by increased labor mobility due to the unenforceability of non-

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[64] NPRM, at p. 43.

[65] *See, e.g.,* Gerald A. Carlino, Do Non-Compete Covenants Influence State Startup Activity? Evidence from the Michigan Experiment, Fed. Reserve Bank of Phila., at 16 (2021) https://www.philadelphiafed.org/the-economy/regional-economics/do-non-compete-covenants-influence-state-startup-activity-evidence-from-michigan-experiment/.

[66] Ronald J. Gilson, *The Legal Infrastructure of High Technology Industrial Districts: Silicon Valley, Route 128, and Non-Compete Clauses*, 74 N.Y.U. L. REV. 575 (1999).

[67] "Given the potential value of NCAs in some settings, the standard of evidence to support a broader ban, or occupational bans (other than those initiated by professional organizations), should be quite high. Policymakers should await clarity from research specific to occupations or industries in the absence of very compelling motivations that may not require evidence. Subsequent regulations may then consider the new empirical findings that become available as data on NCAs continues to expand." Kurt Lavetti, Non-Competes in Employment Contracts, IZA World of Labor (2012), available at: https://wol.iza.org/articles/noncompete-agreements-in-employment-contracts/long.

[68] Bruce Fallick, Charles A. Fleischman, and James B. Rebitzer, *Job-Hopping in Silicon Valley: Some Evidence Concerning the Microfoundations of a High-Technology Cluster*, 88 REV. ECON. & STATISTICS 472, 477 (2006); NPRM at fn. 89.

compete clauses."[69] The data sample used by Prof. Gilson extended from 1994-2001, and is approximately coterminous with China's accession to the WTO in late 2001 and its rapid development since as an economic and security competitor.[70] China's entry into the WTO was also the start of China's accelerated commitment to becoming a peer technology competitor with the United States, which China has since achieved by nearly every measure.[71] Due to its bias of exclusively focusing on US innovation clusters, it is my belief that this study has limited utility in addressing the role of non-competes in addressing the international technological competitiveness of the United States and the competitive threat posed by China's technological emergence.

One approach towards evaluating Gilson's theories on prospective global innovation would be to update his study on innovation clusters with more recent data on global innovation clusters. The World Intellectual Property Organization (WIPO) collects such data on a yearly basis in its Global Innovation Index (GII), where it also ranks innovation clusters.[72] The GII also has the advantage of following the methodology used by Prof. He of relying principally on overall patent data in weighting the innovation outputs of a cluster, without his overlay of his efforts to uniformly value patents based on stock fluctuations. The rankings have been made based on Patent Cooperation Treaty (PCT) filings, a widely accepted measure for judging patent quality. Using USPTO data would likely skew findings in favor of US innovation.[73] In addition, the GII includes a ranking on share of total scientific publications, which is another widely accepted measurement for scientific and innovative output.[74] Additional adjustments could be made to these calculations based on patent families, field of use of the patent, forward or backward citations, etc., but those would entail a far greater commitment of time and resources. Unlike Prof. He's study, the GII study also facilitates comparisons can be made across multiple economies and across time.

To analyze how technological clusters may have benefited from the absence of non-compete clauses, I used GII's listing of the 100 leading innovation clusters. I then consulted with

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[69] NPRM at fn. 340.
[70] Id. at p. 476.
[71] *See* Ian Clay and Robert Atkinson, *Wake up, America: China is Overtaking the United States in Innovation Capacity*, Information Technology & Innovation Foundation (Jan. 23, 2023), https://itif.org/publications/2023/01/23/wake-up-america-china-is-overtaking-the-united-states-in-innovation-capacity/.
[72] WIPO, Global Innovation Index 2022, at pp. 57-62 and Appendix Table 3, https://www.wipo.int/global_innovation_index/en/2022/.
[73] Long Zhao, *On the grant rate of Patent Cooperation Treaty Applications: Theory and Evidence*, 117 ECONOMIC MODELLING (Dec. 2022), https://www.sciencedirect.com/science/article/abs/pii/S0264999322002887.
[74] *See e.g.*, European Commission, Directorate-General for Research and Innovation, Publications as a measure of innovation performance: selection and assessment of publication, Publications Office of the European Union (2021), https://data.europa.eu/doi/10.2777/43576.

numerous legal resources to determine which tech clusters were in economies that ban non-compete agreements.[75]

In its 2022 GII rankings, the top five science and technology clusters, in rank order, were (1) Tokyo/Yokohama, (2) Shenzhen-Hong Kong-Guangzhou, (3) Beijing, (4) Seoul, Korea and (5) San Jose/San Francisco. San Jose/San Francisco was the only one of the top five clusters located in a jurisdiction (California) that absolutely bans non-competes.[76] The other jurisdictions that are known to ban non-competes entirely and made the top 100 were in India, Russia, and Israel.[77] Both Beijing and Shenzhen-Hong Kong-Guangzhou permit non-compete agreements to be enforced. Moreover, as Dan Wang has observed, Shenzhen, is particularly well-known for its labor mobility and accumulated process technology, which benefits from robust labor mobility. The assumption made by Prof. Gilson that non-competes promote such process-oriented innovation are belied by the Chinese successes as ranked in the GII. Two Chinese jurisdictions that permit non-competes are now more innovative than any United States technology cluster.

Collectively, the jurisdictions in the GII rankings that ban non-compete agreements fell by 2 rankings between 2019 and 2022, which included a decline of Los Angeles, a jurisdiction that bans non-competes, by one ranking. Overall, United States tech clusters decreased by 34 rankings during this period. By contrast, China's tech clusters, which permit non-compete agreements, increased by 132 rankings over the same period. During the past year, the largest increases came from three Chinese clusters – Zhengzhou (+15), Qingdao (+12) and Xiamen (+12). Among jurisdictions that ban non-competes, only Mumbai advanced significantly (+3) year-on-year. The other two jurisdictions in the United States that decline to enforce non-compete agreements, Oklahoma, and North Dakota, were not ranked at all. In terms of raw numbers of technology clusters, China's 21 clusters emerged in 2022 as equivalent in number with the 21 clusters in the United States.

The data, at a minimum, demonstrates that technological competition is international and not solely domestic, as the NPRM would otherwise imply with its failure to consider international technological competition. In addition, the United States is not maintaining the lead of its technology clusters vis a vis China and many other countries in the world since the time that Dr. Gilson published his study.

Prof. He suggests that abolishing non-compete agreements is an important factor in stimulating patent output. To the contrary of that study, this simple analysis of the relative ranking of innovation hubs based on their prohibition of non-compete agreements suggests that over time permitting non-compete agreements to be enforced can stimulate certain types of innovation and that the absolute invalidity of non-compete agreements correlates with absolute and relative declines in the innovative capacity of countries that host global innovation clusters.

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[75] *See* sources listed at n. 4.

[76] See n. 51.

[77] Tehran, Iran is also listed as a technology cluster. However, I have thus far been unable to determine Iranian law regarding non-compete agreements.

Whatever the causative factors or technologies involved, the data on innovation clusters confirms that countries that permit non-compete agreements of some kind are among the most innovative in the world, host the most rapidly rising innovation clusters, and may be highly dependent on process technology. This data is also consistent with Prof. Gilson's analysis that "legal infrastructure [involving intellectual property and employee mobility] prominently influences the dynamics of high technology industrial districts" and that this legal infrastructure should be tailored to the industries that are located there.

This analysis also supports my recommendations that non-compete clauses should continue to be available internationally to support protection of confidential information, considering the circumstances that exist in a range of foreign countries with differing legal systems and different competing technologies. The FTC should also consider the possibility that adverse changes in international non-compete enforceability may accelerate the declines in American innovative capacity relative to other countries, which are already happening over a short timeframe.

(C) Impact on CHIPS Act Implementation

Today the competitive threat posed by "technology spillover" from employees working overseas is considerably more severe than in 1957, when a group of eight employees left Shockley Semiconductor Laboratory to establish Fairchild Semiconductor. None of those so-called "Traitorous Eight" went to work in foreign countries that had emerged as peer competitors to core US technologies. Here again, an up-to-date and international comparative study may shed light on the impact on US international competitiveness of rules against enforceability of non-competes.

A counter example to the Traitorous Eight is the more recent story of Dr. Gerald Yin, the current CEO of AMEC, a Chinese semiconductor equipment manufacturer. Dr. Yin left Applied Materials reportedly with a team of over 30 engineers to establish a semiconductor equipment manufacturing company in Shanghai in 2007.[78] Applied Materials also subsequently was a party to a trade secret law suit involving Dr. Yin in 2009 in Shanghai, which was withdrawn in 2010.[79] According to the *Wall Street Journal* and other media, his company now risks being placed on the US Entity List by the Bureau of Industry and Security (BIS) by reason of its presenting a

[78] Andrew Leonard, Betrayal: A Silicon Valley Way of Life, Salon (Jan. 3, 2008) https://www.salon.com/2008/01/03/chips_and_treachery/.

[79] Mark Cohen, Semiconductor Patent Litigation Part 2 – Nationalism, Transparency and Rule of Law, China IPR (July 4, 2018) https://chinaipr.com/2018/07/04/semiconductor-patent-litigation-part-2-nationalism-transparency-and-rule-of-law/; *Applied Materials v. AMEC* 630 F. Supp.2d 1084 (N.D. Cal. 2009); AMEC Shanghai v. Applied Materials, Inc. (USA) *中微半导体设备(上海)有限公司 v. 美国应用材料有限公司* Lv Yizhong Minxu (Zhi) Chuzi No. 239. (2009) [沪一中民五(知)初字第 234 号].

threat to US competitiveness in semiconductor technology, under regulations promulgated by BIS in October 2022.[80]

The potential scope of this problem of high-tech employee migration to China has been identified by Georgetown University's Center for Security and Emerging Technology as potentially affecting as many as 1,100 Chinese engineers involved in semiconductor manufacturing equipment technology alone.[81] The FTC's proposed rule, as it applies to China's high-tech enterprises, is in direct conflict with BIS's October 2022 export control rulemaking, which limits employee mobility from the United States to China regarding technologies of concern to US national and economic security, including in the "development" and "production" of certain integrated circuits.[82]

Dr. Yin's story is one of several that document the close relationship among invalidity of non-competes, trade secret theft and threats to US national security due to employee migration to China. California's ban on non-competes did not create spillover opportunities in the United States for Gerald Yin's employees. It created more high-paying job opportunities for employees in China. A useful additional study that the FTC may wish to conduct might be on the effect of banning non-compete agreements on enhancing China's technological competitiveness in high-technology areas.

California law holds that when an employee moves to California, his non-compete agreement from another jurisdiction is deemed invalid because of the superior interest of California in not enforcing non-compete agreements. A well-known example of this judicial invalidation of non-compete obligations arose in the case Kaifu Lee when he departed Microsoft in Seattle in 2005 to work for Google in China. A California court ruled that California had a superior interest in invaliding the non-compete agreement with respect to Mr. Lee's employment in China by Google, a California company.[83] The court relied on a line of California cases which underscored that superior interest. For example, in Application Group, Inc. v. Hunter Group, Inc., 61 Cal. App.4th 881, 72 Cal.Rptr.2d 73 (1998), a California appellate court held that California law applied to an employment contract entered by Pike, a computer consultant. AGI, a California corporation, hired Pike away from Hunter. However, Pike remained in Maryland and telecommuted to her job. The California Court nonetheless ignored her contract's choice-of-law provision and invalidated the covenant not to compete. This same rule has been applied

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[80] Peter Landers, Entrepreneur Caught in the Middle of U.S.-China Chip War, Wall St.J. (Nov. 9, 2022), https://www.wsj.com/articles/entrepreneur-caught-in-the-middle-of-u-s-china-chip-war-11667989801.

[81] Center for Security and Emerging Technology, China's Progress in Semiconductor Manufacturing Equipment, (March 2021), https://docplayer.net/205054920-China-s-progress-in-semiconductor-manufacturing-equipment.html.

[82] Interim Rule, Bureau of Industry and Security, Implementation of Additional Export Controls: Certain Advanced Computing and Semiconductor Manufacturing Items; Supercomputer and Semiconductor End Use; Entity List Modification 87 Fed. Reg. 62186, 62193 (Oct 13, 2022) ("this rule revises § 744.6 … to inform "U.S. persons" that "support" for the "development" or "production," of integrated circuits that meet certain specified criteria in the PRC implicates the general prohibitions set forth in § 744.6(b) of the EAR and is therefore subject to a BIS license requirement").

[83] *Google, Inc. v. Microsoft Corp.*, 415 F. Supp. 2d 1018 (N.D. Cal. 2005).

internationally to employees of California companies that are principally located overseas. *Power Integrations, Inc. v. De Lara*, Case No. 20-cv-410-MMA (MSB) (S.D. Cal. Mar. 26, 2020).

These choice of law precedents are relevant to employees from overseas that work in CHIPS Act subsidized semiconductor manufacturing facilities or are employed by these companies while working overseas. If the California precedents were adopted by US courts implementing a non-compete ban proposed by the NPRM, any foreign investor in the United States risks invalidation of its non-compete agreement when its employee comes to work for a United States company. These precedents would turn the United States, with its large labor and technology markets, into the non-compete "divorce capital" of the world, where employees come to shed their non-compete obligations by working for US-based employers and thereafter take on other assignments that may pose risks to themselves, their former employers and the economic security of the United States. Reliance on post-facto export controls to provide an administrative "non-compete" approach to labor mobility in semiconductors and other sectors will not address the need to deter trade secret misappropriation before the leakage has occurred. Ex ante remedies, such as non-compete agreements and preliminary injunctions for their violation, are critical tools in preventing these losses from occurring in the first place.

One solution to the problems identified in these comments is for the FTC to clarify that the NPRM only applies within the United States. The FTC should also consider establishing different rules for international labor mobility to prevent application of California-style choice of law rules. However, the adoption of a rigid rule would risk an inconsistency between FTC rules and foreign law, leading to potential invalidity of FTC rules by foreign courts. If a rigid FTC rule were adopted, it would also deprive employers of the flexibility to adjust their non-compete agreements based on evolving legal, business, technology, and labor environments in jurisdictions where they compete or operate.

I believe the better approach for the FTC to a revised rule that acknowledges the importance of international competition in technology and labor markets, would be to refer (renvoi) issues involving application of foreign non-compete rules to the local law existing in a foreign country where a former employee of a US company seeks to be employed. If this situation were to apply, US employers would be free to insist that employees sign non-compete agreements that conform to other jurisdictions, such as Germany or China, where compensation may be required for the period when the non-compete is in effect. In my own experience, US multinationals are already quite familiar with foreign non-compete agreements for their technically skilled staff and have the know-how to draft agreements that generally comply with the multiple jurisdictions where they operate. If California companies had been able to draft non-compete clauses with similar provisions, they would likely have limited their exposure to overseas trade secret misappropriation during the past several years, which would have benefited the economic and national security interests of the whole country.

Differential treatment between foreign and domestic non-compete agreements as I propose for technically skilled employees is also supported by WTO agreements and jurisprudence. Many

foreign countries, including the United States,[84] China,[85] and Switzerland,[86] provide for more deterrent penalties when trade secret misappropriation is undertaken on behalf of a foreign actor. The TRIPS Agreement also provides for exemptions for its obligations to protect national security or in the event of an international emergency.[87] The WTO and its predecessor agreement, the GATT, also recognize that there may be instances where differential treatment between the application of domestic law and use of foreign law may be "necessary to secure compliance" with GATT/WTO requirements.[88] The use of foreign law in my proposed changes in the NPRM is necessary to ensure that United States trade secrets are adequately protected domestically and overseas, pursuant to TRIPS obligations that: "[m]embers shall protect undisclosed information [trade secrets]"; and they may adopt "criminal procedures and penalties to be applied in other cases of infringement of intellectual property rights [such as trade secrets]"; and that member economies shall "permit effective action against any act of infringement of intellectual property rights."[89] The WTO requirement that "members" shall protect undisclosed information also imposes an affirmative obligation to protect against trade secret misappropriation on WTO members, rather than principally relying on civil remedies that are required to protect all other IP rights.[90] My proposal implements this affirmative obligation. Finally, I know of no WTO case where the domestic application by a renvoi to a WTO member country's law, was itself a violation of TRIPS obligations. My proposal simply reflects that the United States does not have the same overriding interest in applying United States law to overseas employment contracts, as it does to domestic employment contracts. Such choice of law matters are usually committed to the discretion of courts according to conflicts of law principles.

Several jurisdictions in the United States are currently slated to build state-of-the-art semiconductor manufacturing facilities subsidies, including Arizona, Ohio, New York and Texas. All these states permit non-compete agreements for highly skilled technical employees. The TSMC fab in Arizona and the Samsung fab in Texas are also invested in by companies that honor non-competes in their home jurisdictions. Among the investing companies, TSMC,[91] Samsung[92] and Micron[93] have also already encountered significant losses due to trade secret

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[84] Economic Espionage Act, 18 U.S. Code § 1831 et seq.
[85] Chinese Criminal Code, Art. 219.
[86] Swiss Penal Code, Art. 273.
[87] TRIPS Agreement, Art. 73.
[88] See General Agreement on Tariffs and Trade, United States – Section 337 Of the Tariff Act of 1930, *Report by the Panel adopted on 7 November 1989* (L/6439 - 36S/345).
[89] TRIPS Agreement, Arts. 40, 41, 61.
[90] TRIPS Agreement, Art. 42.
[91] Ramish Zafar, TSMC Wins Legal Battle Against Employee Who Violated Contract and Moved to China, WCCF Tech (July 8, 2022) https://wccftech.com/tsmc-wins-legal-battle-against-employee-who-violated-contract-moved-to-china/.
[92] Matthew Humphries, 7 Former Samsung Employees Jailed for Stealing Chips Secrets for China, PC Mag (Feb. 21, 2023), https://www.pcmag.com/news/7-former-samsung-employees-jailed-for-stealing-chip-secrets-for-china.
[93] South China Morning Post, Taiwan's UMC to aid US Pursuit of Chinese Chip Maker Fujian Jinhua over Alleged Theft of Micron Trade Secrets, https://www.scmp.com/tech/gear/article/3107531/taiwans-umc-aid-us-pursuit-chinese-chip-maker-fujian-jinhua-over-alleged.

misappropriation by their employees or partners on behalf of Chinese companies. Micron's proprietary technology has already been stolen by employees of a Taiwanese partner for Fujian Jinhua, a Chinese fab, which has since been determined by BIS to "pose a significant risk of becoming involved in activities contrary to the national security or foreign policy interests of the United States."[94] Along with Gerald Yin/AMEC, this is the second instance in recent years in which employee mobility to China in the semiconductor sector has been recognized by our export control agencies as a threat to US national economic security.

If the NPRM were enacted in its current form, it is likely that US and foreign employees of the new fabs would also no longer be bound by their pre-existing non-compete agreements, thereby leaving their employers with difficult-to-enforce trade secret cases in China, much as was faced by Applied Materials in its case against Dr. Yin. For foreign investors such as TSMC or Samsung, this weakening of IP protection may result in a need to restructure employment agreements and/or even more scrutiny of how proprietary technology is transferred, controlled or managed by their US affiliates. These changes may also limit the pool of employees that the employer deems suitable to travel to the United States based on risks of that employee working for a competitor in China.

The NPRM, by facilitating employee migration to China through invalidation of non-compete agreements, benefits China's economic and national security plans to develop a leading, internally competitive semiconductor industry. Litigation data in the United States already demonstrates that, among those countries where a defendant's nationality has been identified, China and Taiwan account for the majority of identified foreign defendants. According to Taiwanese Prof. Tzu-I Lee, from January 1, 2001, to December 31, 2021, 8.3% of all the defendants in United States semiconductor trade secret cases were identified as Chinese individuals/entities, 3.2% were identified as Taiwanese individuals/entities, and 2.9% were identified as Taiwanese defendants allegedly misappropriating trade secrets to China or for Chinese entities. An additional 5.3% involved defendants related to other main players in the industry, such as Japan, South Korea, India, and Israel. The balance of the defendants (80.2%) may have been from the United States or were simply not identified as being of any national origin.[95] Collectively, Chinese and Taiwanese defendants accounted for over 50% of the cases where the foreign nationality of a defendant had been identified.

The impact of these changes would extend beyond the CHIPS Act to other technology areas. Foreign companies have invested over $2.0 trillion in high tech, which is about 46% of their total FDI in the United States. These foreign-owned affiliates were responsible for over 2.1 million US jobs in 2017.[96] Most foreign countries honor non-compete agreements; many

[94] Bureau of Industry and Security, Final Rule, 83 Fed. Reg. 54519 (effective Oct. 30, 2018) https://www.federalregister.gov/documents/2018/10/30/2018-23693/addition-of-an-entity-to-the-entity-list.
[95] Tzu-I Lee, *Bordering Secrecy: An Empirical Study on Cross-Border Trade Secret Thefts in the Semiconductor Sector* (2022) (unpublished manuscript, available from the author).
[96] Kara Mazachek, FDI in High-Tech: Innovation and Growth in the United States (Feb. 5, 2020) https://blog.trade.gov/2020/02/05/fdi-in-high-tech-innovation-and-growth-in-the-united-states/.

foreign countries likely already have non-compete agreements in place for their skilled workers who have access to their key technical secrets. The foreign investors from jurisdictions which honor non-compete agreements would be placed at a high risk of trade secret loss to other countries by investing in high tech sectors in the United States. The invalidation of non-compete agreements would also affect ongoing employment and secondment agreements and may also send a negative signal to the employees' home countries to similarly weaken their non-competition obligations in advanced technologies. These steps could all serve to further enhance China's competitive role in semiconductors and other high-tech sectors.

(D) Conclusion

I do not believe that a one-size fits all approach of invalidating non-compete agreements for both unskilled low-wage workers and highly skilled high-tech executives in a range of critical and non-critical technologies is appropriate or in the national interest. The NPRM has set up a red herring issue by focusing on the millions of low-wage workers who should not be encumbered by non-compete agreements. I do not disagree with that proposition, although I believe that has little relevance to the issues discussed in these comments.

The international consequences of the proposed FTC rule should be the subject of an additional opportunity for public comment and additional study. At a minimum, the FTC, in consultation with other US government agencies concerned with technology and intellectual property (USPTO, NIST, OSTP, USTR, USDOL, USDOJ, etc.), as well as our science agencies with ownership and managements interests in technology development (NSF, DOE, NIH, NOAA, DoD, etc.) should exercise great caution in finalizing the NPRM.

If the FTC nonetheless seeks to publish a final rule limited to the United States domestic environment, I have proposed amendments that conform to my viewpoints as an appendix to these comments.

Thank you for the opportunity to comment on the NPRM.

Mark A. Cohen
April 2, 2023

The author gratefully acknowledges the research done by the students in his class on Chinese Intellectual Property Law at the University of California, Berkeley Law School since 2018, particularly Jacob Lahana, Dr. Tzu-I Lee and Dr. Su Li.

The opinions expressed here are my own.

APPENDIX

910.1.(b)1 Definitions

Non-compete clause means a contractual term between an employer and a worker that prevents the worker from seeking or accepting employment with a person, or operating a business, after the conclusion of the worker's employment with the employer in the United States. Application of United States law is not mandated by these rules to non-compete agreements involving overseas employers, including overseas subsidiaries of US companies.

§ 910.2 Unfair methods of competition.

(a) Unfair methods of competition. It is an unfair method of competition for an employer to enter into or attempt to enter into a non-compete clause with a worker; maintain with a worker a non-compete clause; or represent to a worker that the worker is subject to a non-compete clause where the employer has no good faith basis to believe that the worker is subject to an enforceable non-compete clause.

(b) It is not a per se unfair method of competition for an employer to enter or attempt to enter into a non-compete agreement with a worker or represent to a worker that the worker is subject to a non-compete clause restricting the worker's ability to work outside of the United States consistent with the rules. In general, international non-compete clauses should be evaluated according to the need of the United States to maintain its economic security in international labor markets and protect proprietary technologies of the United States from disclosure to foreign markets. Employers should consider the impact upon the worker and the needs of her employer, the degree of labor competition in the market and other factors in entering into an international non-compete agreement. Employees who are in senior management positions and have had access to confidential technical or business information may be subject to a non-compete agreement for a limited period of time and under reasonable conditions, including the availability of compensation such as providing a reasonable portion of the employee's salary for the duration of the non-compete.

Statement of Suzanne Harrison

Principal, Percipience LLC

Before the Senate IP Subcommittee hearing on

Foreign Competitive Threats to American and Economic Leadership

April 18, 2023

Chairman Coons, Ranking Member Tillis, distinguished members of this Subcommittee, it is an honor and a pleasure to appear before you today to discuss how intellectual property is a key part of a comprehensive defense strategy for the United States. In a recent article that I co-authored, *Organizing America for 21st Century Comprehensive Defense*, we highlighted the need for an updated approach to national security:

> *"[i]n today's world, preserving American prosperity, freedoms, and influence requires that the U.S. government architect a comprehensive defense that integrates economic policy as a constituent component of national security policy."*

My background is in strategy, finance and organizational behavior and design. I currently own my own consulting firm providing strategic advice, IP best practices and capability building to organizations looking to get more value out of their IP and other intangibles. Although I am neither a lawyer or technologist, my consulting practice has given me considerable exposure into how organizations make decisions about IP, how they create and execute IP strategies, and how organizations get value out of their IP portfolios, whether as protection, revenue generation, cost reduction, risk reduction, or strategic positioning.

My foray into IP began accidentally. During the 1990s I began to work with seven companies whose Chief Executive Officers (CEOs) had tasked their R&D and Legal executives with finding a way to "explain" their hidden value and ultimately move their stock price. After meeting with me and each other, the answer that ultimately emerged turned out to be understanding and utilizing their intellectual property and other intangibles more effectively and consistently. The industries represented in these initial meetings were quite diverse: chemical, insurance, pharmaceutical, defense, and high technology and included both U.S. and European companies. This group, now grown to roughly twenty companies, has been meeting regularly since 1995 to create, define, benchmark, and describe IP issues, and publish the results. This group, called "The Gathering", has ultimately created a set of definitions, frameworks, and an intellectual property management (IPM) decision system. These tools enable companies to realize the

value of their IP portfolios more fully and to support the companies' corporate strategies and objectives.

In 2001, I co-authored the first book arising from the work of *The Gathering: Edison in the Boardroom*, and a new industry was born. IP was suddenly recognized as more than an artifact of R&D. Now, IP was treated as a value generator for the business. As the group has continued to meet over the 20-plus years, we have continued to learn so much more about IP and other intangibles, particularly their impact on technologies, markets, industries, and economies.

Starting in 2010, I began to focus on issues relating to China. A client project sent me to China to try and determine if the Chinese government would allow non-practicing entities (NPEs) to operate in China. As part of the project, I along with some colleagues, travelled to China and interviewed IP judges, legal scholars, and IP lawyers. What we learned was shocking. Legal scholars and lawyers told us that the Chinese government was forcing Chinese companies to engage in illegal activities when competing with their Western counterparts. Additionally, we learned that the Chinese government would only allow foreign companies to gain a small percentage of the Chinese market and would ensure they were ultimately unable to compete freely in the emerging Chinese marketplace. There were whisperings of a grand Chinese strategy to unseat the United States as the dominant global market leader.

This meant that the Chinese government was systematically undermining hundreds of years of intellectual property doctrines applied in the rest of the world. Historically, emerging and developing countries establish their own IP systems, grow IP awareness and sophistication within their home country, and ultimately open their markets, industries, and economy to free market competition. Until now, every county has followed this general playbook. So began my quest to understand what the Chinese government was doing and how it related to foreign companies, markets, industries and ultimately the world economy and U.S. national security.

I. IP AS A DRIVER OF ECONOMIC GROWTH

Both the Trump and Biden Administrations have made it abundantly clear that economic security is now national security. Many economists also agree. In a recent article about the Ukraine war, for example, Paul Krugman, a Nobel laureate economist noted,

> "National power in the modern world has far more to do with economic strength than it does with military might and also reflects "soft power" — the influence of a country's values and culture. Even when it comes to military prowess, modern wars don't involve much hand-to-hand combat among guys with bulging muscles.

> What they involve, mainly, are strategic duels using long-range weapons, aided by a lot of technology."[1]

In the latest National Security Strategy, The Biden Administration stated,

> "Technology is central to today's geopolitical competition and to the future of our national security, economy, and democracy. U.S. and allied leadership in technology and innovation has long underpinned our economic prosperity and military strength. In the next decade, critical and emerging technologies are poised to retool economies, transform militaries, and reshape the world."

The Under Secretary of Commerce for Intellectual Property and Director of the United States Patent and Trademark Office (USPTO), Kathi Vidal, has been working to tighten the link between economic and technological competitiveness and invention, specifically patents. Currently as the Chair of the Public Patent Advisory Committee (PPAC)[2], an advisory board to the USPTO, we too are working to ensure that the link between IP and economic and technological competitiveness is explicit. Below is an excerpt from the 2022 PPAC annual report to Congress, which points out the dire situation we are currently in:

> *"In the 1970s, the U.S. accounted for roughly 70% of global research and development (R&D). Today, the U.S. accounts for only 16%, well below China's 25%. The National Science Board recently reported that in addition to lagging behind China in R&D output, from 2010 to 2020 the U.S. share of international patenting dropped from 15% to just 10%. In contrast, China's share of international patents increased from 16% in 2010 to 49% in 2020."*

The PPAC Report goes on to observe that before we can reverse this trend and compete with other nations that are truly focused on innovation, we must first acknowledge that the world is embroiled in a global innovation race that may be existential for many countries, including ours. The only way our country can compete in this kind of race is to broaden our base of innovators and encourage more Americans to participate in the invention of new and more diverse and disruptive technologies.

The USPTO has a substantial resource not currently being fully exploited that would be useful for assessing progress, i.e., patent data. Patent data combined with demographic data can help us visualize who is and isn't participating in the ecosystem. It can also help focus efforts on how to reach and attract and incentivize underrepresented inventors into the innovation ecosystem. We can enhance our economic and technological competitiveness by focusing on ensuring inclusion in innovation and invention *processes for all future innovators*. Professor Lisa Cook, a former Edison Fellow for the USPTO and current member of The Board of Governors for the Federal Reserve, has observed that:

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[1] "*What Ukraine Teaches Us About Power*", Paul Krugman, New York Times, January 6, 2023.
[2] All my remarks are my own and not those of PPAC or the USPTO

> *"If we quadruple the number of inventors, we could increase the overall level of U.S. GDP by up to 4.4 percent. For some reference, 4.4% percent of the $23 Trillion U.S. GDP in 2021 represents about $1 trillion in potential annual growth to the U.S. economy."*[3]

Let me be clear. Invention is directly tied to increasing our national Gross Domestic Product (GDP). Maintaining and growing GDP is the job of Congress and the White House. That growth is under threat from adversarial nations. Even without the advent of foreign competition, strategies that would engage more Americans to participate more fully in our economic system is, in and of itself, a positive action. Given the threat from foreign competition, however, a counter strategy to negate that threat has become truly critical.

II. WHAT IS THE CHINESE GOVERNMENT STRATEGY?

In 2020, with co-authors Jeanne Suchodolski[4] and Bowman Heiden[5], we identified the current Chinese government strategy to undermine the economic stability of the United States. This Chinese government strategy, which we called "Innovation Warfare", has been operating since at least 2010, and likely much longer. Our paper called out the need for an effective counterstrategy to negate this new threat. My hope is that at the end of this hearing, you will better understand and agree with this assessment. Below is a paraphrased summary of Innovation Warfare (bolding is mine).

> *The Chinese government is currently utilizing a competitive strategy called Innovation Warfare, which is a systematic and coordinated effort to achieve technical and economic dominance through the use of **legal** and **illegal** means to misappropriate U.S. technology and undermine the innovation ecosystem and our broader economic stability.*

I believe this committee is well versed in the illegal ways that the Chinese government has been misappropriating U.S. IP, technologies, and data. Those efforts include counterfeiting, theft, trade secret misappropriation, espionage, hacking, and digital piracy to name a few. What is new and different is the way that the Chinese government is utilizing **legal** means to also gain access to our technology while also seeking to undermine our innovation systems and economic stability. Manipulating the IP ecosystem for their own gain includes:

- forced technology transfer,
- foreign direct investment
- venture capitalist investment,

[3] 2022 PPAC annual report: https://www.uspto.gov/about-us/organizational-offices/public-advisory-committees/patent-public-advisory-committee-ppac
[4] Director Innovation Protection Policies at the U.S. Navy
[5] Executive Director at The Tusher Center, University California, Berkeley

- creating their own innovations,
- manipulation and use of the U.S. IP system (e.g., overwhelming the USPTO on trademark and patent applications to slow down all IP grants),
- use of courts and the Patent Trial and Appeal Board (PTAB) to eradicate patents while hiding/obfuscating real parties in interest (RPI),
- manipulating standard setting organizations,
- using international courts to try and set worldwide, artificially low, FRAND (fair, reasonable and non-discriminatory) license rates on standard essential patents (SEP) artificially low, thereby robbing U.S. companies of real rates of return (ROI) on their technology development.

All these issues fall under the purview of this Committee and should be reviewed and updated as part of a new strategic objective of utilizing IP to help keep the nation safe and prosperous.

What I would like to discuss more fully is how intellectual property offers the U.S. government a new tool to utilize in this strategic endeavor.

III. DISCUSSION OF PATENTS

A patent is a "negative" right. In theory, the owner of a patent has the right to preclude anyone else from using the patented invention, unless specifically authorized by the patent holder.[6] Patents have another important attribute, as a technology control position. Returning to my Innovation Warfare article:

> *"Patents help innovative entities straddle the dimension of time. Savvy entities protect innovation value streams both in the present and in the future via a portfolio of patents. Many leaders think of intellectual property, and patents in particular, as simply a necessary defensive expenditure. But experienced leaders realize that intellectual property is a type of real option that connects current R&D investments to future benefits inclusive of the ability to control and manage outcomes at a later point in time. The difference between these two points of view is significant. Under U.S. law, a patent is a right to exclude others from making, using, or selling the patented invention. These rights mean that others must have the patent owner's permission to practice the invention claimed in the patent. Therefore, the patent owner "controls" how the patented technology is to be utilized and holds the option to exercise that right throughout the life of the patent. Patents are, therefore, real options on control positions, or simply for ease of discussion, control positions. The real option nature of patents, however, nonetheless provides key insights on their optimum use as control positions. Entities file patent applications hopeful that the resulting patent may prove to be of some use or value in the future. Often one or*

[6] This was largely true until 2006, when the U.S. Supreme Court, in its wisdom, decided to increase the burden on patent owners to obtain injunctions, even against intentional infringers of valid patents. eBay Inc. v. MercExchange, L.L.C., 547 U.S. 388 (2006). This case is one of several such cases that have led in large part to the decline in innovation.

> *more of these future anticipated uses of a patent, such as licensing, technology transfer, influencing standards-setting or other technology adoption, or stopping infringement, fails to materialize. In such a case, the patent option is null. But, if one of these uses were to come about, the patent option is "called" and the patent often assumes a significant amount of value through that use. That value, or future return, varies depending on the precise use and may not materialize at all. Thus, not all patents are equally valuable. Entities, therefore, try to file as many patents to obtain as many options to assert a control position in the future as possible. The first and most obvious means of using patents as control positions is to obtain them at all. Every such control position a U.S. entity obtains is one that its adversaries do not obtain. In the context of Innovation Warfare, patents can be used to own and control relevant technology future(s) for U.S. interests. Either a U.S. company can own and control a relevant patent asset, or the U.S. government can own and control the patent asset. In either scenario, a U.S. entity, not an adversary, owns and controls the patent asset."*

Most executives understand that patents are options on potential technology futures. Companies that are sophisticated about their IP strategy both blanket strategically interesting technology areas with patent options and take efforts to ensure that their desired technology future is one that the industry ecosystem will ultimately choose and accept. In my 30 years of consulting experience, I have either performed this capability for companies or I have embedded this capability within companies for their continued use. Below is a summary of lessons learned and how they can be applied to nation states:

Strategy Matters – no IP-savvy company decides to change the nature or direction of their business or industry without clearly defined innovation and intellectual property strategies that are aligned with their corporate strategy and objectives. This is also true for nation states. The Chinese government publishes 5-year IP plans and tells us specifically what their goals and objectives are for that period. Currently, the United States does not have a clearly defined national innovation strategy nor have we publicly announced any formal national IP goals or objectives. We have not filled cabinet level IP positions and the IP experts we do have across the government are not in agreement on the value of IP to the nation and therefore are issuing conflicting guidance to Congress and the White House. We do, however, have a list of Critical and Emerging Technologies (CET).[7] As a nation, we no longer have the funding to create, own and control all the CET needed to ensure our national security. This presents a conundrum. As was mentioned earlier in the PPAC report, we are no longer the global leader in R&D or technology development. The shift of funding has also changed in the U.S., from 70% government funded R&D, 30% private funding in 1966, to 30% government funding and 70% private funding today.[8] This means that, corporations, academic institutions and inventors are

[7] https://www.whitehouse.gov/wp-content/uploads/2022/02/02-2022-Critical-and-Emerging-Technologies-List-Update.pdf

[8] J. Suchodolski, S. Harrison & B. Heiden, Innovation Warfare, North Carolina Journal of Law & Technology, volume 22, issue 2: December 2020

now in charge of funding and creating the bulk of technology development in our country today. Because we are a democracy, we do not have the power of a centralized economy, where the government issues directives and all private and public actors rush to comply. Instead, we must consider how best to motivate the public and private sectors to work harmoniously to achieve a common objective. The most successful innovation directive outside of wartime, was the Kennedy Administration's goal of being the first nation to put a man on the moon. Not only did both the public and private sectors work together harmoniously to achieve this goal, but the subsequent innovations fueled continued economic growth for the next 20+ years. We are desperately in need of a new moonshot goal to unite both the public and private sectors in keeping our nation safe and prosperous.

Data is Vital – perhaps the most interesting aspect of adding IP into the national security toolbox, is the ability to use patent data to "visualize" the emerging economic and technological battlefields. Former Admirals and Generals that I have spoken with are very excited to be able to "see and possibly predict" where economic and technological battlegrounds will be in the future. Again, given the future oriented nature of patents, utilizing patent data allows us to visualize likely confrontations, issue course corrections and/or determine if government intervention is warranted. While patent data is useful, because it is standardized and collected by all countries with an intellectual property regime worldwide, it is currently only a static point in time measure. The Australian Strategic Policy Institute (ASPI) issued a report *Policy Brief: ASPI's Critical Technology Tracker: the global race for future power* which evaluates the state of critical and emerging technology of various countries. The research was partly funded by U.S. State Department's *Global Engagement Center*. This report indicates that China leads in 37 out of 44 technologies and a key area where China excels in is defense/space-related technologies. The U.S. currently leads in high performance computing, quantum computing, and vaccines. These kinds of reports are helpful, but do not indicate whether the battle is lost or if change is still possible. The report does not make a value judgement as to whether the patents issued matter technologically or not. Companies could have received numerous patents on technologies that are tangential to our preferred technological future. More specifically, does the U.S. own key technology control positions or does an adversary? It is vital to understand where the U.S. stands vs. allies and adversaries across multiple technology trajectories for each of the critical and emerging technologies. Another important fact to note, for companies, what matters is what patents they own, or control compared to their competitors. Nation states do not own patents, therefore understanding the patent landscape and whether a given entity is owned or controlled by a friendly or adversarial nation state is critical and oftentimes difficult to determine.

There is currently a new type of forecasting analysis, Future-Oriented Technology Analysis (FTA), that combines patent data with business and technological data to provide predictive technology forecasting capabilities. FTA was created in Korea, and it is utilized heavily in China.

The Chinese government often provides this analysis to Chinese companies to help them utilize IP more effectively as part of their competitive strategies. The United States does not currently have this capability deployed meaningfully in either the public or private sectors. It is not clear who is tasked with creating and mastering FTA capability either. What this Committee can do, is to task the USPTO with exploring and understanding FTA capability and to work collaboratively with the Department of Defense (DoD) and the Department of Commerce (DOC) to ensure this capability is utilized for the benefit of the nation.

Top-Down Communications - In companies, when management starts a new and large initiative, top-down mandates are crucial to ensure that the employees understand and will comply with the new initiative. The same applies here as well. No one has effectively communicated the importance of IP to the nation.[9] Nor that China is running a strategy to harm us economically and technologically, and that both Chinese and many American companies are unwittingly on the front lines of this new battle. Why is this important? Because as a whole U.S. companies have no idea this is happening or how it adversely affects them in the marketplace today or in the future. When messaging the problem, companies should be provided data about the size and scope of the problem. Companies should also be informed what tools are needed or have been created to assist them if they are being targeted or experiencing a competitive nation state issue. Identifying a defined agency in charge of collecting data from companies who experience or "see" Innovation Warfare behavior in their markets or industries is necessary. All these activities fall squarely within the confines of this Committee.

What Can This Committee Do?

1. **Create A Plan**
   Given this new reality, we need a **new plan**, one that involves our Allies, to:
   a) make strategic public and private investments in Critical & Emerging Technologies (CET),
   b) message the importance of innovation and inventorship to companies and inventors in both the public and private sectors, and
   c) ensure continued western technology dominance.

2. **Create a Consistent Narrative On How IP Can Help the Nation and Put Someone in Charge**
   Develop a clear understanding of how IP can help the nation. This Committee should charter the Department of Defense, the Department of Commerce and the USPTO to issue a joint report to Congress on how to optimize the IP ecosystem to help the nation utilizing patent data and Future-Oriented Technology Analysis (FTA) around Critical & Emerging Technologies and this Committee can then use that report to implement legislation to optimize the system towards improving national security and

[9] Indeed, many academics, government officials and judges identify themselves as IP "skeptics." Several Supreme Court Justices also fit into that group. Congress is the only possible institution to restore and revive an effective patent system if that is ever to occur.

competitiveness.

3. **Put "Control" Back into the Technology Control Position**
   The concept of a **technology control position only works if patents can exclude.** Over the past 20+ years the Supreme Court has significantly eroded the ability of a patent to exclude others. Congress needs to restore this fundamental right and reduce the ambiguity across the IP ecosystem in areas such as obviousness, eligibility, claim construction, damages, and more. It is important that when making any changes to the IP ecosystem, Congress do so in ways that do not hinder industry's ability to utilize patents in ways that create value for them.

4. **Define a role for the USPTO in the Innovation Warfare Counterstrategy**
   IP data is a useful tool to help us "visualize" these new economic and technological battlefields. The USPTO currently has the data, technologically astute workforce, and the desire to participate in this new area. Congress should define an expanded role for the USPTO to:
   a) expand their existing analytic capabilities,
   b) help to define their role in the Innovation Warfare counter strategy and,
   c) require them to develop, utilize and share the results of FTA.
   Congress should also expand the USPTO's mandate to ensure inventor demographic data to collected to enable Congress to see at a more granular level, who is and is not participating in our innovation and inventorship ecosystem and better grow GDP and enhance national security.

Thank you for your invitation to speak here today, and I look forward to your questions.

U.S. Chamber of Commerce

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April 13, 2023

The Honorable Chris Coons
Chair
Subcommittee on Intellectual Property
Committee on the Judiciary
United States Senate
Washington, DC 20510

The Honorable Thom Tillis
Ranking Member
Subcommittee on Intellectual Property
Committee on the Judiciary
United States Senate
Washington, DC 20510

Dear Chairman Coons and Ranking Member Tillis:

The U.S. Chamber of Commerce's ("the Chamber") Global Innovation Policy Center ("GIPC") submits these written comments for the record in conjunction with its oral testimony for the Tuesday, April 18 hearing entitled "Foreign Competitive Threats to American Innovation and Economic Leadership," focusing on the impacts of counterfeit goods and streaming piracy and their threats to intellectual property ("IP") and innovation, particularly within the Chinese market. As the world's largest business federation, representing some of the most innovative companies and industries worldwide, we appreciate the opportunity to share our thoughts and research on such an important topic that affects all industry sectors.

The Chamber strives to ensure policymakers and the United States' multilateral allies are engaged in data-driven policy discussions to inform the debate regarding the critical role intellectual property plays in advancing global frameworks that foster innovation and creativity.

The protection of robust IP requires a global approach. Successful IP enforcement is often a result of extensive public-private sector collaboration that builds ecosystems of mutual trust and ingenuity. This partnership ensures economies can benefit from the fruits of IP-driven innovation while also protecting consumers against harmful and substandard counterfeit goods. As such, the Chamber is especially concerned that theft of American IP from foreign countries, including China, undercuts American innovation, jeopardizes our economic growth, and endangers U.S. national security.

The Chamber looks forward to working with Members of Congress to find solutions that will protect American innovation and creativity and safeguard our IP rights. We would like to emphasize five points about the role of IP rights in fostering a framework that advances ingenuity, protects the U.S. business community's investment in innovation, and protects American consumers from theft of U.S. intellectual property.

I. **IP underpins the growth of an effective global innovation ecosystem**.

The global pandemic demonstrated the power of IP-enabled innovation, with multiple safe and effective vaccines and therapeutics developed in record time. Innovation occurs along a lifecycle and across a multi-stakeholder ecosystem of private industry, financial markets, government agencies, research universities, and scientific institutions. This ecosystem collectively advances knowledge and develops, tests, and commercializes new technologies that have revolutionized and enhanced the lived human experience. Public-private sector collaboration across the ecosystem is critical to ensuring that the fruits of the innovation ecosystem are realized and reach end-users to save and transform lives.

According to the National Science Foundation, three-quarters of research and development ("R&D") taking place throughout the U.S. innovation ecosystem is performed by the private sector, whose investment relies on effective IP laws and supporting regulatory frameworks backed by a commitment to the rule of law. As in the case of mRNA, many new technologies require decades of R&D before reaching a form where they can reach an end-user as a new product or service. IP rights serve a critical economic function as a guarantor of investment in these long-term, high-risk, capital-intensive projects. Without this, it would be impossible for private sector actors, especially financial markets, to allocate resources to such activities instead of other less risky or time-consuming alternatives.

In the U.S. ecosystem, innovation is rarely monolithic: ideas, know-how, data, and rights change hands frequently among public, private, and academic stakeholders. Within this ecosystem, IP rights serve as a medium for exchange and a store of value. They enable diverse partners to mutually assess and reach an agreement on the relative value of the assets that each brings to a partnership. Where IP rights and/or the rule of law are weak, this frictionless exchange breaks down with the result that entities are incentivized to hoard their knowledge rather than make it available to partners on agreed and enforceable terms.

Underscoring the importance of implementing a baseline for IP protection, the U.S. Chamber International IP Index (the "Index") illustrates the socio-economic benefits associated with a conscious, policy choice to invest in stronger IP frameworks.[1] For example, the Index illustrates that economies with the most effective IP frameworks are 40% more attractive to foreign investment, are 32% more likely to see private-sector investment in R&D and have almost double the innovative output as economies whose IP system lags behind. For the global innovation ecosystem to continue to thrive, it is critical to have an effective framework for protecting and enforcing IP rights.

II. A Range of Threats - Ongoing debates at multilateral organizations threaten to dismantle a global IP system already under duress.

From pervasive systemic threats at the multilateral level to relentless piecemeal national-level attacks, U.S. IP is at risk overseas like never before. Outright IP infringement, online piracy,

[1] See *2022 Statistical Annex to the U.S. Chamber International IP Index* at https://www.valueingenuity.com/wp-content/uploads/2022/04/GIPC_IPIndex2022_StatAnnex_v2-1.pdf

counterfeiting, cyber-hacking, trade secret theft, erosion of legal rights, forced technology transfer, political stigmatization of IP, and outright waiver of global IP commitments all contribute to an environment of heightened vulnerability for American innovators and creators around the world.

WTO TRIPS Waiver and Other Multilateral Threats

IP weakening measures, such as the TRIPS waivers that have been agreed to or proposed at the World Trade Organization ("WTO"); in the World Health Organization ("WHO") Pandemic Treaty Zero Draft; with respect to revisions to the WHO International Health Regulations; in the United Nations High Level Panel on Pandemic Preparedness and Response; and in the United Nations Framework Convention on Climate Change, are proliferating at the national, plurilateral and multilateral levels.

Given IP's vital role in supporting investment in innovation, U.S. leadership in advancing strong, rules-based global IP standards is critical. The Chamber is grateful for the U.S. government's legacy efforts to promote and protect IP worldwide. However, the Chamber was alarmed by the U.S. government's unprecedented support for the waiver of WTO TRIPS commitments related to COVID-19 vaccines, which will disrupt the IP ecosystem that enabled American industry's highly effective response to the pandemic and undermine future American innovation. This marks a radical departure from long-standing, bipartisan U.S. policy.

Proposals to expand the waiver to therapeutics and diagnostics will only compound threats to American competitiveness and sabotage investment in other IP-intensive sectors, including digital, green, and agricultural technologies that are central to the response to current and future crises. With renewed U.S. leadership at multilateral organizations in support of a strong, global framework of IP rules, it is not too late to stem the damage from the initial waiver and preserve American jobs, foster ingenuity, and protect U.S. national security.

IP Theft and Erosion Takes Many Forms

The theft and erosion of IP standards are widespread globally and are in no way confined to one particular nation or economy. The Chamber, other trade organizations, and industry leaders have extensively documented the scale of IP theft and erosion. The Index—which benchmarks the IP framework in economies representing nearly 90 percent of global gross domestic product (GDP)—and the Chamber's annual Special 301 submission highlight the business community's concerns with the absence of effective standards of IP protection in key global markets. Examples of this theft and erosion covered in the Index and Special 301 submission include:

- The use of compulsory or government use licenses for a COVID-19 treatment in Hungary and Indonesia;

- The mass distribution and use of unlicensed and pirated software in India and Brazil;
- The absence of sufficient standards for regulatory data protection across many regions of the world, including the Indo-Pacific, Latin America, the Middle East, and Africa; and
- Gaps in patent term restoration in both emerging and developed economies alike, from Israel and Canada to Chile and India;

III. **Counterfeiting - Public-private partnership can successfully combat widespread counterfeiting operations that endanger U.S. consumers.**

In recent years, studies by the Chamber, the Organization for Economic Cooperation and Development ("OECD"), and others have shown global trade in illicit goods taking place on a massive scale, with significant ramifications for consumer health and safety, jobs, and economic growth. Working with both public and private sector partners, the Chamber and other key stakeholders are innovating to meet the challenge. The Chamber is leading efforts to facilitate information-sharing between the public and private sectors through groundbreaking partnerships, including a first-of-its-kind Memorandum of Understanding with U.S. Customs and Border Protection ("CBP"). Congress, meanwhile, added critical transparency to the online market space with the recent passage of the INFORM Consumers Act, and has an opportunity for further progress by ensuring that law enforcement agencies at both the federal, state, and local levels have the resources they need to successfully protect brand owners from trademark infringement, and consumers from dangerous fake products.

Illicit Trade on a Massive and Damaging Scale

In a series of studies compiled over a six-year period, the Organization for Economic Cooperation and Development and EU Intellectual Property Office have consistently reported that trade in counterfeit and pirated goods reaches upwards of $500 billion, and a significant percentage of global trade. The most recent study, reflecting 2019 data, estimates that the volume of international trade in counterfeit and pirated (non-digital) products amounted to as much as $464 billion in that year, or 2.5% of world trade.[2] These results rely on customs seizure observations and do not include pirated digital content on the Internet. In its own proprietary study of global counterfeiting trends, the U.S. Chamber of Commerce reached similar conclusions.[3]

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[2] See OECD study *Global Trade in Fakes A Worrying Threat* at https://euipo.europa.eu/tunnel-web/secure/webdav/guest/document_library/observatory/documents/reports/2021_EUIPO_OECD_Report_Fakes/2021_EUIPO_OECD_Trate_Fakes_Study_FullR_en.pdf

[3] See U.S. Chamber of Commerce study *Measuring the Magnitude of Global Counterfeiting* at https://www.uschamber.com/assets/archived/images/documents/files/measuringthemagnitudeofglobalcounterfeiting.pdf

The OECD finds fakes prevalent across all types of goods, "including common consumer products (clothing, footwear), business-to-business products (spare parts, pesticides), and luxury items (fashion apparel, deluxe watches)." Both studies highlight the risk to health, security, and safety:

> "First and foremost, counterfeit goods jeopardize consumers and pose a serious safety risk: fake toys contain hazardous and prohibited chemicals and detachable small parts; brake pads made of compressed grass; counterfeit microchips for civilian aircrafts; all these and many more may and tragically already have led to injuries and deaths. Counterfeit products also result in detrimental effects on economies due to decreased innovation, loss of revenue and taxation, and higher employment rate. Disturbingly, a growing body of evidence draws a clear link between physical counterfeiting and terrorist groups which exploit the easy-made money and high profit margin to fund terror activities around the world."[4]
> – U.S. Chamber of Commerce

"These include fake pharmaceuticals in particular, but also food, cosmetics, toys, medical equipment and chemicals,"[5] adds the OECD.

The Chamber study found China alone to be the source for more than 70% of global physical trade-related counterfeiting, accounting for the equivalent of 12.5% of China's exports of goods and over 1.5% of its GDP. China and Hong Kong together are estimated as the source for 86% of global physical counterfeiting.[6] The OECD adds that, "[w]hile counterfeit and pirated goods originate from virtually all economies in all continents, China remains the primary economy of origin."[7]

During the COVID-19 pandemic, e-commerce surged as consumers turned to online markets to make many of their purchases. Significant growth in e-commerce corresponded with an increase in the number of counterfeits for purchase online. Fake goods included not only medicines and personal protective equipment (PPE), but also household and consumer goods, apparel and accessories, and kitchen appliances. The increase in online shopping also meant that fakes were being delivered directly to the consumer's front door via small parcels. Small parcels pose a significant enforcement challenge due to their sheer quantity.[8]

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[4] Id.
[5] See OECD study *Global Trade in Fakes A Worrying Threat* at https://euipo.europa.eu/tunnel-web/secure/webdav/guest/document_library/observatory/documents/reports/2021_EUIPO_OECD_Report_Fakes/2021_EUIPO_OECD_Trate_Fakes_Study_FullR_en.pdf
[6] See U.S. Chamber of Commerce study *Measuring the Magnitude of Global Counterfeiting* at https://www.uschamber.com/assets/archived/images/documents/files/measuringthemagnitudeofglobalcounterfeiting.pdf
[7] See OECD study *Global Trade in Fakes A Worrying Threat* at https://euipo.europa.eu/tunnel-web/secure/webdav/guest/document_library/observatory/documents/reports/2021_EUIPO_OECD_Report_Fakes/2021_EUIPO_OECD_Trate_Fakes_Study_FullR_en.pdf
[8] Id.

The Chamber has found that the "economic damage sustained from counterfeit goods is significant," affecting the economy at large.[9] Consumers encounter products that fail to meet expectations and that may be unsafe; this in turn undermines a brand's integrity and customer trust. Specifically, IP owners sustain not only direct losses due to decreased market share, but also irreparable damage to the brand's reputation and dilution of the brand, along with costs related to defending their intellectual property rights.

Public-Private and Private-Private Partnerships

These challenges have spurred considerable effort and ingenuity from the public and private sectors alike – and, increasingly, in partnership. In April 2021, the Chamber, and the GIPC commenced a Secondee program with the Department of Homeland Security ("DHS"), Homeland Security Investigations ("HSI"), National Intellectual Property Rights Coordination Center ("the National IPR Center") to combat the illicit movement and trade of counterfeit products. With approval from the HSI Office of the Principal Legal Advisor, the secondee represents the Chamber and its members at the National IPR Center and acts as a conduit between the private sector and U.S. government to exchange actionable intelligence in a timely manner. This real-time information sharing has facilitated identification of individuals involved in the smuggling of counterfeit goods, which then is used to issue search warrants and seize fake goods.

Soon after inception of the Secondee program, the Chamber and DHS, U.S. Customs and Border Protection ("CBP") established a historic Memorandum of Understanding (MOU) founded on pillars such as information sharing, consumer awareness, and public-private trainings to enhance intellectual property rights enforcement. Since the signing of the MOU in May 2021, CBP has added personnel to meet the flow of data from Chamber members which has increased the ability of the Chamber Secondee to work with CBP to share relevant data on potential exporters and importers shipping counterfeit goods. CBP can analyze this data and use it for targeting purposes to generate leads for HSI.

Congressional Action: Laws and Resources

The Chamber applauds Congress for the recent passage of the INFORM Consumers Act, which enhances seller transparency on online platforms. The legislation is a landmark effort to protect brand owners from having their intellectual property stolen by bad actors and protect consumers from falling prey to counterfeiters aiming to utilize an online marketplace to peddle fake goods.

The Chamber recommends the continued funding of federal, state, and local law enforcement efforts to combat IP theft and the prevalence of counterfeit goods entering our country. The Chamber supports increased funding for the Intellectual Property Enforcement Program within the Department of Justice ("DOJ"). The grant program awards state, local, and

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[9] See U.S. Chamber of Commerce study *Measuring the Magnitude of Global Counterfeiting* at https://www.uschamber.com/assets/archived/images/documents/files/measuringthemagnitudeofglobalcounterfeiting.pdf

tribal jurisdictions funds to prevent and reduce IP theft and related crime and supports law enforcement efforts to investigate and prosecute IP crime, including violent crime associated with IP theft investigations.[10] Additionally, the Chamber supports the mission and activities of DHS's National IPR Center and supports funding for the dedicated placement of federal law enforcement agents at the National IPR Center to enable greater collaboration between government agencies charged with preserving IP and protecting the American public.

IV. **Piracy - Similar collaborations between government and stakeholders are needed to effectively fight piracy.**

Digital Piracy Has Accelerated

While advancing technology and evolving distribution methods enable consumers to stream content like movies, music, and video games from virtually any device, the door is also opened to digital pirates aiming to illegally stream licensed content to a growing consumer base. This poses a significant threat because the copyright industry employs over five million Americans and accounts for nearly 12% of the overall U.S. economy.[11]

According to a 2019 Chamber study, Impacts of Digital Video Piracy on the U.S. Economy, more than 80% of digital piracy is attributed to streaming, and although there are significant benefits that streaming brings to the U.S. economy, those economic gains are capped by the extreme cost of digital piracy.[12] Online piracy cost 290,000 creative professionals their jobs in 2020 as well as almost $30 billion in lost revenue, and furthermore, digital piracy causes losses to the U.S. economy of between 230,000 and 560,000 jobs and between $47.5 billion and $115.2 billion in GDP every year.[13]

Effective online enforcement against the theft of creative works is grounded in a robust and modernized copyright framework. Creators across the African content have expressed serious concern about their ability to protect their works from theft and to make a living at their craft. Strong copyright protections ensure the benefit of these local creators, as well as the U.S. creative industries who are working in, partnering with, and exporting to these markets. As the Administration seeks to deepen ties between the U.S. and African creative industries, it must also work with governments to modernize their copyright laws and ensure that all creators have the benefit of meaningful and modernized copyright protections.

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[10] See DOJ *Intellectual Property Enforcement Program* at https://bja.ojp.gov/funding/opportunities/o-bja-2022-171289

[11] See Digital Creator Coalition *2022 Digital Discover Report* at https://irp.cdn-website.com/39c12a3c/files/uploaded/DigitalDiscoveryReport-2022.pdf

[12] See U.S. Chamber of Commerce report *Impacts of Digital Video Piracy on the U.S. Economy* at https://www.theglobalipcenter.com/wp-content/uploads/2019/06/Digital-Video-Piracy.pdf

[13] See Digital Creator Coalition *2022 Digital Discover Report* at https://irp.cdn-website.com/39c12a3c/files/uploaded/DigitalDiscoveryReport-2022.pdf

V. **China - The United States can play a leading role in addressing the theft of IP from foreign competitors.**

The U.S. innovation ecosystem empowered the U.S. to become the world's leading producer of innovative and creative goods and services. Effective protection and enforcement of IP rights are the backbone of America's leadership on ingenuity. The Chamber is concerned that theft of American intellectual property will jeopardize our ability to continue to lead the world on IP-driven innovation.

The Chamber appreciates the Committee's focus on countering IP theft by foreign competitors, including China. When China acceded to the WTO in 2001, the global business community was hopeful that alignment with WTO standards, including the TRIPS Agreement, would mitigate China's widescale counterfeiting efforts. However, China remains a hotbed of counterfeit production and dissemination, which pose a serious threat to American innovation and creativity and the well-being of global consumers. The production, sale, and distribution of these counterfeit and pirated goods hurts American businesses and consumers and undermines the foundational IP rights that form the cornerstone of our economic system.

Intellectual property theft by "far away" bad actors is not a victimless crime. Theft of IP rights through the production and sale of counterfeit and pirated goods continues to harm legitimate businesses by robbing them of creative ownership, fair market competition, and profits earned.

For this reason, the Chamber remains committed to encouraging the Chinese government to strengthen IP protection and enforcement. The Chamber acknowledges that since the U.S. and China concluded the Phase One Economic and Trade Agreement (the "Phase One Agreement"), the government introduced a series of legislative and regulatory changes, including:

- The PRC Patent Law, amended in October of 2020, with revisions that took effect in June of 2021.
- The China National Intellectual Property Administration (CNIPA) issued new rules on trademark usage that took effect on January 1, 2022.
- The PRC Copyright Law, amended in November of 2020, with revisions that took effect in June of 2021.
- The State Administration of Market Regulation circulated draft revisions to the PRC Anti-Unfair Competition Law in November of 2022.
- The PRC Anti-Monopoly Law, amended in June of 2022, with revisions that took effect in August of 2022.

Challenges remain even amidst these changes. Many of our members in the pharmaceutical industry remain frustrated that China is yet to implement a meaningful patent term adjustment and patent term extension mechanism as part of the patent linkage system stipulated in the Phase One Agreement. We have also voiced concerns over the invocation of antitrust measures to compel U.S. companies to license their technology at suppressed rates, particularly for standard

essential patents.[14] We do hope, however, that the proposed revisions to the Anti-Unfair Competition Law will be an impetus for statutory damages with teeth for trade secret infringement and a lunching point for meaningful action on digital piracy.

Perhaps most notably for this hearing, China's amendments to its Copyright Law from November 2020 broadly aligns with the development of China's cultural industry over the past several years and under the Phase One Agreement. While the amendments are mainly geared towards strengthening digital copyright protections, they simultaneously strengthen and increase penalties for general copyright infringement. The new law includes discussion of protections for audio-visual works that are common in today's digital environment, including webcasts and short videos.

As noted in the Chamber's Special 301 submission and in the Index, there has been some progress in recent years in China regarding government enforcement against the distribution of infringing content via online piracy. Chinese authorities have begun to crack down on the illegal distribution of content, and rights-holders have successfully sued websites engaged in brazen infringement. However, China still lacks adequate tools to encourage cooperation with internet intermediaries, ensure rapid takedown of infringing content, act against repeat infringers, and provide proactive measures to address piracy.

Compounding existing issues with online piracy in China, piracy devices including media boxes, set-top boxes, or other devices that allow users, through piracy apps, to stream, download, or otherwise access unauthorized content from the internet are increasingly available in China. Piracy devices are part of a sophisticated and integrated online ecosystem facilitating access to pirated audiovisual materials. These devices have emerged as a significant means through which pirated motion picture and television content is accessed on televisions in homes in China. China is a hub for manufacturing these devices, which are openly and explicitly promoted and advertised for enabling copyright infringement or other illegal activities. Chief among these activities are:

1. Enabling users to access unauthorized decrypted motion pictures or television programming;
2. Facilitating easy access, through apps, to remote online sources of unauthorized entertainment content, including music, music videos, karaoke, motion pictures and television programming, video games, and published materials; and
3. Preloading the devices with infringing apps that provide access to hundreds of high-definition (HD) motion pictures prior to shipment or allowing vendors to load content upon import and prior to sale, or as an "after sale" service.

The longstanding issue of piracy in China stems from the challenges related to the distribution copyrighted content in the market. Extensive market access barriers limit the

[14] See U.S. Chamber of Commerce report *U.S. Antitrust Legislative Proposals: A Global Perspective* at https://www.uschamber.com/assets/documents/U.S.-ANTITRUST-LEGISLATIVE-PROPOSALS-A-GLOBAL-PERSPECTIVE-FINAL-LOCKED-2.16.22.pdf

admission of legitimate content, which fosters a market that thrives on piracy. To meaningfully address the challenges surrounding piracy in China, the U.S. government should focus on the bigger problem of foreign piracy sites aimed explicitly at the U.S. and other lucrative foreign markets. The 2022 Notorious Markets report shows that that this is a key concern for U.S. stakeholders.

For example, if the infringing website is based in the U.S., American authorities have the power to shut it down and take other necessary criminal and civil actions against hosting actors. In the U.S., this most recently occurred through the District Court for the Southern District of New York ruling that ordered U.S. Internet service providers (ISPs) to disable access to infringing content online.[15] Likewise, many other jurisdictions provide tools that allow rights holders to act against foreign-based infringing sites through the application of injunctive style relief or dynamic injunctions. The Index details how economies around the world—from EU Member States to India to Singapore—use these types of mechanisms that allow rightsholders to seek and gain effective relief against copyright infringement online.[16] However, China does not have a similar mechanism in place to address infringing content. The Chamber encourages the Committee consider how the application of similar tools could be used to combat the pervasive piracy emanating from China.

Like online piracy, online counterfeiting remains a significant challenge in China. The explosive growth of online transactions in China has fueled online sales of counterfeit goods and the upstream manufacturing and distribution of these goods. In 2015, a report to Chinese lawmakers found that more than 40% of goods sold online in China were either counterfeit or of "bad quality." A survey by the China Consumer Association in 2018 revealed that over 70% of customers had purchased counterfeit goods online. Respondents believe counterfeit goods are the most severe problem on online platforms. Over half of the online-shopping customers surveyed have purchased counterfeits from cross-border online platforms. Additionally, the popularity of counterfeit goods on social media sites has also become a new and distinct challenge for rightsholders in China.

It is for these reasons, and many more, that China currently leads the world in counterfeit and pirated products. In fact, according to the 2023 Notorious Markets Report, "Counterfeit and pirated goods from China, together with transshipped goods from China to Hong Kong, accounted for 75% of the value of counterfeit and pirated goods seized by U.S. Customs and Border Protection in 2021."[17] These staggering numbers are aided by approximately 6 major online markets (most notably WeChat) and 10 physical markets identified by U.S. officials that are reportedly engaging in or facilitating "substantial trademark counterfeiting or copyright piracy" in China.[18] The Chamber is grateful that the U.S. government acknowledges the scale of counterfeiting and piracy in China, and we look forward to working with members of the

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[15] See *2023 U.S. Chamber International IP Index* at https://www.valueingenuity.com/wp-content/uploads/2023/02/GIPC_IPIndex2023_FullReport.pdf
[16] Id.
[17] See USTR report *2022 Review of Notorious Markets for Counterfeiting and Piracy* at https://ustr.gov/sites/default/files/2023-01/2022%20Notorious%20Markets%20List%20(final).pdf
[18] Id.

Committee and the Hill to address the theft of IP through the proliferation of counterfeit and pirated goods.

Closing

It has never been more evident that foreign threats to intellectual property rights, particularly China's ongoing abuses, pose a significant challenge to the economic and national security interests of the United States and American business community.

While progress has been made in recent years to address these issues through policy and legal means, particularly through the Phase One Agreement with China, much more must be done. Congress must continue to prioritize and invest in efforts to protect American innovation and creativity, including through targeted measures that increase transparency and accountability for those who violate IP rights and enforce the agreements on the books and with our trading partners.

Doing so will require close collaboration with our international and multilateral partners to establish clear rules and enforceable standards. Strong U.S. leadership will be indispensable to protecting American IP rights, securing our economic growth, and safeguarding U.S. national security. The Chamber looks forward to working the Congress and the Administration to strengthen our defenses and safeguard American innovation for generations to come.

Sincerely,

Patrick Kilbride
SVP, Global Innovation Policy Center
U.S. Chamber of Commerce

cc: Members of the Senate Committee on the Judiciary, Subcommittee on Intellectual Property

Testimony before the Subcommittee on Intellectual Property of
the Senate Committee on the Judiciary

"Foreign Competitive Threats to American Innovation and Economic Leadership"

Matt Turpin

April 18, 2023

Chairman Coons, Ranking Member Tillis, and other members of the Committee, thank you for inviting me to testify.

Although I am a Senior Advisor at Palantir Technologies and a Visiting Fellow at Stanford University's Hoover Institution, the views I express here today are my own and are shaped by the last dozen years focused on U.S.-China policy during the Obama and Trump Administrations in the Department of Defense, the Commerce Department, and serving on the staff of the National Security Council as the China Director.

A decade ago, Admiral Dennis Blair and Governor Jon Huntsman chaired the Commission on the Theft of American Intellectual Property. Their work revealed that the United States suffered over $300 billion of annual economic loss due to IP theft and economic espionage primarily by the People's Republic of China (PRC), along with the loss of millions of jobs. The Commission's updates in 2017 and 2021 reveal that these losses have not substantially changed. That is over $3 trillion in losses for just the past decade and there is reason to believe that the number could be much higher.[1]

Starting in late 2017, the Office of the U.S. Trade Representative conducted an investigation under Section 301 of the Trade Act to examine unfair trade practices by the PRC, specifically whether the PRC Government's laws, policies, practices, or actions harm American intellectual property rights, innovation, and technology development. That investigation, which took place over six months, revealed four elements of Beijing's technology transfer regime:

1. The use of opaque administrative processes, joint venture requirements, foreign ownership limitations, and other mechanisms to require or pressure the transfer of valuable U.S. technology and intellectual property to the PRC;
2. PRC government actions and policies that deprive U.S. companies of the ability to set market-based terms in technology-related negotiations;
3. The PRC government direction and unfair facilitation of outbound Chinese investment targeting U.S. companies and assets in key industry and technology sectors; and

[1] *The Report of the Commission on the Theft of American Intellectual Property*, May 2013, https://www.nbr.org/program/commission-on-the-theft-of-intellectual-property/

4. The PRC government's support of economic espionage using human and cyber tradecraft, to include direct participation by PRC intelligence services like the Ministry for State Security.[2]

The IP Commission, the Section 301 Investigation, and dozens of criminal prosecutions by the U.S. Justice Department over multiple Administrations, expose a truth that many have been reluctant to acknowledge: the United States is the victim of a comprehensive and intentional campaign by the People's Republic of China involving criminal acts, espionage, market manipulation, and government policies which result in grave economic and national security harms.

We should face the reality that the cost of these harms exceed the benefit Americans gain from our economic relationship with China.

While often relegated to the conference tables of trade negotiations or court rooms for specific cases, this comprehensive state-sponsored campaign strikes at the very heart of our economy, and the economies of our Allies, and endangers the qualitative military advantage that constitutes our deterrence against both Beijing and Moscow.

Our economy, while broad and diverse, relies upon a foundation of innovation and technology leadership. That foundation is reinforced by a constitutional and legal superstructure, supervised by this Committee, that guarantees property rights, contracts, and transparency which incentivizes innovation and free markets over mercantilism and state control. Our legal and social structures create the environment for innovation, technological development, and prosperity that is the envy of the world. Gaining unfair access to our innovation economy remains a top priority for the PRC as it has yet to successfully create an alternative system.[3]

Our national security is built upon a qualitative military advantage which offsets the quantitative and/or geographic advantages of our potential adversaries. This qualitative advantage creates deterrence by persuading potential adversaries that the costs of military aggression will exceed the benefits they could gain. To create this qualitative military advantage, the U.S. military depends upon unequal access to technological advantages generated by our innovation economy.

In other words, as our innovation economy creates technological breakthroughs, the U.S. military and our allies field those breakthroughs first, maintaining a qualitative military advantage and providing us with the capability to deter aggression by rivals. This strategic logic

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[2] *Findings of the Investigation into China's Acts, Policies, and Practices Related to Technology Transfer, Intellectual Property and Innovation Under Section 301 of the Trade Act of 1974*, Office of the United States Trade Representative, March 22, 2018, https://ustr.gov/issue-areas/enforcement/section-301-investigations/section-301-china/investigation

[3] That is not to say that the PRC cannot succeed or that it has not had success in some areas of innovation. On the whole, the PRC still relies on access to American and allied innovation economies to drive their own growth and prosperity.

has served as America's basic approach in deterring aggression since the end of the Second World War.

The Chinese Communist Party is attacking this dynamic system with its comprehensive campaign of forced technology transfer and economic espionage. Beijing seeks to rob the United States and its allies of these economic and national security advantages. In doing so, the PRC abuses its access to a globalized economic system, which is "expressly based on the principles of non-discrimination, market access, reciprocity, fairness and transparency" to create opportunities for itself at the expense of the United States and other open societies.[4] These opportunities provide Beijing with the means to remake the international system into one that protects the interests of authoritarian regimes and undermines those countries committed to democratic principles and market economies.

Our law enforcement and judicial systems are designed to deal with specific crimes, yet what we have experienced over the past three decades has be a coordinated, comprehensive, and consistent effort by the PRC to acquire the technology and knowhow necessary to confront and disadvantage the United States in the economic and military domains.

As this Subcommittee well knows, the United States has extensive layers of protection. We have a export control regimes for both weapons and dual-use items, we have a system for reviewing foreign direct investment into the United States, we restrict U.S. companies and individuals from doing business with or investing in some of the most egregious Chinese state-owned defense companies, and we have robust legal enforcement mechanisms which have successfully prosecuted individuals breaking our laws. Dedicated and hard-working Americans across Departments and Agencies go to work every day to protect us from this hostile campaign.

Unfortunately, the PRC adapts its strategy and tactics to exploit the gaps and seams in our protective layers more rapidly than we can adapt. Additionally, PRC entities, acting at the direction of the PRC Government, weaponize the U.S. legal system against Americans and our national interests, whereas our companies and individuals lack reciprocal access to PRC courts. To date, we have done relatively little to impose costs on those PRC entities that benefit from this campaign.

This is no longer a problem that can be relegated to trade negotiations, quiet diplomacy with Beijing, or individualized criminal prosecutions. The United States must consider a shift to holding the PRC, and its commercial entities, collectively responsible for their actions. Episodic and uncoordinated responses by individual Departments and Agencies, or from across individual companies and our research enterprise, are insufficient for the challenge.

Recommendations:

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[4] *China's Trade-Disruptive Economic Model: Communication from the United States to Members of the World Trade Organization*, Office of the United States Trade Representative, July 11, 2018, https://docs.wto.org/dol2fe/Pages/SS/directdoc.aspx?filename=q:/WT/GC/W745.pdf

1. Identify the beneficiaries of IP theft, forced technology transfer, and economic espionage. Rather than focus on just the individuals and commercial entities that directly commit crimes, the United States should focus on determining those who benefit from these activities.

2. Closer coordination across law enforcement, the intelligence community, trade negotiators, the Defense Department, the defense industrial base, and the wider U.S. private sector to understand the tactics and techniques that PRC employs to cause economic and national security harms. The attachment to this testimony includes charts that describe some of the most egregious examples, but we must have a much better understanding and a broader awareness of these tactics across the U.S. Government, our research enterprise, and our business community.

3. Compel corporate and other private sector victims to be transparent about the loss of IP through theft and other forced technology transfer requirements. In too many circumstances, companies consider these losses as the 'cost of doing business' without a regard to the broader implications that these losses have on American economic prosperity, technological leadership, and national security. The whole of these losses is greater than the sum of the parts. In many cases, these private sector actors are transferring enormous risks on to the United States Government and the American people. This lack of transparency into the scope and scale of Beijing's activities prevents the United States from understanding our vulnerabilities and responding appropriately. It is not unreasonable to expect that the private sector be transparent when targeted by a hostile nation-state seeking to undermine American security and prosperity. But without a straightforward legal obligation to be transparent, it is unlikely that companies will volunteer the information.

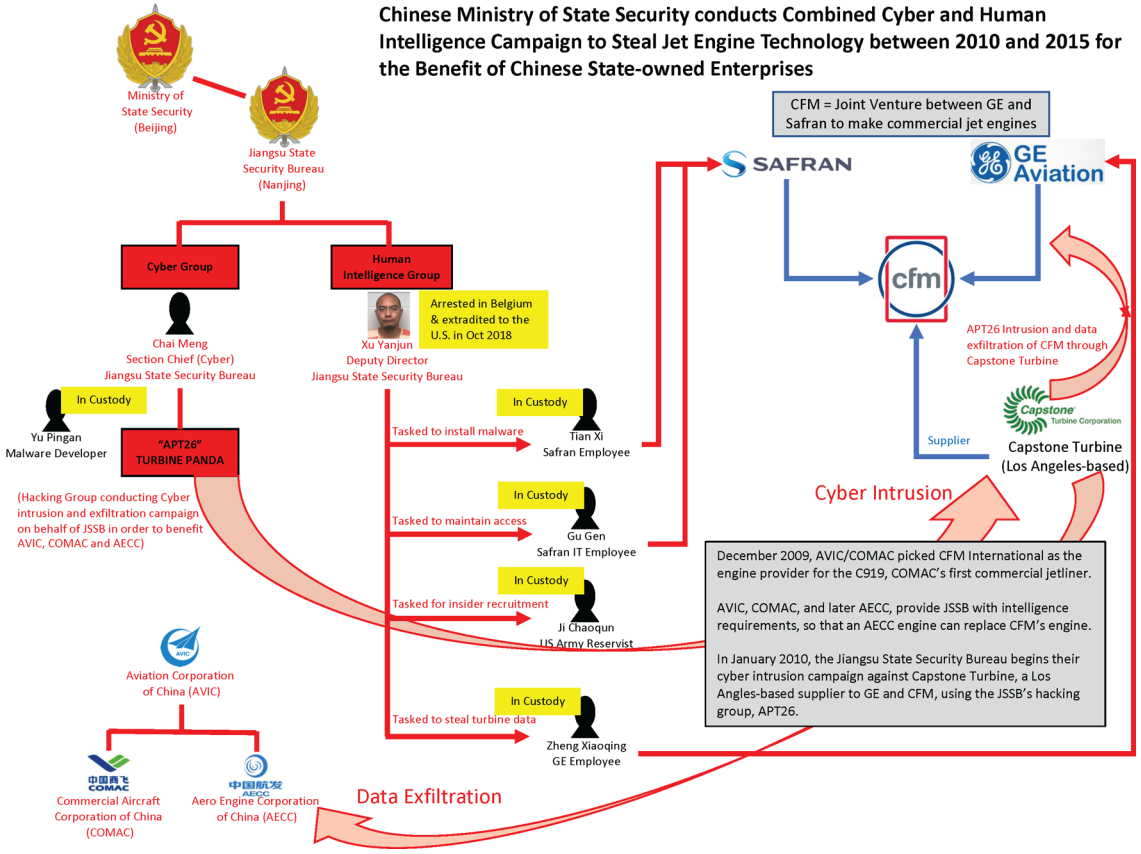
4. Stop the importation of goods produced with, or which benefits from, stolen IP or economic espionage. Impose financial sanctions, export restrictions, and other economic impairments on these entities and the entities that enable these activities. Until the Chinese Communist Party perceives that the cost of these activities exceeds the gain that they receive, it is unrealistic to expect them to change their behavior. Taking these actions will most certainly have negative repercussions on U.S. companies and the PRC will retaliate. But of course, we are already suffering massive negative repercussions from the PRC's comprehensive campaign that we have largely become numb to.

Chairman Coons, Ranking Member Tillis, and other members of the Committee, thank you again for the opportunity to testify and I look forward to addressing your questions.

Attachment 1

Examples of harms committed by the
People's Republic of China against foreign companies.

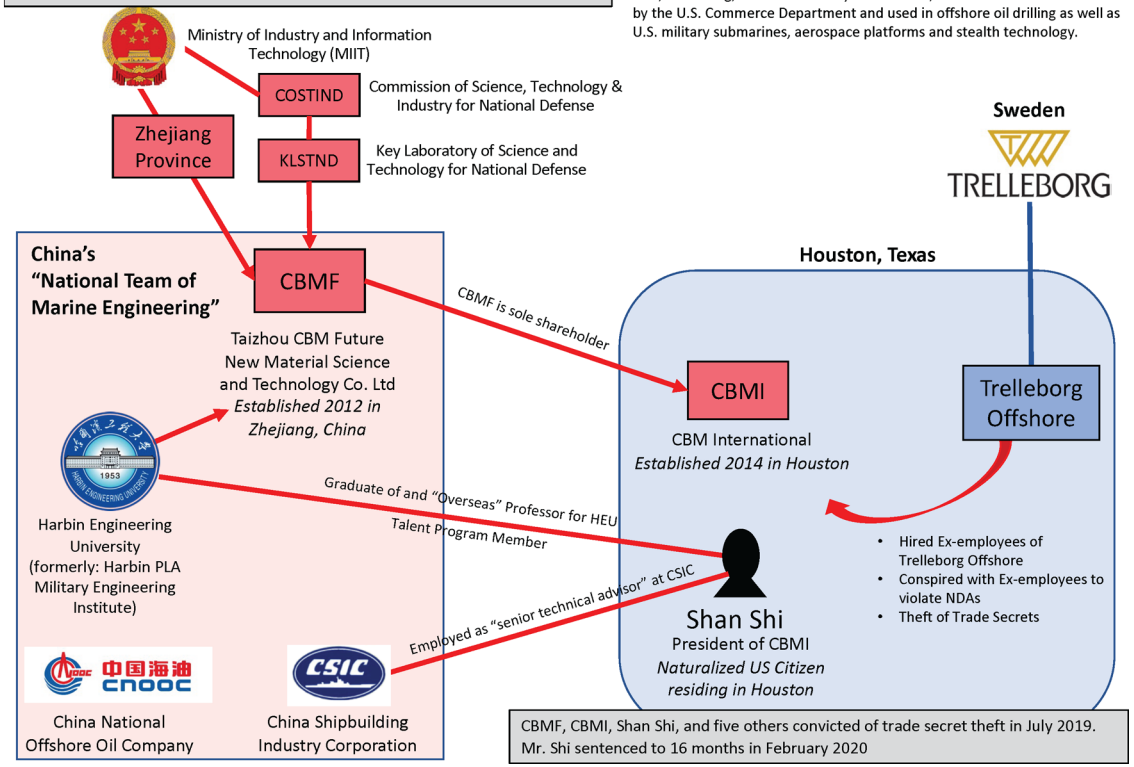
Included are five charts detailing economic espionage, intellectual property theft, market manipulation, concealing ownership, and cyberattacks. These examples are based on publicly available information from prosecutions and other U.S. Government documents that reveal the tactics and techniques employed by the PRC Government and the entities it controls.


Chinese Ministry of State Security conducts Combined Cyber and Human Intelligence Campaign to Steal Jet Engine Technology between 2010 and 2015 for the Benefit of Chinese State-owned Enterprises
Ministry of State Security (Beijing)
Jiangsu State Security Bureau (Nanjing)
Cyber Group
Human Intelligence Group
Chai Meng
Section Chief (Cyber)
Jiangsu State Security Bureau
Arrested in Belgium & extradited to the U.S. in Oct 2018
Xu Yanjun
Deputy Director
Jiangsu State Security Bureau
In Custody
Yu Pingan
Malware Developer
"APT26" TURBINE PANDA
(Hacking Group conducting Cyber intrusion and exfiltration campaign on behalf of JSSB in order to benefit AVIC, COMAC and AECC)
Tasked to install malware
In Custody
Tian Xi
Safran Employee
Tasked to maintain access
In Custody
Gu Gen
Safran IT Employee
Tasked for insider recruitment
In Custody
Ji Chaoqun
US Army Reservist
Tasked to steal turbine data
In Custody
Zheng Xiaoqing
GE Employee
Aviation Corporation of China (AVIC)
Commercial Aircraft Corporation of China (COMAC)
Aero Engine Corporation of China (AECC)
Data Exfiltration
CFM = Joint Venture between GE and Safran to make commercial jet engines
SAFRAN
GE Aviation
cfm
APT26 Intrusion and data exfiltration of CFM through Capstone Turbine
Capstone Turbine Corporation
Capstone Turbine (Los Angeles-based)
Supplier
Cyber Intrusion
December 2009, AVIC/COMAC picked CFM International as the engine provider for the C919, COMAC's first commercial jetliner.
AVIC, COMAC, and later AECC, provide JSSB with intelligence requirements, so that an AECC engine can replace CFM's engine.
In January 2010, the Jiangsu State Security Bureau begins their cyber intrusion campaign against Capstone Turbine, a Los Angles-based supplier to GE and CFM, using the JSSB's hacking group, APT26.

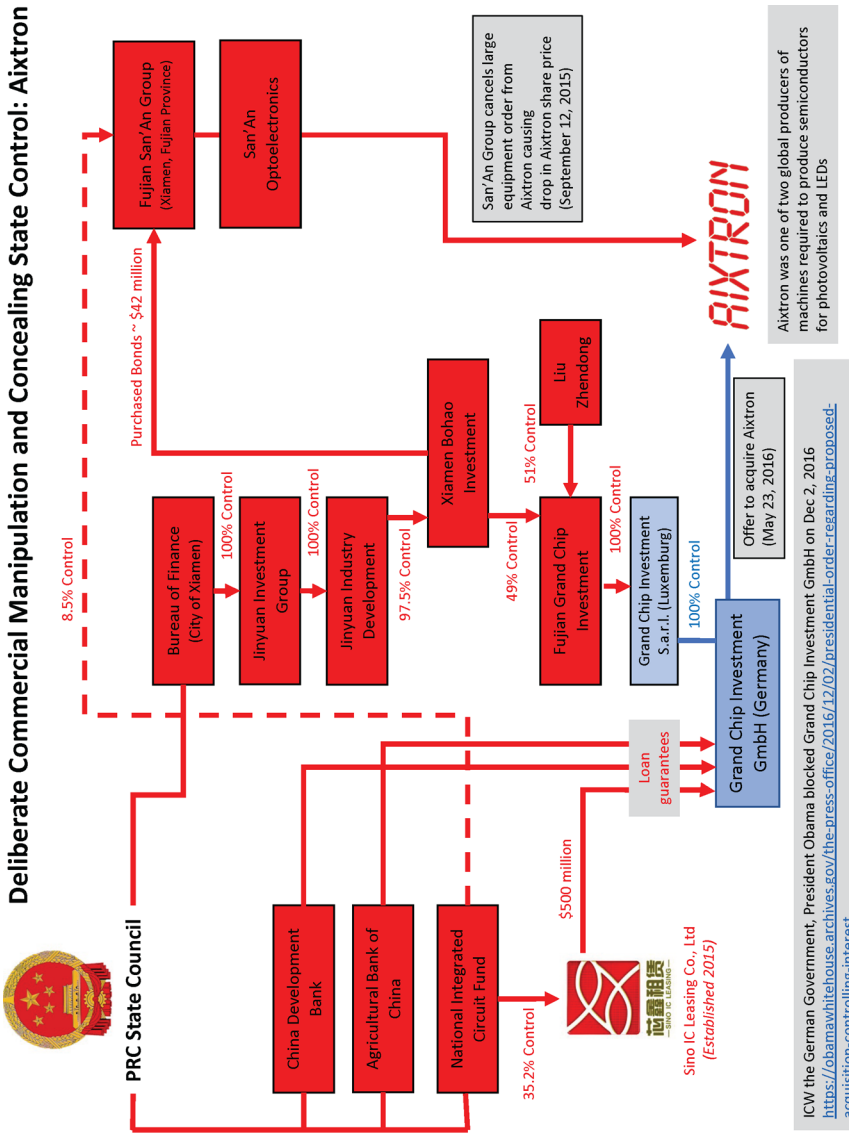
Economic Espionage: Syntactic Foam

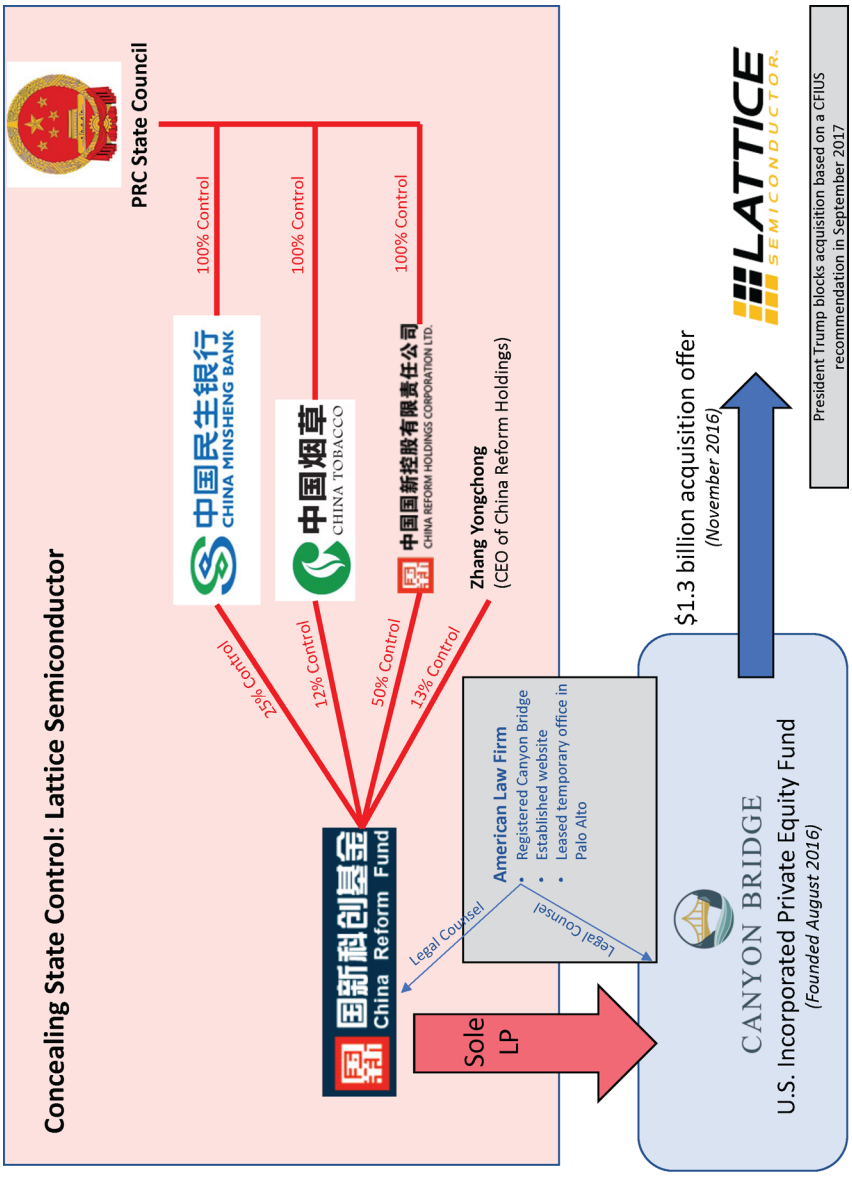
Trelleborg Offshore, a Houston-based subsidiary of the Swedish engineering firm, Trelleborg, manufacturers syntactic foam, a dual-use material controlled by the U.S. Commerce Department and used in offshore oil drilling as well as U.S. military submarines, aerospace platforms and stealth technology.

China's 12th Five Year Plan (approved March 2011) directed MIIT to develop indigenous components for deep-water buoyancy (1500-3000 meters below sea level). MIIT created a "National Team of Marine Engineering," directed COSTIND/HEU to support and provided funds to Zhejiang Province.



CBMF, CBMI, Shan Shi, and five others convicted of trade secret theft in July 2019. Mr. Shi sentenced to 16 months in February 2020


Deliberate Commercial Manipulation and Concealing State Control: Aixtron
PRC State Council
8.5% Control
Fujian San'An Group (Xiamen, Fujian Province)
San'An Optoelectronics
Purchased Bonds ~ $42 million
San'An Group cancels large equipment order from Aixtron causing drop in Aixtron share price (September 12, 2015)
Bureau of Finance (City of Xiamen)
100% Control
Jinyuan Investment Group
100% Control
Jinyuan Industry Development
97.5% Control
Xiamen Bohao Investment
49% Control
51% Control
Liu Zhendong
Fujian Grand Chip Investment
100% Control
Grand Chip Investment S.a.r.l. (Luxemburg)
100% Control
China Development Bank
Agricultural Bank of China
National Integrated Circuit Fund
35.2% Control
$500 million
Loan guarantees
Sino IC Leasing Co., Ltd
(Established 2015)
Grand Chip Investment GmbH (Germany)
Offer to acquire Aixtron (May 23, 2016)
AIXTRON
Aixtron was one of two global producers of machines required to produce semiconductors for photovoltaics and LEDs
ICW the German Government, President Obama blocked Grand Chip Investment GmbH on Dec 2, 2016
https://obamawhitehouse.archives.gov/the-press-office/2016/12/02/presidential-order-regarding-proposed-


Concealing State Control: Lattice Semiconductor
PRC State Council
100% Control
100% Control
100% Control
中国民生银行 CHINA MINSHENG BANK
中国烟草 CHINA TOBACCO
中国国新控股有限责任公司 CHINA REFORM HOLDINGS CORPORATION LTD.
25% Control
12% Control
50% Control
13% Control
Zhang Yongchong
(CEO of China Reform Holdings)
国新科创基金 China Reform Fund
Legal Counsel
American Law Firm
• Registered Canyon Bridge
• Established website
• Leased temporary office in Palo Alto
Legal Counsel
Sole LP
CANYON BRIDGE
U.S. Incorporated Private Equity Fund
(Founded August 2016)
$1.3 billion acquisition offer
(November 2016)
LATTICE SEMICONDUCTOR
President Trump blocks acquisition based on a CFIUS recommendation in September 2017

Decade-long Cyber Intrusion & Theft Campaigns by the Chinese Ministry of State Security against Companies around the World

Source: U.S. District Court, Southern District of New York, Grand Jury Indictment, December 17, 2018

"APT10"
Huaying Haitai Science & Technology Development Company
(Located in Tianjin, China)

"Technology Theft Campaign" (2006-2018)

Engaged in a cyber intrusion campaign for over a decade to steal information and data from at least 45 companies in at least 12 U.S. states.

"Managed Service Provider Theft Campaign" (2014 – present)

Engaged in a cyber intrusion campaign to obtain unauthorized access to the computer networks of at least ten Managed Service Providers (MSPs) in order to steal data from the clients of MSPs.

For just one of these MSPs, APT10 compromised and obtained unauthorized access to hundreds of companies in at least 12 countries.

Means and Methods of the "Technology Theft Campaign"

- The MSS used socially engineered "spear phishing" attacks to introduce malware on targeted computers.
- The installed malware included keystroke loggers which were used to steal usernames and passwords as the user typed them.
- The malware then automatically communicated with APT10, allowing MSS to maintain persistent remote access to victim computers over the internet.
- The MSS could then surveil victim computers for data of interest.
- Once identified, the MSS exfiltrated data of interest and had the ability to manipulate or destroy data.

Means and Methods of the "MSP Theft Campaign"

- The MSS used many of the same techniques from the "Technology Theft Campaign" to gain access to the computer networks of Managed Service Providers (MSPs).
- APT10 then installed customized malware (PlugX, RedLeaves, QuasarRAT) to defeat antivirus protection and steal user credentials in order to steal administrative credentials from the MSP.
- Once APT10 had stolen admin credentials for the MSP, APT10 initiated Remote Desktop Protocol (RDP) connections to the networks of the MSP's clients.
- This allowed the MSS to compromise and remove data from the computers of the MSP's clients without installing malware.

Countries Targeted

- Brazil
- Canada
- Finland
- France
- Germany
- India
- Japan
- Sweden
- Switzerland
- United Arab Emirates
- United Kingdom
- United States

Industry Sectors Targeted

- Banking and Finance
- Telecommunications Equipment Manufacturing
- Consumer Electronics Manufacturing
- Medical Equipment Manufacturing
- Packaging
- Advanced Manufacturing
- Aviation and Aerospace Manufacturing
- Consulting
- Healthcare
- Biotechnology
- Auto Manufacturing
- Oil and Gas Exploration
- Mining
- Maritime Technology

Questions from Senator Tillis
for Mark Cohen
Witness for the Senate Committee on the Judiciary
Subcommittee on Intellectual Property Hearing
"Foreign Competitive Threats to American Innovation and Economic Leadership"

1. As early stage innovators develop new products for market, to what extent are strong IP protections necessary in raising capital?

2. How big of a threat is China's involvement with Standard Essential Patents (SEPs), especially in light of their connection to critical international technical standards such as the 5G telecommunications standard?

3. Approximately 80% of all economic espionage prosecutions brought by the DOJ allege conduct that would benefit the Chinese state and approximately 60% of all trade secret cases involve China.

   What steps can and should the DOJ take to further address this critical issue?

4. How important are strong IP protections to sustaining U.S. leadership in economically and strategically important industries that are R&D intensive?

5. Have changes to U.S. patent law contributed in some way to our nation's inability to keep pace with China? If so, what reforms to our patent system are necessary?

6. In 2022, the Biden Administration helped lead an effort to waive IP rights on COVID-19 vaccines. After decades of pressing the world to strengthen and respect IP rights, the U.S. is potentially now seen as willing to give away valuable U.S. technologies to foreign competitors. Despite the President signing a bill announcing a formal end to the pandemic, the Administration is considering granting additional waivers – this time for the production and supply of COVID-19 diagnostics and therapeutics and there have been talks to expand waivers to other technology areas.

   a. Is waiving IP rights the way to solve global problems?

   b. How do our foreign competitors view this sort of posturing, which comes at the expense of our nation's IP system?

   c. What cost does this waiver exact terms of lost jobs, investments made, and capital flowing to other nations?

d. What are the risks to innovation and to U.S. leadership in these fields if waiving IP protections becomes the norm?

7. Malicious foreign actors sometimes use the U.S.' system and culture of openness as a weapon against us. The Global Intellectual Property Center found that online piracy costs the U.S. economy at least $29.2 billion in lost revenue annually. Other democracies, such as the U.K. and Australia, have developed what some consider more effective means to enforce their rights online than we have here in the U.S.

   What can Congress do to address this purported gap and what can the U.S. government do to ensure that the U.S. supports progress towards more effective online enforcement?

8. Which countries besides China should U.S. foreign policy focus on, and what are the best tools at our disposal to monitor and combat their behavior?

9. What should the U.S. government be doing with its allies in the Indo-Pacific region to ensure that the U.S. does not forfeit its leadership in IP to competitors like China?

10. Huawei cannot build products with advanced semiconductors and their sales in the U.S. and elsewhere are severely restricted due to national security reasons. However, Huawei continues to accumulate U.S. patents and enforce patents in U.S. Courts.

    a. In light of this, is Huawei becoming a patent assertion entity?

    b. Does this seem like a deliberate strategy by Huawei to manipulate the U.S. patent system for their own advantage?

    c. Are there any other conclusions that we can we draw from this?

11. Huawei has sued U.S. companies in Germany for their use of standardized WiFi technology. These companies are now at risk of injunctions that would block sale of their products there.

    How can we work together with our allies to assure that Huawei does not weaponize the international patent system against U.S. industry?

12. In recent years, there has been growing concern about the involvement of foreign interests – and particularly

of foreign sovereign wealth funds – in funding U.S. patent litigation. This potentially creates a serious risk is that litigation will be manipulated to the benefit of foreign competitors or with the intent of harming the competitiveness or technological leadership of U.S. industry. This risk is particularly concerning with respect to patent litigation because it often involves sensitive or emerging technologies.

Do you agree that the involvement of foreign governments in funding domestic patent litigation raises significant concerns with respect to U.S. national and economic security? If so, what can be done to adequately address this?

13. TikTok has a history of undermining artists and their intellectual property rights around the globe. In Australia, TikTok has used hit music to drive up the popularity of its platform, but has restricted user access to the copyrighted music, hurting artists and fans in an attempt to devalue IP globally. TikTok is not a trustworthy partner when it comes to protecting U.S. IP, creative industries, and user privacy.

    What steps can and should the Congress and/or the U.S. government take to address this?

14. America's copyright sector exported $230 billion in 2021. The core copyright industries account for more than 52% of the digital economy and 48% of the digital economy's employment. These initiatives that the Administration is negotiating – Indo-Pacific Economic Framework (IPEF), U.S.-Taiwan Initiative, Americas Partnership for Economic Prosperity (APEP) – include digital trade chapters.

    Do you agree that it's imperative for these digital chapters to include obligations to provide meaningful enforcement and that U.S. Trade Representative Tai should not miss this opportunity to take action?

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   What can Congress do to address this purported gap and what can the U.S. government do to ensure that the U.S. supports progress towards more effective online enforcement?

8. Which countries besides China should U.S. foreign policy focus on, and what are the best tools at our disposal to monitor and combat their behavior?

9. What should the U.S. government be doing with its allies in the Indo-Pacific region to ensure that the U.S. does not forfeit its leadership in IP to competitors like China?

10. Huawei cannot build products with advanced semiconductors and their sales in the U.S. and elsewhere are severely restricted due to national security reasons. However, Huawei continues to accumulate U.S. patents and enforce patents in U.S. Courts.

    a. In light of this, is Huawei becoming a patent assertion entity?

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11. Huawei has sued U.S. companies in Germany for their use of standardized WiFi technology. These companies are now at risk of injunctions that would block sale of their products there.

    How can we work together with our allies to assure that Huawei does not weaponize the international patent system against U.S. industry?

12. In recent years, there has been growing concern about the involvement of foreign interests – and particularly

of foreign sovereign wealth funds – in funding U.S. patent litigation. This potentially creates a serious risk is that litigation will be manipulated to the benefit of foreign competitors or with the intent of harming the competitiveness or technological leadership of U.S. industry. This risk is particularly concerning with respect to patent litigation because it often involves sensitive or emerging technologies.

Do you agree that the involvement of foreign governments in funding domestic patent litigation raises significant concerns with respect to U.S. national and economic security? If so, what can be done to adequately address this?

13. TikTok has a history of undermining artists and their intellectual property rights around the globe. In Australia, TikTok has used hit music to drive up the popularity of its platform, but has restricted user access to the copyrighted music, hurting artists and fans in an attempt to devalue IP globally. TikTok is not a trustworthy partner when it comes to protecting U.S. IP, creative industries, and user privacy.

    What steps can and should the Congress and/or the U.S. government take to address this?

14. America's copyright sector exported $230 billion in 2021. The core copyright industries account for more than 52% of the digital economy and 48% of the digital economy's employment. These initiatives that the Administration is negotiating – Indo-Pacific Economic Framework (IPEF), U.S.-Taiwan Initiative, Americas Partnership for Economic Prosperity (APEP) – include digital trade chapters.

    Do you agree that it's imperative for these digital chapters to include obligations to provide meaningful enforcement and that U.S. Trade Representative Tai should not miss this opportunity to take action?

Questions from Senator Tillis
for Matthew Turpin
Witness for the Senate Committee on the Judiciary
Subcommittee on Intellectual Property Hearing
"Foreign Competitive Threats to American Innovation and Economic Leadership"

1. As early stage innovators develop new products for market, to what extent are strong IP protections necessary in raising capital?

2. How big of a threat is China's involvement with Standard Essential Patents (SEPs), especially in light of their connection to critical international technical standards such as the 5G telecommunications standard?

3. Approximately 80% of all economic espionage prosecutions brought by the DOJ allege conduct that would benefit the Chinese state and approximately 60% of all trade secret cases involve China.

   What steps can and should the DOJ take to further address this critical issue?

4. How important are strong IP protections to sustaining U.S. leadership in economically and strategically important industries that are R&D intensive?

5. Have changes to U.S. patent law contributed in some way to our nation's inability to keep pace with China? If so, what reforms to our patent system are necessary?

6. In 2022, the Biden Administration helped lead an effort to waive IP rights on COVID-19 vaccines. After decades of pressing the world to strengthen and respect IP rights, the U.S. is potentially now seen as willing to give away valuable U.S. technologies to foreign competitors. Despite the President signing a bill announcing a formal end to the pandemic, the Administration is considering granting additional waivers – this time for the production and supply of COVID-19 diagnostics and therapeutics and there have been talks to expand waivers to other technology areas.

   a. Is waiving IP rights the way to solve global problems?

   b. How do our foreign competitors view this sort of posturing, which comes at the expense of our nation's IP system?

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Suzanne Harrison & Mark Cohen Witness Response to questions from Senator Tillis for the Senate Committee on the Judiciary Subcommittee on Intellectual Property Hearing "Foreign Competitive Threats to American Innovation and Economic Leadership"

Note: Statements followed by an "SH" refer to Suzanne Harrison, and "MAC" refers to Mark Cohen. If a matter is referred to as SH & MAC, it is coauthored.

1. *As early-stage innovators develop new products for market, to what extent are strong IP protections necessary in raising capital?*

Answer:

To raise capital from investors, early-stage companies must convincingly show investors they have the following:

- A new and novel product, technology and/or service that meets an unmet customer need, or provides a significant advantage over a current product or service in the market.
- Competent management that has both content expertise and can navigate the myriad of start-up hurdles and bring a successful product or service to market.
- That their offering has distinct competitive advantages (cost or pricing, intellectual property (IP), first mover advantage, etc.) to assist in succeeding in the marketplace.

Your question relates specifically to whether IP provides a competitive advantage to early-stage companies. Historically, all investors and venture capitalists required some (or multiple) form(s) of intellectual property before they would invest in a company, such as patents, trade secrets, trademarks, or copyrights. This is due, in some part, to the fact that investors would participate in their portfolio companies over a number of years and were generally placing a large amount of money in each investment. Today, this is no longer the case universally. In some industries such as pharmaceuticals, nanotechnology, chemicals, oil & gas, aerospace, etc. these requirements still hold, and investors still require their portfolio companies to obtain and maintain IP protections as part of their investment criteria. In other industries such as social media, some consumer products, software, fin tech, automotive, artificial intelligence, and more, the amount of money invested in each company is much smaller, and also the amount of time to bring a product to market is less, which means that in the case of patents, investors have already cashed out of their investments before the patents are even issued, making them less relevant to their investing criteria. Additionally, the ability of patents to exclude others has been seriously eroded since eBay Inc. v. MercExchange, L.L.C., 547 U.S. 388 (2006). Finally, the cost of patent litigation has skyrocketed and is no longer affordable for many startup companies, and the Patent Trial and Appeal Board (PTAB) is viewed by investors as particularly patent owner unfriendly, meaning that most small patent owning companies who find themselves at PTAB do not emerge with valid patents. Therefore, the use of patents to provide a competitive advantage to investors is no longer believable to them

for the industries mentioned above and others like them. Trade secrets are still considered by investors as a viable form of IP competitive advantage, however, the high cost of litigation makes this a very undesirable route and given the high level of ambiguity around IP litigation, again, while viewed as better than patents, still is not viewed as an effective remedy for small entities. It should be noted that to the extent that a proprietary process is easily reverse engineered, trade secrets may be a particularly weak form of protection. (SH)

A still useful but dated report on the role of standards in high tech startups is a survey done by Berkeley Law "High Technology Entrepreneurs and the Patent System: Results of the 2008 Berkeley Patent Survey" that was published in 2009: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=1429049. (MAC)

2. *How big of a threat is China's involvement with Standard Essential Patents (SEPs), especially in light of their connection to critical international technical standards such as the 5G telecommunications standard?*

Answer:
Having Chinese companies participate in standards bodies and SEPs licensing in general is not an issue, as it is part of the normal competitive dynamic amongst companies. All global companies are welcome to participate in creating a worldwide set of standards that govern relevant new technologies that all can use. What is an issue, however, is allowing nation states to use companies as a "front" for their nation state efforts to manipulate standards bodies and SEP's in ways that are advantageous for them. This appears to be what the Chinese government did with Huawei, using their technology which was part of a telecommunications standard to commit spying/espionage on other nation states. This is not the intent of SEP's and standards bodies and should not be allowed. (SH).

Additionally, there may be concerns over proxy use by the Chinese government of private or quasi-private entities to obtain patents, including having them declared as standards essential. In the United States, a positive step to address this type of issue would be for the USPTO to be authorized to require disclosure of foreign government support for the technology that is the subject of a US patent application or grant. (MAC)

3. **Approximately 80% of all economic espionage prosecutions brought by the DOJ allege conduct that would benefit the Chinese state and approximately 60% of all trade secret cases involve China.**

What steps can and should the DOJ take to further address this critical issue?

Chinese trade secret theft prosecutions may be divided into two parts: prosecutions in which a party is charged as an agent of the government of China or the Communist Party, and prosecutions in which a party is charged as acting on behalf of China or to advance Chinese national goals. The former is what I like to call "State-mandated" while the latter is "State-inspired." Theft of core national security technology is most likely accomplished by professional spies. Theft of other forms of technology that serve national competitiveness goals is likely handled on a less formal basis by private or quasi-private operations. Our law addresses both forms of espionage by encompassing perpetrators "intending or knowing that the offense will benefit any foreign government, foreign instrumentality." (18 USC Sec 1381). However, it is likely that the tools that can be used to address these two different types of conduct differ.

There may be a stronger case for a WTO case when trade secrets are stolen by a state actor. The TRIPS Agreement requires that "Members shall protect undisclosed information" (Art. 39). This language imposes an affirmative obligation to protect and, by inference, not to steal trade secrets. There are also other WTO remedies that may be available to address inadequacies in China's trade secret regime, including the non-publication of foreign-related trade secret cases, discrimination against foreigners in trade secret cases involving technologies of interest to China, the availability of a mechanism for file patents anonymously in China (thereby facilitating patent disclosure and Chinese ownership of foreign trade secrets), and the low availability of preliminary injunctions for trade secret misappropriation. Another tool that the United States should adopt is to ensure that non-compete agreements are available to US companies internationally to provide more immediate and easier relief that prevents trade secret misappropriation by competitors.

With regard to state-inspired trade secret misappropriation, greater use may be made of predictive analytical tools as well as analyses of Chinese industrial policies to determine which types of technologies are most vulnerable to Chinese trade secret misappropriation. One initial step might be to track prior prosecutions by the FBI by the technologies identified in Made in China 2025, to better determine if the FBI has targeted technologies of key interest to Chinese industrial development. The FBI should be encouraged to work with USPTO to develop a better understanding of targeted technologies.

Greater resources may also be provided to the USITC to support small businesses filing Section 337 cases involving trade secret misappropriation.

Finally, USDOJ may wish to develop deeper relations with individual states and with foreign countries to support information sharing and joint prosecutions. Internationally, this can be done through mutual legal assistance treaties and agreements. (MAC)

4. *How important are strong IP protections to sustaining U.S. leadership in economically and strategically important industries that are R&D intensive?*

Answer:
One measure of an economy is its level of national competitiveness which is defined as economic and technological competitiveness and national security. Intellectual property (IP) is important engine to maintaining or increasing each of the three areas. IP, and in particular patents, can be used to provide a competitive advantage, specifically as technology control positions. A patent is a "negative" right. In theory, the owner of a patent has the right to preclude anyone else from using the patented invention, unless specifically authorized by the patent holder.[1] Patents have another important attribute, as a technology control position.

"Patents help innovative entities straddle the dimension of time. Savvy entities protect innovation value streams both in the present and in the future via a portfolio of patents. Many leaders think of intellectual property, and patents in particular, as simply a necessary defensive expenditure. But experienced leaders realize that intellectual property is a type of real option that connects current R&D investments to future benefits inclusive of the ability to control and manage outcomes at a later point in time. The difference between these two points of view is significant. Under U.S. law, a patent is a right to exclude others from making, using, or selling the patented invention. These rights mean that others must have the patent owner's permission to practice the invention claimed in the patent. Therefore, the patent owner "controls" how the patented technology is to be utilized and holds the option to exercise that right throughout the life of the patent. Patents are, therefore, real options on control positions, or simply for ease of discussion, control positions. The real option nature of patents, however, nonetheless provides key insights on their optimum use as control positions. Entities file patent applications hopeful that the resulting patent may prove to be of some use or value in the future. Often one or more of these future anticipated uses of a patent, such as licensing, technology transfer, influencing standards-setting or other technology adoption, or stopping infringement, fails to materialize. In such a case, the patent option is null. But, if one of these uses were to come about, the patent option is "called" and the patent often assumes a significant amount of value through that use. That value, or future return, varies depending on the precise use and may not materialize at all. Thus, not all patents are equally valuable. Entities, therefore, try to file as many patents to obtain as many options to assert a control position in the future as possible. The first and most obvious means of using patents as control positions is to obtain them at all. Every such control position a U.S. entity obtains is one that its adversaries do not obtain. In the context of Innovation Warfare, patents can be used to own and control relevant technology future(s) for U.S. interests. Either a U.S. company can own and control a

[1] This was largely true until 2006, when the U.S. Supreme Court, in its wisdom, decided to increase the burden on patent owners to obtain injunctions, even against intentional infringers of valid patents. eBay Inc. v. MercExchange, L.L.C., 547 U.S. 388 (2006). This case is one of several such cases that have led in large part to the decline in innovation.

relevant patent asset, or the U.S. government can own and control the patent asset. In either scenario, a U.S. entity, not an adversary, owns and controls the patent asset."

Most executives understand that patents are options on potential technology futures. Companies that are sophisticated about their IP strategy both blanket strategically interesting technology areas with patent options and take efforts to ensure that their desired technology future is one that the industry ecosystem will ultimately choose and accept. For patents to be used as technology control positions, they need to be able to exclude others which provides an incentive for companies to either license the technology or risk going to court to adjudicate the answer. The Supreme Court over the last 15 years has made a series of legal decisions which have seriously eroded the right of a patent to exclude others. Thus, the Supreme Court has been effectively creating innovation policy through their legal decisions, which has resulted in more ambiguity regarding what can and cannot be patented, whether or not a patent is valid, and what is the effective remedy if one's patent rights are upheld? Regardless of the industry, Executives want more reliable patent rights which translates to clear criteria for disclosure, obviousness, and eligibility. Additionally, you would need to bring back injunctions to be able to effectively preclude others from using your patented technology without the patent owner's permission. Additionally, one would need to review how damages are calculated, as in my 30 years of experience, less than 5% of large corporate portfolios are truly valuable. Damages need to be updated to reflect this reality, particularly in technology areas with large numbers of patents to a product. While it is true, some patents are very valuable, most are not, and this should be reflected in the damages model. (SH)

5. Have changes to U.S. patent law contributed in some way to our nation's inability to keep pace with China? If so, what reforms to our patent system are necessary?

Answer:
As was stated above, Executives want more reliable patent rights which translates to clear criteria for disclosure, obviousness, and eligibility. Additionally, you would need to bring back injunctions to be able to effectively preclude others from using your patented technology without the owner's permission. The USPTO should ensure that both the examiners and PTAB judges are using the same decision criteria and applying them in the same manner to ensure that patents issued by the agency have the highest probability of validity. (SH)

Instability in patent eligible subject matter may contribute to waning competitiveness in several ways: (a) patents may not be granted or deemed unenforceable; (b) the patent may be deemed to be unstable or unclear in light of unclear precedents; (c) the patent may be granted in overseas markets, thereby encouraging investment and economic growth in those markets at the potential expense of the US market. (MAC)

In addition, our US patent system has lagged behind China in terms of engaging with small businesses, women and underrepresented minorities to encourage their contributions. The cohort of small businesses filing for patents in the United States is smaller than China in both absolute and relative terms. China also has low-cost mechanisms, such as utility model patents and expedited patent litigation, that reduces costs for its own inventors. (MAC)

6. **In 2022, the Biden Administration helped lead an effort to waive IP rights on COVID-19 vaccines. After decades of pressing the world to strengthen and respect IP rights, the U.S. is potentially now seen as willing to give away valuable U.S. technologies to foreign competitors. Despite the President signing a bill announcing a formal end to the pandemic, the Administration is considering granting additional waivers – this time for the production and supply of COVID-19 diagnostics and therapeutics and there have been talks to expand waivers to other technology areas.**

   a. **Is waiving IP rights the way to solve global problems?**

   b. **How do our foreign competitors view this sort of posturing, which comes at the expense of our nation's IP system?**

   c. **What cost does this waiver exact terms of lost jobs, investments made, and capital flowing to other nations?**

   d. **What are the risks to innovation and to U.S. leadership in these fields if waiving IP protections becomes the norm?**

   Answer:
   6(a): Waiving IP rights may be a tool to address national emergencies, as part of a toolbox of various tools, with just compensation provided to those affected by such a measure. Other measures are much less invasive and should be prioritized in lieu of IP rights waivers, including supporting delivering of leading edge medication from US manufacturers, addressing issues in health care delivery, assisting with measures that address extensive risks posed by counterfeit and substandard medicines, and supporting the licensed manufacture of active pharmaceutical ingredients through patent pools, licensing and other voluntary mechanisms. Voluntary mechanisms may also be faster, more flexible and more adaptive than state mandated waivers.

   6(b): This type of posturing is viewed as a weakening support by the United States for protection of IP in global markets and is a win for those who are opposed to intellectual property or who are global strategic competitors.

6(c): I have no data on lost jobs, investment, and capital flow. Additional factors are a reduction in investment incentives, an increase in incentives to relocate to countries that oppose waivers, an increased reluctance in incentives to cross-license or codevelop new medications due to instability in economic incentives from patents, and possibly increased reliance on trade secrets to protect new innovations in order to minimize costs from patent infringement, if circumstances of the invention suggest that trade secret protection would be sufficient.

6(d): Extending additional mechanisms for waiving IP rights such as were originally negotiated in the TRIPS Agreement or in the Doha Declaration, are part of a continuous effort to erode IP protections. As these protections erode, the fundamental reasons for the US supporting the creation of the WTO and the TRIPS Agreement, are further compromised. There is also additional erosion possible in national treatment of US companies in foreign countries by reason of internationally sanctioned appropriation of foreign IP rights. Further erosion is possible in other technologies.(MAC)

7. Malicious foreign actors sometimes use the U.S.' system and culture of openness as a weapon against us. The Global Intellectual Property Center found that online piracy costs the U.S. economy at least $29.2 billion in lost revenue annually. Other democracies, such as the U.K. and Australia, have developed what some consider more effective means to enforce their rights online than we have here in the U.S.

   What can Congress do to address this purported gap and what can the U.S. government do to ensure that the U.S. supports progress towards more effective online enforcement?

   We believe that questions 7 and 8 are best directed to Patrick Kilbride from the US Chamber of Commerce (SH & MAC).

8. Which countries besides China should U.S. foreign policy focus on, and what are the best tools at our disposal to monitor and combat their behavior?

   We believe that questions 7 and 8 are best directed to Patrick Kilbride from the US Chamber of Commerce (SH & MAC).

9. What should the U.S. government be doing with its allies in the Indo-Pacific region to ensure that the U.S. does not forfeit its leadership in IP to competitors like China?

   Currently there is limited appetite for new Free Trade Agreements. As a consequence, the United States risks losing its prior leadership role in supporting increased international IP protection and gap filling in older IP-related agreements, such as the TRIPS Agreement. China has signaled its intention to join TPP. Moreover, China and many economies have

signed on to the Regional Comprehensive Economic Partnership which also includes significant IP commitments.

Notwithstanding this significant impediment, there are additional steps that can be considered to advance US interests in intellectual property overseas until a new consensus emerges on free trade agreements. The State Department, USPTO and the State Department should continue to advocate for higher IP standards at international bodies, including WIPO, WTO, UNESCO, ITU, Interpol, WCO, and WIPO. The USPTO also has numerous bilateral or plurilateral agreements, including among the five largest patent, trademark and industrial design offices. US Customs, USDOJ and the Copyright Office also enjoy important bilateral or multilateral agreements.

Offshoring and de-risking of supply chains with China also creates an opportunity to support stronger IP protection. The US government may wish to consider focusing on improving intellectual property in those economies which are benefiting from US reshoring, including providing technical assistance. Supporting IP in extended supply chains should be an interagency goal for all relevant US government agencies, including State, USTR, ITA, and others.

The USPTO IP Attaché program should be expanded to repositioned to provide greater support on IP-related issues in countries with increased importance to our economy due to their role in newly reconfigured supply chains. (MAC)

10. Huawei cannot build products with advanced semiconductors and their sales in the U.S. and elsewhere are severely restricted due to national security reasons. However, Huawei continues to accumulate U.S. patents and enforce patents in U.S. Courts.

    a. In light of this, is Huawei becoming a patent assertion entity?

    b. Does this seem like a deliberate strategy by Huawei to manipulate the U.S. patent system for their own advantage?

    c. Are there any other conclusions that we can we draw from this?

Answer:
10a. No. Huawei would love to sell its products in the US and globally, however because of the Chinese government use of their technology to commit spying/espionage against other nation states, they are not allowed to sell in the US. It is actually beneficial to the US to have Huawei litigate its US patents in the US courts, as our Article 3 justice system can be used to ensure that US citizens have a fair and reasonable system to adjudicate their rights. If you litigate in the US under a known set of principles, the result will likely be a settlement, of all world-wide claims. The result will have been achieved in a forum which US citizens

deem to be fair and equitable, using all the constitutional protections afforded under our system and with which they are familiar. (SH)

10b. Perhaps. Neither Mark nor I are aware of any data that could determine the answer to this question, nor do we have any public information to make a determination. (SH & MAC)

10c. Yes. The Chinese government is very adept at using the openness of the West against us. They are good at manipulating the system and US citizens to provide them with knowledge, expertise and technology because we have not effectively messaged this concern to our own citizens. We need to explain to Americans that the Chinese government is running an Innovation Warfare strategy against us and that they will go to great lengths to disguise their efforts to access technology and IP for their own gain. (SH)

11. Huawei has sued U.S. companies in Germany for their use of standardized WiFi technology. These companies are now at risk of injunctions that would block sale of their products there.

How can we work together with our allies to assure that Huawei does not weaponize the international patent system against U.S. industry?

Answer:
American business is very adept at normal competitive actions, such as pricing, litigation, etc. If Huawei is merely using its IP rights as part of normal competition, this potential litigation is fine. But if instead, Huawei is being aided and abetted by the Chinese government to help achieve its geopolitical goals and objectives, by using their unlimited resources, and assistance, to tip the scales towards a more favorable outcome for their company, than nation states are using the court system in a manner different then its intended purpose, and it is no longer a fair fight. This is the larger and more important issue that needs to be addressed. (SH)

12. In recent years, there has been growing concern about the involvement of foreign interests – and particularly of foreign sovereign wealth funds – in funding U.S. patent litigation. This potentially creates a serious risk is that litigation will be manipulated to the benefit of foreign competitors or with the intent of harming the competitiveness or technological leadership of U.S. industry. This risk is particularly concerning with respect to patent litigation because it often involves sensitive or emerging technologies.

Do you agree that the involvement of foreign governments in funding domestic patent litigation raises significant concerns with respect to U.S. national and economic security? If so, what can be done to adequately address this?

Answer:
Yes. First, the justice system should not be repurposed as an investment vehicle. Second, there is a need to allocate the risk of litigation in a way that allows all participants equal access to justice. Small companies often find it difficult to litigate against large competitors based on the different power and economic disparities. One way to allocate the financial risk is through insurance products rather than investment vehicles, as the insurance products can be regulated. Allowing foreign wealth funds to fund litigation allows them access to discovery information which likely contains sensitive technology information. (SH)

US judges should be required to have foreign funded patent assertion entities disclose government ownership or investment in the PAE. USPTO should also require disclosure of foreign government support for patent and trademark applications. (MAC)

13. **TikTok has a history of undermining artists and their intellectual property rights around the globe. In Australia, TikTok has used hit music to drive up the popularity of its platform, but has restricted user access to the copyrighted music, hurting artists and fans in an attempt to devalue IP globally. TikTok is not a trustworthy partner when it comes to protecting U.S. IP, creative industries, and user privacy.**

What steps can and should the Congress and/or the U.S. government take to address this?

We believe this question is best answered by others. (SH & MAC)

14. **America's copyright sector exported $230 billion in 2021. The core copyright industries account for more than 52% of the digital economy and 48% of the digital economy's employment. These initiatives that the Administration is negotiating – Indo-Pacific Economic Framework (IPEF), U.S.-Taiwan Initiative, Americas Partnership for Economic Prosperity (APEP) – include digital trade chapters.**

Do you agree that it's imperative for these digital chapters to include obligations to provide meaningful enforcement and that U.S. Trade Representative Tai should not miss this opportunity to take action?

Answer:

I agree that IP chapters are critical to the successful implementation of IPEF, the US-Taiwan initiative, and APEP.

The Administration may have limited negotiating leverage if we are not offering much in terms of reductions in market access restrictions (reduced tariffs, increased product or serve market access, etc.). Nonetheless, these agreements can espouse positive commitments that are not directly linked to negative trade concessions. These can include

increased support for technical assistance on IP, placement of IP attaches, availability of investment guarantees or political risk insurance, supporting collaborative research, assistance with standardization practices, MOUs with other USG agencies on IP and IP-relates issues, negotiations towards patent prosecution highways and exchanges of information with IP officials, training of officials, etc. In addition, the administration should still seek to gap-fill TRIPS Agreement and other treaties, through encouraging such measures as (a) enhanced transparency; (b) avoiding misuse of antitrust mechanisms; (c) encouraging criminal remedies for trade secret misappropriation; and (d) joint development of other best practices. If these packages are appropriately bundled, it may also be possible to obtain improved enforcement for IP protection and support US goals of securing our supply chains and improving IP protection. (MAC)

Questions from Senator Tillis
for Patrick Kilbride
Witness for the Senate Committee on the Judiciary
Subcommittee on Intellectual Property Hearing
"Foreign Competitive Threats to American Innovation and Economic Leadership"

1. As early stage innovators develop new products for market, to what extent are strong IP protections necessary in raising capital?

Response: Throughout the innovation ecosystem effective control of proprietary knowledge through various forms of intellectual property rights is essential to the ability of the private sector to raise capital for allocation to research and development. IP plays two indispensable roles within this ecosystem: first, acting as a store of the value created by intangible knowledge assets, thus enabling long-term, high-risk, capital intensive investment; and, second, by providing a medium of exchange whereby diverse stakeholders (government, academic, industry, etc.) have a means to assess the value created by each within the ecosystem, and enter into mutually beneficial collaborative partnerships and licensing

agreements. These economic functions of IP have been particularly important to innovation in the United States, with its market-based economy and world-class financial markets.

2. How big of a threat is China's involvement with Standard Essential Patents (SEPs), especially in light of their connection to critical international technical standards such as the 5G telecommunications standard?

Response: China's readiness to intervene in markets at will effectively nullifies the reliability of its otherwise increasingly sophisticated intellectual property policies. In lieu of a rule of law environment, American businesses can expect to encounter "rule by law." Companies exposing their IP to China should adopt a "buyer beware" mentality, and it is reasonable for U.S. policymakers to expect that technology included in ventures with Chinese partners is at large.

3. Approximately 80% of all economic espionage prosecutions brought by the DOJ allege conduct that would benefit the Chinese state and approximately 60% of all trade secret cases involve China.

What steps can and should the DOJ take to further address this critical issue?

Response: The success of the Memorandum of Understanding signed in 2021 between the U.S. Chamber of Commerce and U.S. Customs and Border Protection related to anti-counterfeiting collaboration is a strong testament to the power of public-private partnership in the law enforcement arena. With its emphasis on awareness, information-sharing and capacity building, activities under the MOU have enabled increased seizures of counterfeits at the border and targeted investigations leading to prosecutions. A similar approach to intelligence sharing between key U.S. companies and the U.S. Department of Justice could be a model for similar success.

4. How important are strong IP protections to sustaining U.S. leadership in economically and strategically important industries that are R&D intensive?

Response: Innovation is not inevitable. U.S. innovation success has gone hand-in-hand with strong U.S. IP protection. The U.S. does a number of things better than virtually anyone else: We

enable risk-taking and encourage failure; we provide property rights; we surround those rights with the rule of law; and we make markets. IP rights are the means to put those strengths to work in the knowledge economy, ensuring that value created in knowledge assets can be identified, valued, leveraged and protected just as physical assets.

5. Have changes to U.S. patent law contributed in some way to our nation's inability to keep pace with China? If so, what reforms to our patent system are necessary?

Response: The Chamber has long held that IP rights should be available for innovation and creativity in every industry sector and field of technology. To the degree that U.S. IP rights have been unavailable to innovators in those sectors, inevitably investment is being directed to other markets where such rights are accessible.

Investment in high-risk R&D activities (such as novel drug development where only one in ten candidate medicines entering clinical trials will ultimately reach patients) requires a long time

horizon and a correspondingly high degree of legal certainty. It is essential that the regulatory environment remains stable and philosophically consistent over time, such that investors in competitive capital markets can allocate resources to high-risk sectors with confidence that technological success is able to earn a commensurate return on investment. Otherwise, investment capital will shun those sectors or demand a risk premium that exacerbates the already high costs of developing new technologies.

6. In 2022, the Biden Administration helped lead an effort to waive IP rights on COVID-19 vaccines. After decades of pressing the world to strengthen and respect IP rights, the U.S. is potentially now seen as willing to give away valuable U.S. technologies to foreign competitors. Despite the President signing a bill announcing a formal end to the pandemic, the Administration is considering granting additional waivers – this time for the production and supply of COVID-19 diagnostics and therapeutics and there have been talks to expand waivers to other technology areas.

    a. Is waiving IP rights the way to solve global problems?

Response: IP rights, which enabled decades of relevant private sector investment in clinical research and development, were foundational to the availability of potential solutions that could be tested against Covid-19. The rapid development and adaptation of those solutions in record time, including through a robust public-private partnership model, was further underpinned by IP rights. As in the innovative ecosystem at large, during the pandemic IP rights were essential to collaboration between diverse stakeholders, such as governments, universities, hospitals, businesses and many others throughout the ecosystem. IP rights provide an important tool for these stakeholders to enter collaborations with a common understanding of the value that each brings to the partnership. To date production of the resulting products has far outstripped the world's capacity to deliver them and administer them where they're needed, demonstrating that whatever shortcomings hampered the global response to Covid, IP was not one of those problems.

b. How do our foreign competitors view this sort of posturing, which comes at the expense of our nation's IP system?

Response: Weaking of IP rights through multilateral measures – and especially U.S. support for those measures – can only be seen as an opportunity by foreign

competitors. Those adversaries and competitors benefit when specific U.S. technologies may be misappropriated as a result of such measures, and they benefit competitively from unilateral U.S. weakening of its core economic advantages related to innovation, namely its massive private sector commitment to R&D, which accounts for three-quarters of all U.S. R&D spending.

c. What cost does this waiver exact terms of lost jobs, investments made, and capital flowing to other nations?

The U.S. Patent & Trademark Office has found that 63 million American jobs are tied directly or indirectly to IP-intensive industries, accounting for one in three U.S. jobs and 41% of U.S. GDP. What's more these jobs pay a strong premium over wages in non-IP-intensive sectors. This benefit from private sector innovation leadership is threatened when the United States unilaterally tilts the playing field away from the domestic market and towards our competitors.

d. What are the risks to innovation and to U.S. leadership in these fields if waiving IP protections becomes the norm?

Response: IP waiver proposals are becoming de rigeur in multilateral debates involving any sort of technological component. An initial WTO waiver of IP commitments for Covid vaccines has broadened into a proposed waiver affecting the much broader class of therapeutics and diagnostics, and continues to broaden to include measures such as forced technology transfer in World Health Organization talks toward a Pandemic Policy Accord. Beyond health innovation, the U.N. Secretary General and others in the multilateral system have already voiced their support for IP waivers related to green energy and climate technology, and those proposals have found fertile ground within the U.N. Framework Convention on Climate Change discussions.

7. Malicious foreign actors sometimes use the U.S.' system and culture of openness as a weapon against us. The Global Intellectual Property Center found that online piracy costs the U.S. economy at least $29.2 billion in lost revenue annually. Other democracies, such as the U.K. and Australia, have developed what some consider more effective means to enforce their rights online than we have here in the U.S.

   What can Congress do to address this purported gap and what can the U.S. government do to ensure that the

U.S. supports progress towards more effective online enforcement?

Response: Ideally, IP enforcement policy melds a range of tactics into a cohesive and strategic whole: statutory authority and mandates to take-down website hosting illegal activity; criminal and civil penalties, including statutory damages; criminal investigative and prosecutorial authority, mandates and resources; and, voluntary industry standards. Additionally, public-private partnership is a key source of data-sharing that can inform and support enforcement activity from both the public and private sector.

8. Which countries besides China should U.S. foreign policy focus on, and what are the best tools at our disposal to monitor and combat their behavior?

Response: U.S. Chamber research (Measuring the Magnitude of Global Counterfeiting (2016)) has demonstrated that 86% of counterfeits entering the U.S. originate from either China or Hong Kong. Across the board, better information-sharing between and among federal agencies, law enforcement, and industry would leverage the data

that is increasingly available to trace supply chains and identify producers, sellers, and distributors of counterfeit goods (as well as operators of pirate sites and corporate spies and hackers).

The U.S. Chamber's public-private partnership with U.S. Customs and Border Protection (CBP) is a case in point: Proceeding under a 2021 MOU, Chamber member companies in vulnerable industries are sharing foreign seizure data with CBP and the U.S. National IPR Coordination Center to identify criminal counterfeiters and facilitate seizures, investigations, and prosecutions. We believe this model can be applied in additional spaces, such as online piracy, and are exploring additional agency partnerships.

9. What should the U.S. government be doing with its allies in the Indo-Pacific region to ensure that the U.S. does not forfeit its leadership in IP to competitors like China?

Response: As initially negotiated by the United States, the Trans-Pacific Partnership included some of the strongest IP standards in any global trade agreement. Barring U.S. re-entry into an Asia-Pacific trade

agreement, the next best thing would be to include IP capacity building into regional measures such as the Indo-Pacific Economic Framework. More than 25 years after the TRIPS Agreement entered into force, the WTO debate over the waiver of IP commitments has shown that many political leaders globally still do not understand the role of IP in facilitating innovation and creativity. As a result, global acceptance of strong IP standards remains distressingly low.

10. Huawei cannot build products with advanced semiconductors and their sales in the U.S. and elsewhere are severely restricted due to national security reasons. However, Huawei continues to accumulate U.S. patents and enforce patents in U.S. Courts.

No Response

a. In light of this, is Huawei becoming a patent assertion entity?

b. Does this seem like a deliberate strategy by Huawei to manipulate the U.S. patent system for their own advantage?

c. Are there any other conclusions that we can we draw from this?

11. Huawei has sued U.S. companies in Germany for their use of standardized WiFi technology. These companies are now at risk of injunctions that would block sale of their products there.

    How can we work together with our allies to assure that Huawei does not weaponize the international patent system against U.S. industry?

No Response

12. In recent years, there has been growing concern about the involvement of foreign interests – and particularly of foreign sovereign wealth funds – in funding U.S. patent litigation. This potentially creates a serious risk is that litigation will be manipulated to the benefit of foreign competitors or with the intent of harming the competitiveness or technological leadership of U.S. industry. This risk is particularly concerning with respect to patent litigation because it often involves sensitive or emerging technologies.

    Do you agree that the involvement of foreign governments in funding domestic patent litigation raises significant concerns with respect to U.S. national and economic security? If so, what can be done to adequately address this?

Response: The Chamber is a vocal advocate for greater transparency in litigation funding, including by foreign governments. A 2022 report by the U.S. Chamber Institute for Legal Reform makes the case that third-party litigation funding poses significant national and economic security risks.

The report outlines a series of comprehensive legislative and legal reforms, including:

- Requiring disclosure of third party litigation funding agreements in funded cases and ultimately of the significant foreign investors of the funds being employed.
- Requiring litigation funders that receive foreign government funding to report this information to a relevant U.S. government agency.
- Requiring agents of foreign governments funding litigation against U.S. companies to disclose their association with that foreign government.

13. TikTok has a history of undermining artists and their intellectual property rights around the globe. In Australia, TikTok has used hit music to drive up the popularity of its platform, but has restricted user access to the copyrighted music, hurting artists and fans in an attempt to devalue IP globally. TikTok is not a

trustworthy partner when it comes to protecting U.S. IP, creative industries, and user privacy.

What steps can and should the Congress and/or the U.S. government take to address this?

No Response

14. America's copyright sector exported $230 billion in 2021. The core copyright industries account for more than 52% of the digital economy and 48% of the digital economy's employment. These initiatives that the Administration is negotiating – Indo-Pacific Economic Framework (IPEF), U.S.-Taiwan Initiative, Americas Partnership for Economic Prosperity (APEP) – include digital trade chapters.

    Do you agree that it's imperative for these digital chapters to include obligations to provide meaningful enforcement and that U.S. Trade Representative Tai should not miss this opportunity to take action?

Response: U.S. global economic initiatives such as the Indo-Pacific Economic Framework, APEC, and others, should include significant attention to IP capacity building in order to build the domestic case for stronger IP standards at the national level.

It has become increasingly clear that countries acceding to the WTO committed only grudgingly to IP standards in the TRIPS Agreement, in order to secure market access to the U.S. and other wealthy markets. The hard work of building political and administrative capacity for leveraging IP in those markets to increase domestic innovation and creativity, and participate in IP-licensing ecosystems, has never been adequately completed. Until that is done, the U.S. will continue to fight an uphill battle to protect its IP and enhance global norms.

Questions from Senator Tillis
for Matthew Turpin
Witness for the Senate Committee on the Judiciary Subcommittee on Intellectual Property Hearing "Foreign Competitive Threats to American Innovation and Economic Leadership"

1. As early stage innovators develop new products for market, to what extent are strong IP protections necessary in raising capital?

To date, our existing IP protections seem to be sufficient to raise capital for new products. It is difficult to do the counterfactual of whether additional capital could have been raised if IP protections were stronger or whether less capital would have been raised if IP protections were weaker. Given that the United States has an incredibly deep and vibrant ecosystem of angel investors and venture capitalists, it would appear that those investors are not deterred by the lack of stronger IP protections.

2. How big of a threat is China's involvement with Standard Essential Patents (SEPs), especially in light of their connection to critical international technical standards such as the 5G telecommunications standard?

Over the past few decades, a non-governmental process of international technology/technical standards has developed which sought to mitigate national and corporate preferences for their own standards and adopted a model based on technical merit. This development of international standard setting created various Standards Developing Organizations (SDOs) in which technical experts from across multiple countries and companies could collaborate under a basic set of democratic values like transparency, openness, impartiality, and consensus.

PRC Party-State entities insert themselves into SDOs, through Chinese commercial entities, to influence the development of international technology/technical standards to advance Chinese military-industrial policies and authoritarian objectives. This is most pronounced in critical and

emerging technology areas like wireless telecommunications, artificial intelligence, microelectronics, energy generation and storage, and PNT (Positioning, Navigation, and Timing).

PRC Party-State entities view each of these technology areas as critical for both economic prosperity and military advantage, and they view these technology areas as traditionally dominated by the United States and other democracies. Meaning that Beijing views that the values embedded in the existing international technology/technical standards reflect the values of democracies and undermine the objectives of the Chinese Communist Party. To offset this preference for the values of democracies, PRC Party-State entities actively 'tilt the gameboard' of these SDOs to favor PRC interests and objectives, violating the underlying premise of the non-governmental international standards-setting process.

In the past month, the Administration has issued its National Standards Strategy which draws attention to this challenge posed by the PRC and seeks to organize U.S. entities and the entities of like-minded countries to push back on these harmful activities by the PRC.

While many hope that Beijing will appreciate the value of a well-functioning, global system for setting international technology/technical standards and cease its efforts to manipulate the system in its favor, that is unlikely to happen. The Party will not abandon its efforts to tilt these standards in its favor and to undermine the democratic values embedded in the existing system. As the U.S. and other countries respond, we are likely to see a further bifurcation of international technology/technical standards into systems that privileges an open, transparent, market-based system that protect human rights and an alternative system that privileges a closed, state-directed system that favors the interests of a ruling party over individual citizens. While this development is unfortunate, a bifurcation is likely the next best option when compared with allowing Beijing to succeed in achieving its goals across a globalized technology standards system.

We can already observe this bifurcation in internet and digital payments platforms, as well as surveillance technology and generative artificial intelligence. This trend towards bifurcation is likely to spread to other critical and emerging technologies as the cold war between the PRC and its democratic rivals accelerates.

3. Approximately 80% of all economic espionage prosecutions brought by the DOJ allege conduct that would benefit the Chinese state and approximately 60% of all trade secret cases involve China.

What steps can and should the DOJ take to further address this critical issue?

This critical issue goes far beyond the remit and capabilities of the Department of Justice alone. Perhaps our greatest failure so far has been to view these activities narrowly as discreet crimes of "economic espionage" and "trade secret theft." These individual cases are a part of a much broader whole: a PRC Party-State directed, resourced, and controlled campaign to gain economic, industrial, and technological advantage in a geopolitical rivalry with the United States and other like-minded countries.

By continuing to pretend that these are stand-alone criminal cases or just the byproducts of an underdeveloped legal system in the PRC, we limit our response to the insufficient tools available to the Department of Justice.

When the second largest economy in the world is waging a multi-decade, whole-of-society campaign to undermine the liberal, rules-based international system and challenge the United States militarily through the accumulation of comprehensive national power, our response cannot rest on DOJ prosecutions. The PRC has been waging a cold war against the United States and like-minded countries for at least a decade and our justice and judiciary system has not adapted to that reality.

Beijing is desperate to prevent the United States and other countries from responding to their malign activities in a more forceful and comprehensive way. PRC leaders understand that their campaign relies heavily on, and succeeds largely due to, the permissive environment of globalized trade and manufacturing. Whether we choose to call this de-risking or de-coupling, the United States and other like-minded countries must take comprehensive trade, national security, and industrial policy actions to prevent the PRC from achieving its twin objectives: 1) overturning a liberal, rules-based international order premised on limited government intervention in the market; and 2) replacing it with an international order that favors authoritarian regimes and state-directed economic activities.

For the Chinese Communist Party, participation in the liberal, rules-based international order and market-economy is a means to an end, not an end in and of itself.

4. How important are strong IP protections to sustaining U.S. leadership in economically and strategically important industries that are R&D intensive?

Strong IP protections alone have not protected U.S. leadership in economically and strategically important industries.

Where we lost leadership in these critical industries, we relied primarily on IP protections and other legal/contractual constructs left to individual companies. Where we have maintained leadership, we relied on a combination of strong export controls, foreign investment restrictions, and other regulatory actions to protect U.S. companies from Beijing's predatory behavior (and often circumscribed where those companies could do business). In the latter case, some U.S. companies and their industry groups have complained that these comprehensive restrictions (export controls, foreign investment restrictions, etc.) limit their market opportunities in the PRC. But when compared with companies in industry sectors where these comprehensive restrictions weren't in place, U.S. companies armed with just IP protections and a licensing agreement often did not survive for long after their rush to "seize" these opportunities.

Two examples are worth comparing: Telecommunications Equipment Manufacturing and Jet Aircraft Engine Manufacturing

Example #1 – Telecommunications Equipment Manufacturing

In the 1990s, the United States largely lifted export controls, investment restrictions and other regulatory actions on the industry sector that produced telecommunications and networking equipment that had been in place during the first cold war. As U.S. telecom and network equipment manufacturers eyed the world, they saw enormous market opportunities in the PRC and moved aggressively to sell their products to an ever-expanding Chinese information technology ecosystem. The companies relied almost entirely on Intellectual Property protections and other contractual agreements to protect their positions as they sought to gain market share and were forced by state-imposed joint venture agreements and other licensing requirements to move their technology, IP, and manufacturing to the PRC.

Fast forward two decades and by the early 2010s nearly all those American telecommunications equipment manufacturers had gone bankrupt or disappeared to be replaced by the same PRC entities that violated those flimsy IP protections. The contracts and licensing agreements that those companies thought would protect them turned out to be no more than sheets of paper. Over the past decade, PRC telecommunications and network equipment manufacturers moved to the global cutting edge and the United States and like-mined countries were forced to expend enormous resources and energy to prevent the PRC from dominating the global market for that equipment and prevent a complete dependency on the PRC. Beijing's success has given them incalculable advantages in surveillance, espionage, as well as the economic heft in the industry to shape global telecommunications standards in a direction that favors the PRC's authoritarian objectives. We are now fighting a rear-guard action and relying on our continued, protected position in advanced semiconductors to prevent an collapse of our position in that industry.

In essence, our ill-considered decision to rely solely on contractual agreements and IP protections gave an entire critical industry to the PRC with consequences that we still cannot fully calculate.

Short-termism and the rush to gain what was perceived to be enormous profits ended up costing not only the companies, their employees, and their shareholders dearly, but also the American public who now must pay far higher costs in terms of lost economic opportunity and heighten national security risks.

Example #2 – Jet Aircraft Engine Manufacturing

In the 1990s, the United States did NOT lift export controls, investment restrictions and other regulatory actions on the industry sector that produced advanced jet aircraft engines. Despite the end of the first cold war, the United States still viewed the technology and manufacture of advanced jet engines as a critical national security concern, unlike the way it viewed telecommunications and networking equipment. The companies involved in the manufacture of advanced jet engines certainly lobbied hard to lower those regulatory restrictions so that they could take advantage of new markets and the "efficiency gains" from off shoring their manufacturing, but their lobbying largely failed. U.S. companies that made the most advanced commercial jet engines were very interested in gaining market share in an expanding Chinese commercial aviation market and they were able to do so, but the U.S. Government prevented those companies from agreeing to one-sided joint ventures and licensing agreements with the PRC and simply sold their U.S.-manufactured jet engines to the PRC via finished aircraft produced in the U.S. and Europe and later as finished engines to emerging Chinese aircraft companies.

Three decades later and those U.S. jet engine manufacturers are still around and still producing the most advanced jet aircraft engines. The United States benefits enormously by the continued existence and success of those companies. From an economic perspective, those are valuable jobs and U.S. remains a world-leader in exporting those engines. From a national security perspective, it is even more valuable. By giving the U.S. military unequal access to the most advanced jet engine technology, the U.S. maintains a qualitative advantage over potential adversaries to offset their quantitative and geographic advantages. This means that U.S. military aircraft continue to have an overwhelming qualitative advantage over anything else produced in the world. The PRC is still multiple generations behind in producing indigenous jet engines and up until last February had to rely on Ukraine to supply them with the most advanced military jet engines they could get for Chinese military aircraft.

By keeping that broad set of interlocking export controls, investment restrictions, and other regulatory actions in place over the last three decades, alongside IP protections, the United States has maintained incalculable economic and national security advantages.

The lesson we should draw from the last three decades is that if we still live in a world of serious geopolitical rivalry, then relying on IP protections and contracts alone will be grossly insufficient to protecting our interests in the most critical industry sectors.

5. Have changes to U.S. patent law contributed in some way to our nation's inability to keep pace with China? If so, what reforms to our patent system are necessary?

I don't feel qualified to provide an answer aside from the observation that participation in our patent system should be predicated on reciprocity and a broad national security alignment between the United States and the third country participating in our system. If those conditions cannot be met, then the U.S. patent system should discriminate against the entities from that foreign jurisdiction.

6. In 2022, the Biden Administration helped lead an effort to waive IP rights on COVID-19 vaccines. After decades of pressing the world to strengthen and respect IP rights, the U.S. is potentially now seen as willing to give away valuable U.S. technologies to foreign competitors. Despite the President signing a bill announcing a formal end to the pandemic, the Administration is considering granting additional waivers – this time for the production and supply of COVID-19 diagnostics and therapeutics and there have been talks to expand waivers to other technology areas.

   a. Is waiving IP rights the way to solve global problems?

Waiving IP rights does not appear like an appropriate solution, but I don't have the expertise to answer fully.

b. How do our foreign competitors view this sort of posturing, which comes at the expense of our nation's IP system?

The PRC will like to employ any technique (legal or otherwise) to undermine the ability of the United States and other advanced economies to maintain a technological advantage over them. The PRC will likely continue to advocate for these waivers, as Beijing seeks to portray itself as the 'champion of the Global South,' and will seek to weaken our IP system for their own interests (and certainly not for the broader interests of the 'Global South').

It serves the PRC's interests to portray the United States and other rich, developed economies as selfish and more concerned with Intellectual Property rights than with the welfare of citizens of the 'Global South.' Much of the narrative around access to vaccines that Beijing and Moscow amplified was an adaption of anti-imperialism and anti-colonialism themes that the Communist Bloc used effectively during the first cold war. Beijing and Moscow have largely pulled out the old playbook in which the U.S. is portrayed as the defender of an evil capitalist and imperialist international system and that the PRC and Russia are the only countries standing up for countries that don't want to live under the thumb of Washington. The United States must be mindful of this battle for global influence and take steps to show good faith to those in need, while simultaneously challenging the hypocrisy of the PRC and Russia.

As we adapt to this second cold war, we will need to develop effective means to dispute these narratives, illuminate the hypocrisy and failures of the systems that Beijing and Moscow represent, and provide better outcomes for citizens that live in countries with fewer resources and who have historically been marginalized. Given those considerations, the United States must also avoid sacrificing our own advantages just to "win" a battle for influence.

This second cold war has an important ideological component and the controversy around access to COVID vaccines was just one example of the kinds dilemmas we are going to be faced with.

One of the most important things we can do to prepare for these dilemmas is to level with the American people and citizens of the rest of the world that a new cold war exists between a Sino-Russian Entente and a portion of the world's democracies. Here is a potential narrative the U.S. could employ:

The United States did not desire this new cold war and tried for decades to welcome Beijing and Moscow into the liberal, rules-based international system where their citizens could prosper alongside citizens from other countries. The United States wanted them to be strong, responsible stakeholders of that system, but unfortunately leaders in the PRC and Russia rejected these overtures because they value their own personal hold on power more than they value the prosperity of their own citizens.

The United States regrets that Beijing and Moscow have chosen this path of confrontation, hostility, and war, but Americans will not shy away from protecting and advancing the interests of peace and prosperity that the world enjoyed after the collapse of the Soviet Union. Leaders in Beijing and Moscow want to be exempted from the accountability that all citizens expect from their political leaders, they recoil at the thought that governments must be limited and respect the dignity of their own citizens. Leaders in Beijing and Moscow want to turn back the clock in a vain effort to insulate their own power and privilege. They appeal to grievances and amplify national victimization as a distraction from their own failures. They silence the legitimate desires of their own citizens to rule themselves.

The door is always open for the Chinese and Russian people to participate in an open, free, and prosperous world, but leaders in Beijing and Moscow must accept the responsibilities of participation that are commensurate with their great power status. Just as they started this second cold war, they can end it by living up to the accountability that all citizens demand of their political leaders.

c. What cost does this waiver exact terms of lost jobs, investments made, and capital flowing to other nations?

I am not qualified to provide an answer.

d. What are the risks to innovation and to U.S. leadership in these fields if waiving IP protections becomes the norm?

Rob Atkinson, President of the Information Technology & Innovation Foundation, provides an excellent overview of the implications that the PRC's harmful activities have on our innovation ecosystem in his January 2020 report, "Innovation Drag: China's Economic Impact on Developed Nations." Further weakening U.S. IP protections would presumably exacerbate the harms Atkinson describes.

7. Malicious foreign actors sometimes use the U.S.' system and culture of openness as a weapon against us. The Global Intellectual Property Center found that online piracy costs the U.S. economy at least $29.2 billion in lost revenue annually. Other democracies, such as the U.K. and Australia, have developed what some consider more effective means to enforce their rights online than we have here in the U.S.

   What can Congress do to address this purported gap and what can the U.S. government do to ensure that the U.S. supports progress towards more effective online enforcement?

Congress should require greater transparency from companies that are victims of economic espionage, IP theft, and trade secret theft. The incentives that companies encounter skew heavily towards remaining silent about these crimes, particularly when they involve the PRC. Management and boards rightfully perceive that these crimes will harm their valuations if they become public, they view the responses by the U.S. Government as inadequate to the challenge, and they view that the PRC will retaliate in ways that the U.S. Government cannot protect them from.

Without a requirement for transparency, or a shift in the incentives, we cannot know the full scope and scale of these harmful activities, nor can we formulate a proper response when we don't have a comprehensive picture. As long as companies can use their discretion in reporting these activities, the United States will find it very difficult to construct an effective response.

One potential way to incentivize companies to report and pursue legal remedies for these crimes is to make it easier for victims to recover assets and compensation from PRC entities. Shift the burden towards a presumption that the PRC Party-State is committing a larger conspiracy to violate US law.

Since these crimes are a part of a wider, state-directed, state-controlled, and state-resourced campaign, victims should be able to recover assets and pursue compensation from the PRC sovereign in U.S. courts, rather than allow PRC entities to hide behind claims of sovereign

immunity. The Executive Branch and Judiciary could make it easier for victims to pierce the "corporate veil" of multiple levels of subsidiaries and affiliates that are being directed centrally by Party-State entities. Since the process of discovery is purposefully obstructed by the PRC Party-State and the PRC has recently implemented laws which criminalize legitimate due diligence and collection of business information, Congress should implement requirements for the Executive Branch to assist victims in collecting the information they need and Courts to presume a degree of collusion between PRC commercial entities and the Party-State. When the PRC Government refuses to comply with legitimate information requests or uses security services to intimidate potential witnesses and their families, the courts should take this pattern of behavior into consideration.

The PRC Party-State will continue to wage this criminal campaign as long as they judge the benefits are worth the cost; and it is clear that Beijing judges that the benefits still greatly outweigh the costs. Congress should take significant action to change this cost-benefit analysis to make the costs greater than the benefits from the PRC's perspective. The statutory changes should be specifically confined to activities that involve the PRC Party-State and be time-limited with the ability to extend and expand those statutory provisions if the PRC refuses to cease its harmful behavior. The costs should be imposed on the entities that are most valuable to the PRC Party-State, rather than simply the individual or entity that committed the crime on behalf of the PRC Party-State.

8. Which countries besides China should U.S. foreign policy focus on, and what are the best tools at our disposal to monitor and combat their behavior?

Based on the evidence we have (which is limited given the reluctance to go public by the victims), the vast majority of this behavior is from the PRC. The PRC is alone in having both the intent and the capability to wage such a broad campaign against us.

It remains appropriate to treat IP theft from other countries as discrete events, as no other country appears to have such a broad campaign in place. For that reason, DOJ and the judiciary should be the primary actors in formulating a response to those specific cases.

The PRC should be treated as a unique case, an intentional state-sponsored, state-directed, and state-resourced activity that requires a whole-of-government response from the United States and in collaboration with like-minded countries.

9. What should the U.S. government be doing with its allies in the Indo-Pacific region to ensure that the U.S.

does not forfeit its leadership in IP to competitors like China?

Our innovation ecosystem is not regionally bounded, so our coordination response should not be confined to the Indo-Pacific alone, nor should it be bounded by concerns solely for U.S. technological leadership. The rules-based international system we value and its market-economy depends on a broad, interconnected network of countries, companies, universities and individuals working together.

The U.S. should continue to collaborate with like-minded countries globally to address the harmful practices of the PRC. Our default response should be to coordinate with like-minded countries, but the United States is uniquely positioned to act first when other countries feel too intimidated to act. Beijing has spent years focusing its economic coercion and threats against our closest allies and partners. They have a long-term goal of rapturing the network of alliances, security partnerships, and habits of cooperation among democracies, the United States should be mindful of this dynamic, but also hold allies accountable for carrying the burden of maintaining a liberal, rules-based system that benefits us collectively.

10. Huawei cannot build products with advanced semiconductors and their sales in the U.S. and elsewhere are severely restricted due to national security reasons. However, Huawei continues to accumulate U.S. patents and enforce patents in U.S. Courts.

    a. In light of this, is Huawei becoming a patent assertion entity?

Huawei is a "Party-owned Enterprise" that has criminally rejected the U.S. legal system (to include collusion with the PRC Party-State on hostage-taking as a way to escape prosecution). Huawei, and other serial violators of U.S. law, should not be permitted to operate in the United States or gain advantage from the U.S. legal system while it thumbs its nose at U.S. courts. Huawei should have no standing to submit or seek enforcement of patents in U.S. courts.

The U.S. Treasury should impose financial sanctions on Huawei, using IEEPA, to preclude the company, its affiliates and subsidiaries, from participating in the USD-dominated global financial system until the company resolves its outstanding criminal charges.

The fact that the DOJ in essence dropped its charges against the Huawei CFO in exchange for the release of two Canadian hostages seriously undermines the entire U.S. legal system. Any partner who has an extradition treaty with us will think twice about acting on our request after the PRC successfully used hostage-taking twice against Canada. (Kevin and Julia Garratt were held for two years, 2014-2015, after Canada arrested Su Bin on charges of economic espionage on behalf of the United States; Michael Spavor and Michael Kovrig were held for nearly three years, 2018-2021, after Canada arrested Mang Wanzhou on charges of financial fraud on behalf of the United States)

b. Does this seem like a deliberate strategy by Huawei to manipulate the U.S. patent system for their own advantage?

Huawei is taking advantage of the gaps and seams that exist in the U.S. system for its advantage. The U.S. patent system does not seem to have a workable response to a criminal enterprise which has the full backing of the world's second largest economy.

c. Are there any other conclusions that we can we draw from this?

The Executive branch continues to fail to conceptualize a whole-of-government response to the PRC's campaign to steal technology and violate U.S. law.

11. Huawei has sued U.S. companies in Germany for their use of standardized WiFi technology. These companies are now at risk of injunctions that would block sale of their products there.

    How can we work together with our allies to assure that Huawei does not weaponize the international patent system against U.S. industry?

U.S. Treasury financial sanctions under IEEPA should be imposed on Huawei, its affiliates, and subsidiaries.

12. In recent years, there has been growing concern about the involvement of foreign interests – and particularly of foreign sovereign wealth funds – in funding U.S. patent litigation. This potentially creates a serious risk is that litigation will be manipulated to the benefit of foreign competitors or with the intent of harming the competitiveness or technological leadership of U.S. industry. This risk is particularly concerning with respect to patent litigation because it often involves sensitive or emerging technologies.

    Do you agree that the involvement of foreign governments in funding domestic patent litigation raises significant concerns with respect to U.S. national and economic security? If so, what can be done to adequately address this?

I do not have any specific insights into foreign sovereign wealth funds supporting U.S. patent litigation. However, it appears to be a vector that could be used by a hostile foreign power to undermine U.S. national and economic security.

Perhaps similar to the way that the Executive Branch provides national security judgments to the Federal Communications Commission when it is weighing whether to grant a license to an entity with foreign ownership concerns, Congress could require that U.S. Patent courts and the judiciary receive national security judgments (including information derived by the Intelligence Community) from the Executive Branch. Under the Committee for the Assessment of Foreign Participation in the United States Telecommunications Services Sector (Team Telecom), elements of the executive branch with expertise in national security provide the FCC with judgments on the national security risks of a particular license or other action by the Commission.

This is done under the assumption that the FCC lacks the expertise and resources to appropriately judge the risks and vulnerabilities that arise from foreign ownership and/or control of U.S. telecommunications services. The U.S. Patents courts and the judiciary writ large, also lack this national security expertise and access to data and intelligence that would allow them to accurately understand the risks and vulnerabilities involved in allowing foreign sovereign wealth funds and other foreign controlled entities to participate in and benefit from these disputes.

To fully operationalize this effort to prevent hostile foreign powers from manipulating the U.S. legal system to their advantage, Congress likely needs to define and explicitly grant the U.S. Patent courts and the judiciary the authority to dismiss cases involving hostile foreign entities or preclude their participation. Additionally, Congress would need to establish safeguards to prevent hostile foreign powers from gaining access to sensitive information and intelligence through the U.S. Court system.

13. TikTok has a history of undermining artists and their intellectual property rights around the globe. In Australia, TikTok has used hit music to drive up the popularity of its platform, but has restricted user access to the copyrighted music, hurting artists and fans in an attempt to devalue IP globally. TikTok is not a trustworthy partner when it comes to protecting U.S. IP, creative industries, and user privacy.

    What steps can and should the Congress and/or the U.S. government take to address this?

Beijing-based ByteDance, and its wholly owned subsidiary TikTok, should not operate in the United States and Congress should take unambiguous action to prohibit social media and internet platforms controlled by a hostile foreign power from operating in the United States. This should extend beyond TikTok to include WeChat and other PRC controlled platforms in the United States.

If ByteDance's TikTok were a radio station or television station it would require a telecommunications operating license from the FCC. And given that ByteDance is a foreign company, its license to operate a radio or television station could be rejected or revoked by the FCC. Because of a historical quirk, we have allowed social media and other internet platforms

to fall outside these long-established rules (for radio station licenses see Section 310 of the Communications Act of 1934).

In 2013, the FCC relaxed its automatic prohibition on foreign ownership of more than a 25% stake in a TV or radio station, but it still has the authority to judge each license on a case-by-case basis. Social media and internet platforms should be brought under similar requirements.

14. America's copyright sector exported $230 billion in 2021. The core copyright industries account for more than 52% of the digital economy and 48% of the digital economy's employment. These initiatives that the Administration is negotiating – Indo-Pacific Economic Framework (IPEF), U.S.-Taiwan Initiative, Americas Partnership for Economic Prosperity (APEP) – include digital trade chapters.

    Do you agree that it's imperative for these digital chapters to include obligations to provide meaningful enforcement and that U.S. Trade Representative Tai should not miss this opportunity to take action?

Yes, the United States should insist on high standards for protecting copyrights in the digital economy for any negotiations conducted by the U.S. Trade Representative and/or the Commerce Secretary.

AMERICAN APPAREL & FOOTWEAR ASSOCIATION

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April 25, 2023

The Honorable Chris Coons
Chair
Subcommittee on Intellectual Property
Committee on the Judiciary
U.S Senate
Washington, DC 20510

The Honorable Thom Tillis
Ranking Member
Subcommittee on Intellectual Property
Committee on the Judiciary
U.S. Senate
Washington, DC 20510

Dear Chairman Coons and Ranking Member Tillis:

Thank you for your bipartisan leadership and commitment to bring forward a much-needed discussion ahead of World IP Day[1] on a range of vital intellectual property (IP) issues during the Subcommittee on Intellectual Property hearing, "Foreign Competitive Threats to American Innovation and Economic Leadership."[2]

The American Apparel & Footwear Association (AAFA) is the national trade association representing apparel, footwear and other sewn products companies and their suppliers, which compete in the global market. Representing more than 1,000 world famous brands, AAFA is the trusted public policy and political voice of the apparel and footwear industry, its management and shareholders, its more than three million U.S. workers, and its contribution of more than $470 billion in annual U.S. retail sales.

Brand protection is a core strategic pillar for the association. AAFA's Brand Protection Council is charged with advocating for the protection of IP, building awareness of the dangers of counterfeits to businesses, consumers, workers, and the environment.[3] Partnership is key; AAFA holds conversations with a range of platforms to raise IP and counterfeiting concerns, above brand-to-platform conversations and brands reporting issues individually.

Your work on the Stopping Harmful Offers on Platforms by Screening Against Fakes in E-Commerce (SHOP SAFE) Act speaks volumes about the commitment you share to address the root of the growing amount of harmful counterfeit products available; much-needed proactive measures and accountability procedures are essential to curtailing dangerous counterfeits from reaching consumers.[4] As you stated in the 2021 SHOP SAFE press release, "incentivizing platforms to engage in best practices for vetting sellers and goods, addressing repeat counterfeiter sellers, and ensuring consumers have access to relevant information at the time of purchase" are also key reforms that are needed. [5]

SHOP SAFE is a bipartisan, bicameral bill; it received feedback, and edits were made from stakeholder meetings and roundtables in two Congresses. The importance of much-needed reforms has been discussed across administrations and policies, including in the 2020 "Combating Trafficking in Counterfeit and Pirated Goods" report from the U.S.

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[1] April 26, 2023: World Intellectual Property Day "Women and IP: Accelerating innovation and creativity" https://www.wipo.int/ip-outreach/en/ipday

[2] Senate Judiciary Subcommittee on Intellectual Property hearing "Foreign Competitive Threats to American Innovation and Economic Leadership" (April 18, 2023) https://www.judiciary.senate.gov/committee-activity/hearings/foreign-competitive-threats-to-american-innovation-and-economic-leadership

[3] AAFA's Brand Protection Council: https://www.aafaglobal.org/AAFA/Priority/Brand_Protection.aspx

[4] Reuters: Etsy shares fall after research firm says platform showcases fake goods (February 16, 2023) https://www.reuters.com/technology/etsy-shares-fall-after-citron-research-calls-out-platform-counterfeit-goods-2023-02-16/

[5] Sens. Coons, Tillis introduce bipartisan, bicameral SHOP SAFE Act (May 26, 2021) https://www.coons.senate.gov/news/press-releases/sens-coons-tillis-introduce-bipartisan-bicameral-shop-safe-act

Department of Homeland Security .[6] Concerns were echoed in 2022 by the White House with President Biden's Safer America Plan, "*To tackle organized retail theft, the plan calls on Congress to pass legislation to require online marketplaces, such as Amazon, to* ***verify third-party sellers' information, and to impose liability on online marketplaces*** *for the sale of stolen goods on their platforms*."[7] The White House Declaration for the Future of the Internet reiterated this as well: "*Promote the protection of consumers, in particular vulnerable consumers, from online scams and other unfair practices online and from dangerous and unsafe products sold online.*"[8]

Thanks to the leadership of Senate Majority Whip Dick Durbin, Chair of the Senate Judiciary Committee, and Senator Bill Cassidy, M.D., the INFORM Consumers Act passed as part of the 2023 Omnibus bill. As Chairman Durbin shared in the April 18 hearing; it was a 10-year battle to achieve INFORM's passage. Our work must build on the momentum of INFORM with additional reinforcements—like enhanced IP measures and SHOP SAFE—to have platforms partner with brands to provide additional layers to protect consumers from harmful counterfeit products; prevent identity theft; safeguard American workers, innovation, and competitiveness; and undermine criminal organizations that benefit from the sale of illicit goods.[9] We don't have another 10 years; online platforms *must* meet the same requirements, and *face the same liabilities*, as brick-and-mortar businesses when it comes to the restriction of counterfeit or illicit products that harm American consumers.

Nefarious counterfeiters, masked behind the anonymity provided by online platforms due to little, or no, front-end verification, can take advantage of consumers. Never has the counterfeit problem been at the scale it is today, from dupe influencers[10], fraudulent advertisements[11], and fake websites to the actual counterfeit products being sold to unwitting consumers across platforms—this is a full online destructive digital value chain.

We hope SHOP SAFE is reintroduced and passed this Congress; it would attack counterfeiting at the root of the problem verses misdirected tariffs that make everyday essentials like clothes, shoes, and travel goods more expensive. This would be the first step to bringing online platforms closer in alignment with the requirements of small brick-and-mortar businesses and retailers as small, mom-and-pop brick-and-mortar shops are held liable under the law for the sale of any counterfeit or illicit products today. However, platforms are not subject to any trademark liability, even when the counterfeit or illicit product harms the health and safety of the consumer.

IP is a vital tool to foster American innovation, support domestic jobs, and fight dangerous counterfeits. A study by the U.S. Global Value Chain Coalition stated that about 75% of the retail value of an apparel article imported from abroad and sold in the U.S. comes directly from American ingenuity.[12] Most of the value found in a T-shirt, jeans, dress, or suit was created by Americans and supported American jobs such as quality assurance, social and import compliance, marketing, and web development.

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[6] U.S. Department of Homeland Security Combating Trafficking in Counterfeit and Pirated Goods (2020) https://www.dhs.gov/publication/combating-trafficking-counterfeit-and-pirated-goods

[7] FACT SHEET: President Biden's Safer America Plan (August 2022) https://www.whitehouse.gov/briefing-room/statements-releases/2022/08/01/fact-sheet-president-bidens-safer-america-plan-2/

[8] The White House Declaration for the Future of the Internet (April 2022) https://www.state.gov/wp-content/uploads/2022/04/Declaration-for-the-Future-for-the-Internet.pdf

[9] Cross-Industry Letter Calls on Congress to Pass Legislation to Stop the Sale & Promotion of Dangerous Counterfeits Online (April 26, 2022) https://www.aafaglobal.org/AAFA/AAFA_News/2022_Press_Releases/Cross_Industry_Letter_Congress_Stop_Sale_Counterfeits.aspx

[10] AAFA "Dupe Influencers: The Concerning Trend of Promoting Counterfeit Apparel, Footwear, and Accessories on Social Media" (2021) https://www.aafaglobal.org/AAFA/Solutions_Pages/Dupe_Influencers_The_Concerning_Trend_of_Promoting_Counterfeits.aspx

[11] AAFA and TRACIT "Fraudulent Advertising Online Emerging Risks And Consumer Fraud" (2020) tracit_fraudulentadvertisingonline_july21_2020_final.pdf

[12] The U.S. Global Value Chain Coalition https://img1.wsimg.com/blobby/go/f23cae5a-2434-44f6-91d1-3695bf2115a3/downloads/1btmo725c_680153.pdf

AAFA member products remain at the top of the IPR most seized items by the U.S. Customs and Border Protection (CBP).[13] The Congressional Research Service found in March 2022 that "79% of the U.S. population engaged in e-commerce, with clothing as the top category of online purchases," using 2021 figures.[14] A 2021 Intellectual Property Rights Seizure Statistics report by the U.S. Customs and Border Protection (CBP) found that more than 13% of targeted shipments from China contain counterfeit goods or contraband items out of 420,000 parcels of mail from China each day.[15] A 2021 Ghost Data report showed that about 65% of active counterfeiter accounts were based in China[16]—researchers found 26,770 active counterfeiter accounts on one platform and more than 20,280 active counterfeiter accounts on another partner platform, in a June-October 2021 window.[17]

AAFA unveiled the results of a counterfeit testing study in March 2022 – including tests on counterfeit clothing, footwear, and other accessories – showing the health and safety dangers that counterfeits present for consumers. Of the 47 counterfeit products tested, 17 products (or 36.2%) failed to comply with U.S. product safety standards. The study found dangerous levels of arsenic, cadmium, phthalates, lead, and more that have been shown to cause adverse health outcomes. [18] AAFA's study echoes previous government-issued counterfeit reports, which found similar percentages of dangerous counterfeits threatening the health and safety of American families.[19]

Leaving absent the roles of an Intellectual Property Enforcement Coordinator ("IPEC") [20]—and a chief innovation and intellectual property negotiator in the Office of the U.S. Trade Representative (USTR)—handicaps domestic IP protection and inter-agency coordination. It keeps the Biden-Harris Administration from leading a unified approach to IP protection and enforcement, as also discussed in the House Subcommittee on Courts, Intellectual Property and the Internet's March 8 hearing. [21] AAFA encourages these critical IP positions be quickly filled.

We applaud Director Kathi Vidal's attention in her first year[22] as the Under Secretary of Commerce for Intellectual Property and Director of the United States Patent and Trademark Office (USPTO), to uncover illegal and bad faith marks, including sanctioning nefarious users and more.[23] Auditing current partnerships that may enable the use of bad faith marks—including the use of pending trademarks—and encouraging comprehensive reviews of incoming applications would help rightsholders with much-needed reinforcements to protect domestic IP from bad faith operators. We look

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[13] CBP "Intellectual Property Rights (IPR) Seizures" https://www.cbp.gov/newsroom/stats/intellectual-property-rights-ipr-seizures
[14] Congressional Research Service "International Trade and E-Commerce" (March 14, 2022)
https://crsreports.congress.gov/product/pdf/IF/IF11194
[15] Intellectual Property Rights (IPR) Seizures
https://www.cbp.gov/newsroom/stats/intellectual-property-rights-ipr-seizures
[16] Reuters "Facebook, Instagram are hot spots for fake Louis Vuitton, Gucci and Chanel" (February 9, 2022)
https://www.reuters.com/technology/facebook-instagram-are-hot-spots-fake-louis-vuitton-gucci-chanel-2022-02-09
[17] Ghost Data "The Meta Counterfeiting Empire" (December 2021)
https://ghostdata.io/report/Upd-Meta-Counterfeit-Empire1221.pdf
[18] AAFA "Fashion Industry Study Reveals Dangerous Chemicals, Heavy Metals in Counterfeit Products" (March 23, 2022)
https://www.aafaglobal.org/AAFA/AAFA_News/2022_Press_Releases/Fashion_Industry_Study_Reveals_Dangerous_Chemicals_Heavy_Metals_Counterfeits.aspx
[19] GAO Report "Agencies Can Improve Efforts to Address Risks Posed by Changing Counterfeits Market" (2018)
https://www.gao.gov/assets/gao-18-216.pdf
[20] AAFA Encourages Pres. Biden to Appoint an IPEC (April 7, 2022)
https://www.aafaglobal.org/AAFA/AAFA_News/2022_Letters_and_Comments/AAFA_Encourages_Pres_Biden_to_Appoint_an_IPEC.aspx
[21] The House Subcommittee on Courts, Intellectual Property and the Internet will hold a hearing, "Intellectual Property and Strategic Competition with China: Part I" (March 8, 2023) https://judiciary.house.gov/committee-activity/hearings/subcommittee-courts-intellectual-property-and-internet-intellectual
[22] AAFA Welcomes Kathi Vidal as USPTO Director (April 2, 2022)
https://www.aafaglobal.org/AAFA/AAFA_News/2022_Press_Releases/AAFA_Welcomes_Kathi_Vidal_USPTO_Director.aspx
[23] USPTO: "One year of bringing innovation to impact" Blog by Kathi Vidal, Under Secretary of Commerce for Intellectual Property and Director of the USPTO (April 13, 2023) https://www.uspto.gov/blog/director/entry/one-year-of-bringing-innovation

forward to learning more as Director Vidal is ready to "rethink everything that we do within trademarks," working with USPTO leadership and unions, as reported by Tim Lince with the World Trademark Review on April 13, 2023.[24]

We must do more to protect consumers from harmful counterfeit products. Online social commerce is expected to grow to $80 billion in retail sales in the United States. If IP and counterfeiting issues are not addressed on the organic side,[25] they will only grow unchecked on the commerce side.[26]

We also must also do more to protect IP, American jobs and more. AAFA chronicled the impacts of online counterfeiting that infringe on IP and detailed issues with physical locations that have significant adverse impact on the value of U.S. innovation in AAFA's submissions to USTR in both the 2023 Special 301 Review[27] comments and Notorious Markets List comments.[28] Many of the points raised in AAFA's comments were echoed in the hearing on April 18.

We want to reiterate—the status quo is not working. The sale of counterfeit clothes, shoes, and travel goods not only hurt U.S. companies and the millions of American workers they employ, they are also in many cases unsafe, causing harm to American consumers and their families. Further, counterfeit goods are also produced in unsafe and environmentally unfriendly conditions, hurting the workers and communities that make them.

Thank you for your commitment to bringing awareness to these issues—and the work of your dedicated staff members. AAFA calls on Congress to level the playing field for businesses impacted by infringing IP and counterfeits, including the passage of SHOP SAFE this Congress.

Sincerely,

Jennifer Hanks

Jennifer Hanks
Director, Brand Protection
American Apparel & Footwear Association

[24] World Trademark Review: "Rethinking everything" USPTO pledges trademark overhaul as Vidal marks 12 months in office (April 13, 2023)
https://www.worldtrademarkreview.com/article/rethinking-everything-uspto-pledges-trademark-overhaul-vidal-marks-12-months-in-office

[25] ET Online: The 14 Best Amazon lululemon Lookalikes We Found on TikTok for Your Spring Workouts (April 17, 2023)
https://www.etonline.com/the-14-best-amazon-lululemon-lookalikes-we-found-on-tiktok-for-your-spring-workouts-155165

[26] McKinsey "E-commerce: At the center of profitable growth in consumer goods" https://www.mckinsey.com/industries/consumer-packaged-goods/our-insights/e-commerce-at-the-center-of-profitable-growth-in-consumer-goods

[27] 2023 301 Review Comments
https://www.aafaglobal.org/AAFA/AAFA_News/2023_Letters_and_Comments/AAFA_Files_2023_USTR_Special_301_Review_Comments.aspx

[28] AAFA Files 2022 Notorious Markets Comments to USTR
https://www.aafaglobal.org/AAFA/AAFA_News/2022_Letters_and_Comments/AAFA_Files_2022_Notorious_Markets_Comments_USTR.aspx?WebsiteKey=49c45f4d-69b3-4c66-823a-6d285960fed2

INVENT TOGETHER

INVENTTOGETHER.ORG

April 17, 2023

The Honorable Christopher A. Coons
Chairman
Subcommittee on Intellectual Property
Committee on the Judiciary
United States Senate
Washington, DC 20510

The Honorable Thom Tillis
Ranking Member
Subcommittee on Intellectual Property
Committee on the Judiciary
United States Senate
Washington, DC 20510

Dear Chairman Coons and Ranking Member Tillis:

On behalf of Invent Together, thank you for holding a hearing on Foreign Competitive Threats to American Innovation and Economic Leadership. Invent Together is an alliance of universities, nonprofits, companies, and other stakeholders dedicated to understanding the diversity gaps in invention and patenting and supporting public policy and private initiatives to close them. Invent Together believes that everyone should have the opportunity to invent and patent and that the United States must mobilize all of its talent to maintain global technology leadership.

Since the Founders enshrined intellectual property rights into the Constitution, the right to own one's inventions has been the foundation of the U.S. innovation economy.[1] Yet more than two centuries later we consistently underutilize the talent and ingenuity of all Americans. According to the U.S. Patent and Trademark Office (USPTO), women account for 51% of the population, but less than 13% of all inventors listed on U.S. patents are women. Our competitors are not making the same mistake. A recent World Intellectual Property Organization study of international patent applications found that from 2001 to 2005 and 2016 to 2020, China grew its capacity of women inventors at almost *double* the rate of the United States—42% in China compared to 22% in the U.S.[2]

Addressing this massive gender gap is about more than fairness. The USPTO Office of the Chief Economist issued a report last October calling the persistent underrepresentation of women in patenting a "drag on American innovation and prosperity," and citing projected increases in U.S. economic output up to $6.3 billion if women were to patent at the same rate as men.[3]

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[1] U.S. CONST. art. I, § 8, cl. 8.
[2] Elodie Carpentier & Julio Raffo, *The Global Gender Gap in Innovation and Creativity: An International Comparison of the Gender Gap in Global Patenting over Two Decades*, WORLD INTELLECTUAL PROPERTY ORGANIZATION (2023), https://www.wipo.int/edocs/pubdocs/en/wipo-pub-ds-gender-2023-en-the-gender-gap-in-global-patenting-an-international-comparison-over-two-decades.pdf.
[3] Michelle Saksena, Nicholas Rada & Lisa Cook, Office of the Chief Economist, *Where are U.S. women patentees? Assessing three decades of growth*, IP DATA HIGHLIGHTS (October 2022), https://www.uspto.gov/sites/default/files/documents/oce-women-patentees-report.pdf.

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For the United States to compete successfully for global technology leadership, we must expand participation in inventing and patenting. As the USPTO report explained, "Gender diversity boosts the inventive process in essential ways: women's experiences and viewpoints help inform, and thus improve, the quantity and quality of innovation."

Invent Together applauds the Subcommittee for recognizing — as our rivals have — the importance of intellectual property to our global technology competitiveness. We urge you to take steps to broaden participation in inventing and patenting to strengthen our economy, promote technological advancement, and ensure the United States remains the undisputed leader in global innovation.

Sincerely,

Holly Fechner
Executive Director
Invent Together

cc: Members of the Subcommittee on Intellectual Property

Ken Monahan
Vice President
International Economic Affairs Policy

April 19, 2023

The Honorable Christopher Coons
Chairman
Subcommittee on Intellectual Property
Committee on the Judiciary
U.S. Senate
Washington, DC 20510

The Honorable Thom Tillis
Ranking Member
Subcommittee on Intellectual Property
Committee on the Judiciary
U.S. Senate
Washington, DC 20510

Dear Chairman Coons and Ranking Member Tillis:

The National Association of Manufacturers appreciates the committee's focus on American competitiveness through today's hearing, "Foreign Competitive Threats to American Innovation and Economic Leadership." The NAM is the largest manufacturing association in the U.S., representing businesses in every industrial sector and in all 50 states. Manufacturing employs 13 million Americans, contributes $2.90 trillion to the U.S. economy annually, pays workers over 18% more than the average for all businesses and has one of the largest sectoral multipliers in the economy.[1] Taken alone, manufacturing in the U.S. would be the eighth-largest economy in the world.

Innovation and intellectual property are central to manufacturing. Manufacturers in the United States drive more innovation than any other sector, performing 55% of private-sector research and development in the U.S.[2] In 2021 alone, manufacturers spent nearly $350 billion on R&D.[3] Research is the lifeblood of manufacturing: new products, new materials and new processes help propel manufacturing in America forward and improve lives here and around the world. Technologies such as machine learning and artificial intelligence, additive manufacturing, the Internet of Things, robotics, 5G, cloud computing, augmented reality, advanced materials and others are attracting significant attention and investment and will empower manufacturers to create more opportunities for American workers.

It is critical that manufacturers in America can compete with foreign commercial rivals, including but not limited to China. The NAM laid out recommendations for policymakers with respect to innovation and IP as part of a broad competitiveness agenda in its recent letter to the Select Committee on the Strategic Competition Between the U.S. and the Chinese Communist Party,[4] as well as the full array of foreign threats to American innovation and IP in a detailed submission to the Office of the U.S. Trade Representative.[5]

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[1] National Association of Manufacturers, "Facts About Manufacturing," last accessed Apr. 17, 2023.
[2] NAM, "Facts About Manufacturing."
[3] NAM, "Facts About Manufacturing."
[4] Letter from the National Association of Manufacturers to the Honorable Michael Gallagher and the Honorable Raja Krishnamoorthi (Feb. 27, 2023), *available at* https://documents.nam.org/IEA/NAM%20Letter%20on%20China%20Competition%20Priorities%20to%20House%20China%20Select%20Committee.pdf.
[5] Letter from the National Association of Manufacturers to Ariel Gordon (Jan. 20, 2023), *available at* https://documents.nam.org/IEA/NAM_2023_Special_301_Comments.pdf.

The NAM strongly supports strengthening IP protections to address IP theft and other threats from foreign rivals. The NAM appreciates the work of the subcommittee and looks forward to engaging with you on this issue.

Sincerely,

Ken Monahan

Aric Newhouse

Senior Vice President,
Policy and Government Relations

Feb. 27, 2023

The Honorable Michael Gallagher
Chair
Select Committee on the Strategic Competition Between the U.S. and the Chinese Communist Party
U.S. House of Representatives
1211 Longworth House Office Building
Washington, DC 20515

The Honorable Raja Krishnamoorthi
Ranking Member
Select Committee on the Strategic Competition Between the U.S. and the Chinese Communist Party
U.S. House of Representatives
2367 Rayburn House Office Building
Washington, DC 20515

Dear Chairman Gallagher and Ranking Member Krishnamoorthi:

The National Association of Manufacturers looks forward to working with members of the bipartisan Select Committee on the Strategic Competition Between the U.S. and the Chinese Communist Party to develop concrete policy solutions for the U.S. to strengthen our national security, bolster our economy and protect American innovation.

The NAM and the nearly 14,000 manufacturers large and small across the country that we represent have long urged a new approach to the U.S.–China relationship—one that is coordinated with allies, aimed at boosting our national security and economic competitiveness around the world and one rooted in American strengths and values. Those values include the ones that keep our industry strong and have made America exceptional: free enterprise, competitiveness, individual liberty and equal opportunity.

Our nation can tackle the challenges in our country's relationship with China by unleashing the power of manufacturing in America. In September 2022, the NAM published the latest version of "Competing to Win," a blueprint of the most critical actions Congress and the administration can take to support the industry.[1] This comprehensive plan includes a wide array of policy options that would help manufacturers in America grow, invest and hire, and therefore make our country more competitive. The actions discussed below include recommendations on trade, tax, workforce, immigration, energy security, intellectual property protections, infrastructure and more. The NAM urges members of this committee to consider policies outlined in "Competing to Win" and detailed in this letter as they seek to enhance American competitiveness with China.

Our approach to China must navigate a complicated set of U.S.–China ties: China is a fierce economic competitor that frequently fails to play by the rules and a major challenger to American global influence. Simultaneously, China is a necessary partner on global issues such as climate change and a critical market for manufactured goods. We must ensure that manufacturers in the U.S. can compete with China around the world, including in China itself. With the world's largest population, the world's second-largest economy and a rapidly expanding middle class, China has become one of the world's leading markets for manufactured goods, including but not limited to automobiles, information technology and food

[1] National Association of Manufacturers, *Competing to Win*, September 2022.

products. Our exports and local sales in China directly contribute to the ability of manufacturers to compete, to invest and to hire here at home. Notably, more than half of American manufacturing workers depend on exports for their paychecks, and China is the fourth-largest market for U.S. manufactured goods exports ($103.8 billion in 2022), behind only Canada, Mexico and the European Union. Moreover, U.S. companies have lost ground to other trading partners in China in recent years. In 2016, 8.9% of the goods China imports from the world came from U.S. companies; by 2020, that fell to 6.6%.

Manufacturers respectfully encourage your committee and other committees of jurisdiction to support action in areas critical to manufacturing leadership and competitiveness in the U.S.:

- **Support our manufacturing workforce.** Manufacturers are facing a workforce crisis that must be addressed for the U.S. to compete with China. The number of open jobs in the manufacturing sector has roughly doubled since before the pandemic, and companies are struggling to find qualified candidates. By 2030, 4 million manufacturing jobs will likely need to be filled, and 2.1 million are expected to go unfilled due to a lack of potential workers with the skills needed in today's modern manufacturing sector. The effects of this shortfall will be felt throughout the country. According to a recent report by Deloitte and the NAM's workforce and education partner, the Manufacturing Institute, the U.S. economy will be $1 trillion smaller in 2030 if those positions are not filled.[2] Without a skilled workforce, manufacturers will not have the people or talent required to compete in today's economy. Manufacturers urge Congress to fund and set guidelines for postsecondary education and training programs that allow employer participation and leadership in determining skills needed by students. Such industry leadership will be critical in shaping well-paying jobs in competitive industries needed to outflank China.

  Reforming our nation's broken immigration system is a critical step to addressing workforce needs. National security, compassion and addressing workforce realities are not mutually exclusive objectives when it comes to immigration. Manufacturers support securing our borders and reforming the immigration system to reflect the needs of the modern workforce, including addressing the existing backlog of immigration cases, providing certainty for individuals who are already in this country and updating our nation's approach to asylum seekers and refugees.

  Moreover, a strong, healthy and productive domestic workforce is critical to unleash American innovation and successfully compete with China. Manufacturers are leaders in employer-sponsored health care, with approximately 99% of NAM member companies offering health benefits. NAM member companies provide health benefits to maintain a healthy workforce, attract and retain talent and fundamentally because they believe it is the right thing to do. Manufacturers go to great lengths to provide health benefits to their employees despite both large and small manufacturers citing rising health care expenses as one of their top business concerns. Congress should adopt health care reforms that promote both innovation and value in ways that are in step with the next generation of health care delivery. The U.S. should apply free enterprise principles to all aspects of health care policy reform. Such principles include, but are not limited to, protecting intellectual property, encouraging transparency, opposing price control–oriented solutions and avoiding costly Medicare for All.

[2] The Manufacturing Institute and Deloitte, *Creating Pathways for Tomorrow's Workforce Today: Beyond Reskilling in Manufacturing*, 2022.

- **Improve federal permitting to strengthen energy and manufacturing investment here at home.** Too often, manufacturers seeking to make significant investments in the U.S. face years-long delays in obtaining the permits needed to break ground on a project. Speeding up the permitting process and establishing permit certainty will support industrial growth. Efforts to expand domestic energy production, upgrade our nation's infrastructure, increase critical mineral extraction and processing and expand facilities are all dependent upon the success of advancing permitting reform. To that end, the administration should closely follow congressional intent regarding One Federal Decision from the bipartisan Infrastructure Investment and Jobs Act, as that mandate establishes strict permit review timelines and eliminates duplicative efforts across various federal agencies. Moreover, Congress should intervene to address ambiguity and inconsistent terminology in key permitting authorities in order to facilitate manufacturing expansion while achieving environmental stewardship.

- **Utilize government funding programs and tax policies to incentivize domestic manufacturing investment.** Manufacturing is a capital-intensive industry. Facilities, equipment and machinery have long productive lives but require significant up-front capital investments. Reducing barriers to these investments will help grow the manufacturing base. Manufacturers urge lawmakers to ensure that funds that have been authorized to support the manufacturing economy are disbursed quickly and equitably. Portions of the CHIPS and Science Act, the Infrastructure Investment and Jobs Act and the Inflation Reduction Act authorize investments in key parts of the manufacturing economy. The administration and Congress should work together to ensure that these funds reach manufacturers expeditiously.

  Additionally, a 2020 study analyzing the primary costs (compensation, property, utilities, taxes and interest rates) associated with manufacturing found that these amounts are on average 16% higher in the U.S. than in a peer group of countries.[3] The NAM also encourages Congress to implement a new tax credit that encourages companies to make domestic investments in workforce, machinery, equipment and innovation to help ensure that the U.S. is the destination of choice for new industrial investment. To be effective, the credit must be as simple as possible to calculate, easy to claim and complement existing tax incentives that are available to all manufacturers, irrespective of size or form.

  Congress must also ensure that the tax code supports private sector investment in manufacturing activities by taking the following steps:

  - *Reverse tax provisions that discourage investments in innovation*. Manufacturers in the U.S. drive more innovation than any other sector, performing 55% of private-sector research and development in the U.S. In 2021 alone, manufacturers spent nearly $350 billion on R&D. The result of this investment is new products, new materials and new processes that help propel America forward. However, as of Jan. 1, 2022, businesses can no longer immediately deduct their research expenses. Instead, manufacturers are now required to amortize, or recover over a period of years, these expenses, making R&D more costly to conduct in the U.S. Unless Congress acts, manufacturers' ability to innovate and create new products, technologies and lifesaving medicines will be

[3] KPMG and National Association of Manufacturers, *Cost of Manufacturing Operations Around the Globe*, October 2020.

harmed. Importantly, the NAM notes that China recently adopted a 200% "super deduction" for manufacturing research expenses; in short, China is using tax policy to encourage innovation while the U.S. tax code has made R&D more expensive. Finally, the amortization requirement poses a threat to our national security, with the National Science and Technology Council noting that R&D investments "are essential to ensure that the U.S. remains able to secure and protect the American people in the face" of other countries' increasing support for R&D.[4]

- *Enable manufacturers to continue to finance growth*. Small and medium-sized manufacturers often borrow funds to afford investments in new equipment and machinery that are necessary for growth. However, a recent change to Section 163(j) of the tax code has made business loans for these firms more expensive. The maximum interest deduction under section 163(j) is now limited to 30% of a company's earnings before interest and tax ("EBIT"), a substantial change from the standard in place prior to 2022 that was based on earnings before interest, tax, depreciation and amortization. ("EBITDA"). By excluding depreciation and amortization, the EBIT-based limitation makes it more expensive for capital-intensive companies to finance critical purchases, grow their businesses and hire new workers. This stricter limitation effectively acts as a tax on investment, and it makes the U.S. a global outlier. Of the more than 30 OECD countries with an earnings-based interest limitation, the U.S. is the only one that employs an EBIT standard. According to a recent study, failing to reverse this harmful change could cost the U.S. economy 467,000 jobs and reduce U.S. GDP by $43.8 billion.[5]

- *Make permanent a key incentive for capital equipment purchases*. A 100% deduction for the purchase of equipment and machinery in the tax year purchased has been in place since 2017. This critical incentive for capital-intensive industries like manufacturing reduces the after-tax cost of capital equipment purchases and increases the return on investments. According to recent analysis by the nonpartisan Joint Committee on Taxation, manufacturers led all sectors in the use of expensing by a wide margin. Unfortunately, the 100% level of full expensing began to phase out this year and will be eliminated completely by 2027. If this occurs, it will be much more expensive for manufacturers to undertake job-creating investments and effectively compete on a global scale.

- **Elevate U.S. energy innovation and leadership.** The U.S. is the world's leading energy producer, creating an advantage for manufacturers in the race to compete against China in the global marketplace. Today, manufacturers benefit from all forms of energy and natural resources while making smart investments to become more energy efficient and keep protecting the environment. Meanwhile, manufacturers are developing new technologies that make energy cleaner, more affordable and reliable with each

[4] See p. 23 of Subcommittee on Research and Development Infrastructure, Committee on Science and Technology Enterprise of the National Science and Technology Council, *National Strategic Overview for Research and Development Infrastructure* (October 2021).
[5] Ernst & Young, "Economic impact of a stricter 163(j) interest expense limitation," Prepared on behalf of the NAM, September 2022.

passing year. When we fail to produce energy here, it is produced elsewhere with a much greater negative impact on the environment.

Manufacturers need the right types of federal policies to support their efforts to find innovative ways to harness U.S. energy. Historically, the federal government has been inconsistent in its support for domestic energy production and delivery infrastructure. Policymakers have not advanced a comprehensive plan that ensures an energy future with continued certainty for manufacturers. In recent years, the federal government has also used regulations to favor or disfavor certain energy options, creating a level of year-by-year instability that makes it difficult for manufacturers to make long-term investments and capitalize on the nation's energy advantage. Manufacturers urge the administration and Congress to remove regulatory barriers that reduce access to the rich diversity of domestic energy, minerals and other natural resources and to expedite the legal and regulatory processes for exporting energy technologies that can help promote trade in energy and environmental goods and aid manufacturers in outcompeting China in global markets.

- **Protect manufacturers' intellectual property abroad.** It is vital that the U.S. advance policies that defend American innovation and technology leadership in the U.S. and abroad, including through efforts to advance strong rules and robust protection of intellectual property and innovation. The U.S. government must push China to take further action beyond the "Phase One" deal to address intellectual property theft, structural concerns with China's patent and trademark systems and rampant counterfeiting. Counterfeit goods, particularly those sold online and largely coming from China, remain a top concern and competitive challenge for manufacturers of all sizes. Congress should take steps to ensure the full implementation of existing laws designed to strengthen enforcement against counterfeit goods, including the Trade Facilitation and Trade Enforcement Act of 2015, the Synthetics Trafficking and Overdose Prevention Act of 2018 and the INFORM Consumers Act of 2022. Moreover, Congress should advance additional legislation to reduce the availability of counterfeit goods on e-commerce platforms, act against intellectual property infringement, provide up-to-date enforcement capability and improve interagency collaboration to fight fake goods.

- **Ensure targeted and effective deployment of national security regulatory frameworks, such as investment security reviews and export controls.** Given the increasing practice of civil-military fusion in China, manufacturers are committed to ensuring that U.S. capital and critical technologies do not undermine the security interests of the U.S. In crafting regulatory frameworks to screen or restrict outbound investment or to increase export controls, manufacturers encourage an approach that protects U.S. national security and upholds the strength, leadership and competitiveness of the U.S. manufacturing and defense industrial base. Policies must be carefully crafted and targeted, and where possible, coordinated with our allies and partners to ensure their effectiveness.

- **Implement a clear China trade strategy to support manufacturing competitiveness in the U.S., China and around the world**. NAM President and CEO Jay Timmons has called on President Joe Biden and other senior government officials to implement a clear China trade and economic strategy to provide badly needed clarity to manufacturers seeking to plan their global operations, increase manufacturing investment in the U.S.

and support industry efforts to diversify supply chains.[6] That strategy must include U.S.–China bilateral engagement at senior levels to press on key economic priorities, close engagement with allies and partners and assertive U.S. leadership in global institutions like the World Trade Organization. The U.S. must develop, and strategically use, a full playbook of legislative and enforcement tools to pressure China to stop its discriminatory economic policies and level the playing field for manufacturers and workers in the U.S. Moreover, the U.S. must also work with allies to shape China's external environment, adopting common approaches that incentivize China to change its behavior. In addition, the U.S. must push for proactive, market-opening policies that strengthen our trading relationships, not just policies that disincentivize U.S. manufacturers from operating in China or impose collateral damage on the U.S. economy.

Manufacturers urge the administration and Congress specifically to take the following steps:

- *Partner with allies, particularly in the Indo-Pacific region, to secure opportunities for manufacturers in the U.S. and ensure that the U.S., not China, writes the rules for the international system.* Manufacturers urge the U.S. to deepen its engagement with allies to open markets, protect U.S. innovation and technology leadership, institute best-in-class trade rules and strengthen U.S. supply chain resiliency in ways that deliver for manufacturers. That strategy must include the negotiation of trade agreements with friends and allies to strengthen manufacturing in the U.S., as well as the deepening of partnerships with trusted trading partners through economic framework agreements such as the Indo-Pacific Economic Framework on supply chains, digital trade and other areas in ways that provide market access and include binding commitments.

  The U.S. must also lead efforts to modernize and reform the World Trade Organization. Manufacturers believe that a strong, functioning WTO provides critical backstops for the U.S. to address areas where China is violating key trade disciplines, but the WTO has not kept pace with industry and technological developments or with Chinese trade-distorting practices. To ensure fair trade for manufacturers in the U.S., the WTO must deliver on trade liberalization, modernize the rules for international trade and strengthen enforcement tools to fully address problematic Chinese behaviors.

- *Exert consistent pressure on China to fully meet its trade and economic commitments through strategic use of both domestic and multilateral trade tools, direct engagement with China and in concert with allies.* The U.S. needs to take clear, strategic steps to pressure, and respond, to problematic Chinese trade and economic behavior. Engagement will require a full toolkit that includes direct negotiation, close work with allies and strategic use of domestic enforcement tools. The U.S. must be direct and steadfast to hold China fully accountable to its trade commitments, including those made in the interim "Phase One" U.S.-China deal in areas such as intellectual property theft and market access as well as its WTO commitments in areas such as intellectual property, industrial subsidies and government procurement. The U.S. and allies must also press China directly

[6] Jay Timmons, Letter to President Joe Biden on China, Mar. 17, 2021; Timmons, Letter to Senior Biden Administration Officials on China, Aug. 31, 2021; Timmons, Letter to House China Accountability Task Force, May 23, 2022.

on a wider variety of market-distorting actions such as industrial overcapacity and forced technology transfer that go beyond these commitments.

Additionally, manufacturers urge the U.S. to make strategic use of enforcement tools. That includes targeted use of investigations under U.S. trade law to assess and counter specific Chinese trade barriers through specific remedies. Remedies should be based on transparent, evidence-based investigations that reflect views from Congress, industry and other relevant stakeholders. They should reflect a full analysis of their impact and implications for Chinese policymakers and economic actors, as well as the impact on the domestic economy, jobs and manufacturers. Such remedies, including existing Section 301 tariffs, should be accompanied by comprehensive, robust processes to allow manufacturers opportunities to seek, and offer evidence, on decisions to fine-tune their implementation to ensure that they do not impose broad harm on the U.S. economy. Moreover, they should be developed and used alongside bilateral, regional and multilateral strategies to address these trade practices, and done so in consultation with allies.

- *Boost initiatives and programs to promote U.S. export competitiveness in China and around the world.* The NAM supports strong U.S. government export promotion programs aimed at helping manufacturers in the U.S. (particularly SMMs) expand and create jobs through finding new customers and markets for their exports. Such programs should include advocacy by relevant agencies across the U.S. government, including the Small Business Administration and U.S. Commercial Service within the U.S. Department of Commerce. The U.S. should also strengthen programs designed to promote U.S. export competitiveness and the ability to compete with Chinese enterprises in global markets. This includes a commitment to a strong and competitive Export-Import Bank and development finance organizations.

- **Increase collaboration between manufacturers, Congress and the executive branch to advance American values abroad.** Manufacturers are the backbone of a strong American economy and strive to uphold the values that have made America exceptional and kept our industry strong: free enterprise, competitiveness, individual liberty and equal opportunity. Our sector has a proud history of standing firm in support of democracy and in solidarity with those suffering from persecution and aggression around the world.

  Manufacturers strongly condemn and oppose all forms of human rights abuses, including the use of forced labor around the world, and supported the passage of the Uyghur Forced Labor Prevention Act. The NAM and its members are committed to working in partnership with Congress and the executive branch to ensure that goods produced with forced labor do not enter the U.S. Manufacturers believe that a robust partnership that includes new tools and technology, due diligence guidance, clear requirements and increased collaboration can effectively target and prevent forced labor violations. Manufacturers also support efforts by the U.S. government to work with our allies and partners to streamline and coordinate laws and regulations that aim to combat and eliminate the use of forced labor in China and globally.

- **Advance domestic pro-innovation policies to successfully compete with China around the world.** Innovation is the lifeblood of our economy, the foundation of a globally competitive manufacturing base here at home and the driver for U.S. manufacturing leadership abroad. Manufacturers in the U.S. have created an innovation engine that has reshaped the world around us. New technologies and processes have brought us energy independence, new lifesaving medicines and medical devices and more efficient automobiles, to name a few. As modern manufacturing in the U.S. races toward the new economic era and pursues future technologies to lead new operational advances, federal policies must keep up with the industry's needs, prioritizing both investment and innovation. The U.S. should adopt policies that will drive innovation as well as foster the growth of connected technologies, digital infrastructure and data-driven innovation across all manufacturing industry segments. These actions include pursuing a federal approach to data privacy that provides flexibility for innovation, addresses domestic and global inconsistencies and maintains U.S. economic growth and technological leadership as well as maintaining a strong mechanism for the public and private sectors to share real time cyberthreat information and support reasonable reporting requirements for those under attack.

- **Support innovation and smart regulation to create a cleaner, safer and more competitive economy that can compete with China.** Manufacturers are innovating to create new solutions to address climate change, protect biodiversity and advance environmental justice, solutions that also allow U.S. companies and technologies to be more competitive against China in the global marketplace. Manufacturers have sharply reduced the industry's impact on the environment through a wide range of innovations, such as saving and recycling water, increasing energy efficiency, implementing successful initiatives to reduce pollution and waste and taking action to protect vulnerable communities here in the U.S. The industry's momentum is strong, and with new technologies being implemented every day, the future is unquestionably bright. With balance between environmental ambition and commercial feasibility, manufacturers are proving we can have both a healthy, clean environment and a prosperous economy. However, when policymakers adopt poorly tailored laws and regulations that put manufacturers in America at a global disadvantage, the critical balance between environmental improvement and economic growth is lost, hurting our workers, businesses and communities and harming our ability to compete against China in the global marketplace.

  While smart regulation is critical to protecting worker safety, public health and our environment, overregulation will hold back our country's economic potential and ability to compete with China. Similarly, speculative litigation continues to cause backlogs in the courts and cost manufacturers millions, even when the claims are baseless. The annual regulatory cost burden for an average U.S. firm represents 21% of its payroll, and manufacturers, particularly small entities, bear a disproportionate share of the regulatory burden.[7] Meanwhile, our legal system is more than twice as expensive as the systems of our major competitors, not only China, but also Japan, France, Canada and the United Kingdom. A more competitive economy demands reforming the nation's broken legal and regulatory systems to ensure that resources are focused on investments in the workforce, new equipment and other opportunities for manufacturers to grow and compete, while protecting consumer health and safety.

[7] Crain, W. Mark and Nicole V. Crain, "The Cost of Federal Regulation to the U.S. Economy, Manufacturing and Small Business," prepared on behalf of the NAM, Sept. 10, 2014.

- **Improve American infrastructure to enhance domestic competitiveness in a global marketplace.** For decades, investment in U.S. infrastructure systems lagged behind global standards, creating an intermodal, interdependent system lacking resources and upgrades to ensure safe and efficient transport of people and commercial operations. The IIJA's 2021 passage heralded a new era of federal investment in critical systems necessary to keep the American economy competitive and authorized programs affecting every facet of U.S. commercial enterprise. Manufacturers played an integral role in advocating and securing this $1.2 trillion investment in modernized infrastructure networks. From roads and bridges to airports, ports, water systems, broadband, national electric vehicle charging systems and more, this law has laid the foundation for a competitive U.S. manufacturing future, and manufacturers are committed to the swift and successful implementation of new and expanded federal investments.

  As national and international supply chain disruptions have made painfully clear, maintaining and modernizing our infrastructure is essential to keeping products moving and manufacturers operating. Manufacturers urge the U.S. government to ensure the successful implementation of IIJA programs, with appropriate Congressional direction, timely federal agency execution and continued industry input to address implementation issues and pave the way for the future of domestic manufacturing prosperity. Further, review and streamlining of federal permitting processes for which manufacturers and industrial partners have advocated will ensure the promise of historic and generational investment is fully realized for U.S. economic interests.

We strongly support strategic action in each of these areas to reset our bilateral relationship with China and to grow domestic manufacturing in ways that position the U.S. to strengthen national security and outcompete China. Manufacturers stand ready to work with the Select Committee to advance strategic approaches and tactics to achieve those critical goals.

Sincerely,

Aric Newhouse
Senior Vice President, Policy and Government Relations
National Association of Manufacturers

CC:

- The Honorable Rob Wittman
- The Honorable Blaine Luetkemeyer
- The Honorable Andy Barr
- The Honorable Dan Newhouse
- The Honorable John Moolenaar
- The Honorable Darin LaHood
- The Honorable Neal Dunn
- The Honorable Jim Banks
- The Honorable Dusty Johnson
- The Honorable Michelle Steel
- The Honorable Ashley Hinson
- The Honorable Carlos Gimenez
- The Honorable Kathy Castor
- The Honorable André Carson
- The Honorable Seth Moulton
- The Honorable Ro Khanna
- The Honorable Andy Kim
- The Honorable Mikie Sherrill
- The Honorable Haley Stevens
- The Honorable Jake Auchincloss
- The Honorable Ritchie Torres
- The Honorable Shontel Brown

Ken Monahan
Vice President, International Economic Affairs

Jan. 30, 2023

Ms. Ariel Gordon
Director for Innovation and Intellectual Property
Office of the U.S. Trade Representative
600 17th Street NW
Washington, DC 20503

Ref. Docket No.: USTR-2022-0016: Request for Comments and Notice of a Public Hearing Regarding the 2023 Special 301 Review

Dear Ms. Gordon:

The National Association of Manufacturers welcomes the opportunity to provide written comments for the 2023 Special 301 Review. The NAM is the largest manufacturing association in the U.S., representing nearly 14,000 manufacturers small and large in every industrial sector and in all 50 states. Manufacturing employs more than 12.9 million people across the country and drives innovation more than any other sector, contributing 55% of all private sector research and development in the U.S. In total, manufacturing contributed $2.81 trillion to the U.S. economy in the third quarter of 2022.[1]

Innovation, intellectual property and research and development are critical foundations of a globally competitive manufacturing base at home and U.S. global manufacturing leadership around the world. IP protections provide incentives for manufacturers to take the necessary risk to create new industries and products, invest in advanced manufacturing facilities and expand workforce development programs. And IP will continue to be a critical driver of U.S. global technology leadership in emerging fields such as green technology, robotics and the digital economy. Our continued fight against COVID-19 underscores the importance of that innovation: manufacturers worked tirelessly for years to build the infrastructure, workforce and manufacturing capacity to quickly create and produce the products needed to help the U.S. and the world fight back. That infrastructure, built on strong IP protections, will be no less important in addressing future global challenges.

The U.S. has long made vigorous protection of IP rights at home and abroad a core component of its trade policy and national competitiveness. These strategies have long been built on two pillars: a strong domestic legal framework to protect and enforce manufacturers' IP at home, and consistent efforts to fight for strong IP protection and enforcement abroad. Manufacturing competitiveness here in America continues to depend on these efforts, as our innovation and IP remains a major target for theft by foreign competitors, threatening U.S. manufacturing competitiveness and jobs, as well as the health and safety of U.S. consumers. In an increasingly competitive global environment, these pressures are growing, not shrinking. IP threats include harmful actions taken by individual bad actors—such as counterfeiting, patent infringement and trade secret theft. Such threats also include coordinated efforts by governments and others to weaken the global IP frameworks that support exports and market access for innovative products that support well-paying manufacturing jobs in the U.S.

[1] National Association of Manufacturers, "Facts about Manufacturing," last visited Jan. 12, 2023.

Though manufacturers in the U.S. face IP challenges globally, they confront particular challenges securing and protecting their IP in specific markets. Based on specific developments in the last year that illustrate the harmful impact of these foreign governments' actions on innovative manufacturers, the NAM recommends that the Office of the U.S. Trade Representative include designation of a series of foreign countries in this year's Special 301 report with specific classifications, including a **Priority Watch List designation for six countries (Canada, China, Colombia, India, Indonesia and Mexico)** and a **Watch List designation for four additional countries (Brazil, Japan, Korea and Thailand).**

The U.S. must take a "whole-of-government" approach to support innovative manufacturing businesses and workers, collaborating across agencies to address IP challenges identified in this submission through specific, action-oriented work plans. This must include active use of Special 301-specific tools such as country classifications, out-of-cycle reviews, results-oriented action plans and existing legislative authorities, as well as:

- Fully enforcing current IP and innovation-related commitments under existing trade agreements, including free trade agreements with **Australia**, **Canada**, **Chile**, **Colombia**, **Korea** and **Mexico** and the existing trade-related agreement with **China**;
- Including "best-in-class" IP protections in current and future trade negotiations and frameworks, including regional economic frameworks such as the Indo-Pacific Economic Framework and the Americas Partnership for Economic Prosperity, bilateral frameworks with markets such as **Brazil**, **Japan**, **Kenya** and **Taiwan**, and any future agreements or frameworks with markets such as the **United Kingdom**;
- Prioritizing IP in bilateral trade dialogues, including bilateral consultations with individual countries such as **India** as well as Trade and Investment Framework Agreement talks (both those with individual countries such as **Indonesia** and **Argentina** and regional agreements with **Association of Southeast Asian Nations** countries);
- Defending, and further advancing, robust rules and initiatives for innovation, IP protection and enforcement at regional organizations and platforms, including the World Trade Organization, G7, G20, Organization for Economic Cooperation and Development, and the World Intellectual Property Organization, leveraging key U.S. roles such as its 2023 host year for Asia-Pacific Economic Cooperation;
- Strengthening policy and technical engagement with foreign governments on IP policy and enforcement to ensure transparency and due process in administrative proceedings, fair treatment in judicial cases and effective enforcement of arbitration awards; and
- Working across relevant federal agencies to boost education, training and capacity-building programs with IP-relevant foreign government authorities, pooling resources and expertise to expand existing programs and to develop new programs and models.

Similarly, manufacturers urge the U.S. government to fully implement domestic authorities to protect IP against bad actors at home and abroad. These activities should include full implementation of legislation such as the Trade Facilitation and Trade Enforcement Act of 2015, the Synthetics Trafficking and Overdose Prevention Act of 2018 and the INFORM Consumers Act of 2022, as well as further agency actions to tackle counterfeiting identified in the Department of Homeland Security's January 2020 counterfeiting report.

The NAM and its members welcome this opportunity to comment and look forward to working with USTR and other agencies to address critical IP concerns facing manufacturers.

Sincerely,

Ken Monahan

National Association of Manufacturers
Detailed Comments for 2023 Special 301 Report

Innovation, intellectual property and research and development are critical foundations of a globally competitive manufacturing base at home and U.S. global manufacturing leadership around the world. Strong pro-IP policies are even more critical given the "fourth wave" of manufacturing innovation that is remaking our workforce and creating new opportunities and new high-skilled jobs for Americans.[2]

The numbers are clear: patents, trademarks, copyrights, trade secrets and other forms of IP fuel the U.S. economy. The U.S. was responsible for just under 30% of all research and development conducted globally as of 2020,[3] with nearly $717 billion in total R&D in that year (3.4% of U.S. GDP).[4] According to a 2022 report by the U.S. Patent and Trademark Office, innovative industries account for 41% of all domestic output, and directly or indirectly support more than 62.5 million jobs across the country.[5] The manufacturing industry alone boasts more nearly 10.7 million IP-intensive jobs in the U.S.[6] And amidst current economic challenges, IP investment has been a bright spot, rising by an average of 8.8% per quarter through the first three quarters of 2022.[7]

IP protections provide incentives for manufacturers to take the necessary risk to create new industries and products, invest in advanced manufacturing facilities and expand workforce development programs. And IP will continue to be a critical driver of U.S. global technology leadership in emerging fields such as green technology, robotics and the digital economy. Our continued fight against COVID-19 underscores the importance of that innovation: manufacturers worked tirelessly for years to build the infrastructure, workforce and manufacturing capacity to quickly create and produce the products needed to help the U.S. and the world fight back. That infrastructure, built on strong IP protections, will be no less important in addressing future global challenges.

The U.S. has long made vigorous protection of IP rights at home and abroad against those who seek to steal our innovative ideas and products a core component of its trade policy and national competitiveness. These strategies have long been built on two pillars: a strong domestic legal framework to protect and enforce manufacturers' IP at home, and consistent efforts to fight for strong IP protection and enforcement abroad. Yet American IP remains a major target for theft by foreign competitors, threatening U.S. manufacturing competitiveness and jobs as well as the health and safety of U.S. consumers. This includes theft of patented technology and trade secrets, counterfeiting of branded manufactured goods and piracy of industrial software that is important for manufacturers. Counterfeit products such as personal

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[2] Manufacturing Institute, "Training to Win: Talent Solutions for the New Economy," March 2020.
[3] Congressional Research Service, "U.S. Research and Development Funding and Performance: Fact Sheet," last updated Sept. 13, 2022 and accessed Jan. 12, 2022.
[4] For statistics on total U.S. R&D, see Anderson, Gary, John Jankowski and Mark Boroush, "U.S. R&D Increased by $51 Billion in 2020 to $717 Billion; Estimate for 2021 Indicates Further Increase to $792 Billion," Jan. 4, 2023.
[5] Statistics cited in the report date to 2019. See Toole, Andrew A., Richard D. Miller and Nicholas Rada, "Intellectual Property and the U.S. Economy: Third Edition," March 2022.
[6] Manufacturing represents 22.6% of the 47.2 million IP-intensive jobs across sectors, based on statistics cited in Toole, Miller and Rada, "Intellectual Property and the U.S. Economy: Third Edition."
cited in the report date to 2019. See Toole, Andrew A., Richard D. Miller and Nicholas Rada, "Intellectual Property and the U.S. Economy: Third Edition," March 2022.
[7] Intellectual property investment has continued to be a bright spot in 2022, rising 10.8% in the first quarter, 8.9% in the second quarter and 6.8% in the third quarter of that year. See Bureau of Economic Analysis, "Intellectual Property," last accessed on Jan. 12, 2023.

care products, medicines, and toys also threaten the health and safety of businesses and consumers in the U.S. that purchase and use these products.

Manufacturers strongly urge the administration to stand with innovative manufacturers through clear, concrete top-down action to embrace and protect IP. To fully and consistently protect American IP from global theft, the U.S. should:

- Fully enforce current IP and innovation-related commitments under existing trade agreements, including free trade agreements with **Australia**, **Canada**, **Chile**, **Colombia**, **Korea** and **Mexico** and the existing trade-related agreement with **China**, making active use of bilateral consultations and, as appropriate, state-to-state dispute settlement to hold these parties accountable and ensure continued progress on IP protection.
- Include "best-in-class" IP protections in current and future trade negotiations and frameworks, including regional economic frameworks such as the Indo-Pacific Economic Framework and the Americas Partnership for Economic Prosperity, bilateral frameworks with markets such as **Brazil**, **Japan**, **Kenya** and **Taiwan**, and any future agreements or frameworks with markets such as the **United Kingdom**, ensuring strong, specific, enforceable protections for all forms of IP;
- Prioritize IP in bilateral trade dialogues, including bilateral consultations with individual countries such as **India** as well as Trade and Investment Framework Agreement talks (both those with individual countries such as **Indonesia** and **Argentina** and regional agreements with **Association of Southeast Asian Nations** countries);
- Defend, and further advance, robust rules and initiatives for innovation, IP protection and enforcement at regional organizations and platforms, including the WTO, G7, G20, OECD and WIPO, leveraging key U.S. roles such as its 2023 host year for APEC.
- Strengthen policy and technical engagement with foreign governments on IP policy and enforcement to ensure transparency and due process in administrative proceedings, fair treatment in judicial cases and effective enforcement of arbitration awards; and
- Work across relevant federal agencies to boost education, training and capacity-building programs with IP-relevant foreign government authorities, pooling resources and expertise to expand existing programs and to develop new programs and models. These programs should take a broad view of relevant officials, including officials and agencies involved in setting IP-relevant policies or regulations impacting innovative industries, patent and trademark examiners, customs and border authorities, law enforcement officials, judges and other judicial staff.

Manufacturers strongly support the strategic use of Special 301-related enforcement tools—including country classifications, out-of-cycle reviews and results-oriented action plans—to foster improvements in global IP protection. Across U.S. government agencies, manufacturers also specific steps to fully implement important legislation such as the Trade Facilitation and Trade Enforcement Act of 2015, the Synthetics Trafficking and Overdose Prevention Act of 2018, and the INFORM Consumers Act of 2022, as well as further steps to tackle counterfeiting identified in the Department of Homeland Security's January 2020 counterfeiting report.

Beyond these specific actions, however, manufacturers urge broader, deeper, quicker action to strengthen IP at home, defend against efforts to weaken global IP rules abroad and tackle cross-border issues like counterfeiting.[8] Manufacturers encourage the Office of the U.S. Trade Representative to play a leading role in interagency efforts to develop and implement robust

[8] National Association of Manufacturers, "Countering Counterfeits: The Real Threat of Fake Products," July 2020.

strategies to advance IP globally, to make measurable progress in priority markets to promote market access and U.S. manufacturing competitiveness abroad, and to engage constructively with the private sector to identify further ways of advancing American innovation abroad.

I. Cross-Cutting Trends and Concerns

As manufacturers in the U.S. seek to obtain, use and enforce their IP rights, they encounter a range of challenges in countries around the world. Although the specific barriers differ from country to country, manufacturers have long faced a number of cross-cutting, thematic issues that deny them adequate and effective IP protection and enforcement for manufactured goods. These issues appear as key themes in the analysis below of challenges in priority markets, but manufacturers also urge the U.S. government to approach these issues comprehensively and strategically given their cross-cutting nature.

Such longstanding barriers include concerns raised repeatedly by manufacturers in previous submissions, including inadequate infrastructure to grant and enforce IP, growing pressure to undermine core IP protections for manufacturers through mechanisms such as compulsory licensing, technical and regulatory roadblocks to obtaining and enforcing patents, inadequate protection of trade secrets and business confidential information, and the European Union's push to expand its exclusionary geographical indications approach. Each of these issues remains an ongoing challenge for manufacturers in markets around the world.

This year's submission spotlights three of these priority themes for manufacturers: the erosion of critical IP protections in multilateral fora, the continued growth of global counterfeiting and growing pressure at the national level to erode core IP protections in the name of other public policy priorities.

A. IP Erosion in Multilateral Fora

Strong IP protection and enforcement are critical to achieving global objectives in areas like health, climate and the digital economy. These protections incentivize investment and technology development in those areas, drive the creation of emerging technologies to tackle these global challenges and enable the spread of these technologies across the globe. Around the world, such protections are rooted in strong, global frameworks for IP protections and enforcement built over decades by the U.S. and like-minded countries in order to harness the power of innovation to drive global trade, investment and development.

Yet in multilateral fora, some countries and activist groups continue to push to dismantle these protections, claiming falsely that IP is inherently a barrier to public health, environmental protection, sustainable development or access to information and ignoring the critical role that IP plays in driving solutions to these very problems. These initiatives appear not only in organizations that clearly have trade and IP within their core jurisdictions, such as the WTO and WIPO, but also in those that do not, such as the World Health Organization. Many of these efforts appear to be driven by these countries' own commercial interests and by longstanding agendas that seek to undermine IP protections. Such attacks on IP in multilateral fora are exacerbated by parallel efforts in some multilateral organizations to limit engagement with private industry, ignore private sector input or delegitimize pro-IP voices.

The conversations matter in framing the global discussion on these issues and also create pressure for policymakers at the national level to adopt flawed policy recommendations in their

own laws and regulations that can have a direct, negative impact on manufacturers and their workers in the U.S. International organizations increase that pressure by directly lobbying or offering technical assistance to national governments to revise their legal frameworks to undermine innovation and strong IP protections or by offering tailored grants to third-party stakeholders that have a vested interest in such changes.

Strong U.S. advocacy in these fora is badly needed to defend American innovation. In the past, success in halting problematic initiatives has been possible only through a steady commitment to defending IP, a strong and coordinated interagency approach to ensure common messaging and close work with likeminded countries and negotiators. Those efforts must continue to address issues such as:

- Ongoing negotiations at the WTO to expand problematic waivers of IP for COVID-19 products. Manufacturers have stepped up to fight COVID-19, investing and creating hundreds of partnerships at an unprecedented speed that leverage U.S. manufacturing capacity to create, produce and deliver critical products needed to fight COVID-19 around the world. That fight is far from over, pointing to the continued need for governments, private sector entities, civil society and others to work together to end the pandemic, save lives and support our economies.

  The focus must remain on advancing practical, effective initiatives that confront the pandemic's health and economic challenges. This must include efforts to leverage trade, investment and innovation to create and deliver critical products needed to fight new COVID-19 variants as well as to tackle ongoing challenges such as lingering supply chain and logistics bottlenecks, waning or limited demand for vaccines, therapeutics and diagnostic tests and inadequate domestic health infrastructure. The U.S. must lead global efforts to attack these challenges at the WTO, G20 and elsewhere to advance initiatives in these areas, including the Trade in Health Initiative; an expanded "zero-for-zero initiative"; expanded COVID-19 product donation programs; and other initiatives to tackle key trade bottlenecks, reduce export restrictions, streamline customs procedures, deepen regulatory cooperation and strengthen national health systems. These approaches can improve global health responses and support manufacturing and innovation in the U.S.

  In contrast, manufacturers across a range of IP-intensive sectors are deeply concerned with ongoing negotiations at the WTO over potential expansion of an already problematic WTO 12th Ministerial Conference decision to effectively waive COVID-19 vaccine patents to include broad categories of COVID-19 diagnostics and therapeutics. The proposed expansion of that decision would jeopardize American innovation and manufacturing jobs and undermine future investment and R&D for products that are fundamental to fighting current and future pandemics. Additionally, an expanded waiver would not solve, and could even worsen, our biggest current challenges related to pandemic response, including supply chain bottlenecks, distribution delays and weak demand for COVID-19 products, while also undermining investment and R&D. The proposed expansion would, in fact, implicate not just final products but their full supply chains due to broad coverage of any patent "required for the production and supply" of products in scope.

  An expanded waiver also raises broader systemic risks, undermining U.S. technology leadership and jobs against global competitors such as **China** by allowing them a

channel to unfairly seize American innovation to benefit their domestic economies. Finally, the expansion threatens U.S. manufacturing innovation in many other sectors, as the waiver is already emboldening those who want to chip away at American innovation in other areas, with other countries such as **India** and even senior United Nations officials discussing similar actions related to innovation in energy and environmental technologies.[9]

Given these wide-ranging concerns, manufacturers appreciated that WTO member states in December 2022 declined to expand the decision by the initial six-month deadline, instead deciding to delay any decision to an unspecified point in the future. That announcement clearly shows a continued lack of consensus, and evidence, that an expanded waiver is necessary and effective and underscores manufacturers' ultimate view that member states should reject fully an expanded waiver. Yet manufacturers remain concerned about potential U.S. support for the expansion, given its problematic support for the initial WTO/TRIPS waiver on vaccines. Additionally, USTR's investigation request letter to the U.S. International Trade Commission failed to ask for consideration of the harmful impact of an expanded TRIPS waiver on American jobs, manufacturing businesses and the overall economy, raising concerns that the investigation—and any subsequent U.S. position—will not be comprehensive or fully evidence-based. Manufacturers also believe that those advocating an expanded waiver hold the responsibility of demonstrating that an expanded waiver will be immediately effective, and is uniquely necessary, to resolve current challenges to pandemic response.

Manufacturers believe that the U.S. must clearly stand with manufacturers to firmly oppose the waiver's expansion and focus its efforts on leading practical, effective international initiatives to better strengthen innovation and access to address COVID-19. At a minimum, the administration should firmly oppose any decision to expand the waiver while USITC's investigation is underway.

- Initiatives and resolutions at other international organizations, particularly the World Health Organization, that undermine IP. The WTO is not the only forum in which IP and innovation are under pressure. The WHO has been a consistent forum for initiatives and discussions about weakening critical global IP protections and frameworks, and Director-General Tedros Adhanom Ghebreyesus has been a vocal supporter of efforts to waive IP rights during the COVID-19 pandemic.[10] Many manufacturers are increasingly concerned about the direction of conversations at the WHO in relation to a potential new instrument on pandemic preparedness and response. Specifically, member states

[9] As an illustration of the reality of this risk, see December 2022 remarks by Indian government officials of plans to leverage the country's presidency of the G20 to push for a waiver of intellectual property rights for green energy and environmental technologies; May 2022 remarks by U.N. Secretary General Antonio Guterres calling for countries to "remove intellectual property constraints" to technology transfer in the context of renewable energy technologies; and even the European Commission's April 2022 consultation on updating and expanding its framework for compulsory licensing of patents to address health, environmental, nuclear or industrial crises;

[10] See, for example, Dr. Tedros Adhanom Ghebreyesus's regular use of Twitter to call for a broad TRIPS waiver (including sample posts on Oct. 17, 2020, Oct. 13, 2021, Mar. 5, 2022, June 14, 2022 and Dec. 16, 2022. See also WHO, "WHO Director-General's opening remarks at the COVID-19 media briefing– 14 June 2022," June 14, 2022.

agreed in December 2022 to develop a first draft of a legally binding pandemic instrument that covers a broad range of topics. That draft will largely be based on a conceptual zero draft that included highly troubling language related to IP, including a proposed commitment for signatories to support "measures to support time-bound waivers of protection of IP rights that are a barrier to manufacturing of pandemic response products during pandemics," as well as a broader commitment to support full and unfettered use of key trade-related patent flexibilities (known as "TRIPS flexibilities").

Such broad language—aimed at cementing automatic support for IP waivers—is highly problematic in both form and substance. The language directly describes IP as a barrier to pandemic response, ignoring the critical role that IP plays in creating the very products, know-how and manufacturing processes needed to boost supply and delivery of pandemic products. Moreover, efforts to shape the implementation and interpretation of WTO agreements fall far beyond the jurisdiction of the WHO. And such automatic support for pandemic IP waivers would prevent evidence-based discussions around the risks, value and effectiveness of such measures to cope with the circumstances around any particular pandemic.

Beyond the specifics of the discussion on IP and COVID-19, manufacturers have long been concerned about that many areas of WHO work reflect a narrow view of IP and an incorrect view that IP is a barrier to public health and access to medicines. There is clear evidence that IP plays a fundamental role in the creation and delivery of key products and services to meet global public health needs—and that many barriers stand between patients around the world and the life-saving medicines they need. Effective solutions require a holistic, inclusive discussion of all such barriers. Yet the WHO secretariat and some member states continue to drive flawed policy recommendations, including the unfettered expansion of TRIPS flexibilities, calls to delink R&D costs from the prices of health products, and efforts to undermine the appropriate exercise of trademarks on various products, in spite of the broad views of the WHO's own member states and broader stakeholders. Such initiatives would have a perverse effect, hampering urgently needed health innovation without solving the access issues they claim to address. Moreover, WHO leadership has increasingly sought to step beyond its bounds to influence the actions of other international organizations on these issues—as its activities in relation to the WTO IP waiver discussions clearly illustrate.

- International advocacy in international organizations for expanded exceptions, limitations, and flexibilities for patents and other forms of IP in areas outside of health. While IP and health have garnered considerable international attention in recent years, many other manufacturing sectors are concerned about initiatives and dialogues to undermine IP across sectors. For many years, for example, manufacturers have faced efforts to undermine innovation and IP in the green technology sector. Importantly, the U.S. and allies have worked to fend off initiatives at meetings of the United Nations Framework Convention on Climate Change that would have undermined critical U.S. environmental technologies. Such discussions have not been limited to UNFCCC, however, but have also arisen at core IP-focused agencies such as the WIPO Standing Committee on Patents and the WTO TRIPS Council. The U.S. has been a strong advocate for innovation and IP in these forums, efforts that align with administration priorities to increase investment, innovation and employment in clean energy.

TRIPS waiver negotiations have given new life to these discussions, prompting renewed calls by advocates to waive IP and expand compulsory licensing for green technology. For example, U.N. Secretary General António Guterres in May 2022 called for countries to "remove IP constraints" to technology transfer in the context of renewable energy technologies.[11] Senior Indian government officials in December 2022 stressed that **India** plans to use its 2023 presidency of the G20 to press for a broad waiver of IP for technologies related to green energy and the clean energy transition.[12]

- Continued efforts to use international fora to legitimize the creation of, and to expand, alternate IP dialogues and frameworks. The **EU** continues to advocate stronger protection for its food and agricultural products through its trademark-alternative system to manage geographical indications under the Lisbon Convention at WIPO. The EU continues to use WIPO to expand the system, and seeks to secure WIPO funding for that initiative, despite the fact that it is contrary to the interests of the U.S. and other WIPO member states. This push undermines the ability of the U.S. and other countries to protect existing trademarks in these products as well as to ensure fair treatment for those making products on terms already treated as generic, ultimately harming American jobs supported by exports to critical global markets.

  The EU's push also manifests in additional ways outside of the scope of WIPO, including EU-negotiated trade agreements with a variety of important U.S. trading partners, including agreements now at least provisionally in force with **Canada**, **Colombia**, **Ecuador**, **Japan**, **Korea**, **Peru**, **Singapore** and **Vietnam**, pending agreements with markets such as **Mexico** and the **MERCOSUR** markets of **Argentina**, **Brazil**, **Paraguay** and **Uruguay**, and agreements being negotiated or revised with markets such as **Australia**, **Indonesia**, **New Zealand** and **East African Community** countries such as **Kenya**. The EU has also negotiated GI-specific agreements with markets such as **China**.

Such discussions in international fora are often the direct result of lobbying by specific member states to undermine IP in the name of their own commercial interests. For example, **India**, **South Africa** and **Indonesia** are among those leading efforts on key patent issues raised above; **Australia**, **Chile** and **Thailand** are among the countries leading efforts on trademark and branding issues; while the **European Union** (and specific EU member states such as **France**, **Germany** and **Italy**) lead the charge in support of GIs. Reports, guidelines and action plans that result from these discussions have an outsized impact on the agenda within these organizations in ways that are hostile to U.S. IP and key industries.

Beyond the specifics of the above, IP and innovation are also a critical topic in broader multilateral discussions, including negotiations with countries seeking to join organizations like the Organisation for Economic Co-operation and Development. Given the growing interest from countries to join the OECD and other bodies, it remains crucial for the U.S. to hold firm on the need for these countries to demonstrate that their laws are drafted and being implemented in line with those organizations' high standards, including in the critical areas of innovation and IP. Allowing accession on anything less than those terms undermines the IP standards for the entire OECD community. These issues will be critical in future OECD accession negotiations, including for countries such as **Argentina**, **Brazil** and **Peru**, which the OECD approved for

[11] Antonio Guterres, "Secretary-General's video message on the launch of the World Meteorological Organization's State of the Global Climate 2021 Report," May 18, 2022.
[12] Rituraj Baruah, "India to seek IPR waiver for green energy tech at G20," *Livemint*, Dec. 27, 2022.

accession discussions in January 2022.[13] Manufacturers urge the U.S. to use broad IP commitments in those countries' roadmaps—including those for Brazil and Peru that have already been released—to improve the environment for American IP in those countries and address stakeholder concerns.

Manufacturers encourage the U.S. government to take steps to support and engage leadership of international organizations to support constructive discussions and a pro-innovation agenda in line with their jurisdictions. Manufacturers also encourage the U.S. to leverage IP and trade-promoting international and regional organizations and platforms, including the WTO and WIPO, to promote pro-IP workstreams that strengthen—not weaken—innovation and IP protection and combat misguided narratives that ignore the constructive role that IP plays in promoting global goals such as health, environmental protection and development.

B. Growth and Evolution of Global Counterfeiting

Counterfeit products pose a growing threat to manufacturers, workers and consumers. While manufacturers have long battled against counterfeits, the problem is getting worse as businesses and consumers increasingly shop online and as counterfeiters use e-commerce platforms to sell their goods. The COVID-19 pandemic showed just how dangerous inaction can be, as bad actors took advantage of consumers' increased anxiety and fear, the high demand for certain goods and the substantial increase in e-commerce necessitated by social distancing measures to expand their reach in selling dangerous counterfeit products. The NAM has responded by boosting its efforts to fight back, focusing on a clear set of innovative policy solutions laid out in a July 2020 white paper to address these issues for the benefit of manufacturers and their families in America.[14]

The scale of counterfeiting is staggering. A June 2021 report by the OECD and the EU Intellectual Property Office, for example, shows the growth of global trade in counterfeit and pirated goods has exploded in recent years, reaching $464 billion in 2019 (or 2.5% of all global trade).[15] This number fails to capture the full scope of the problem, however, as many counterfeit products evade detection and would not be captured in these calculations. A 2017 estimate by the Commission on the Theft of Intellectual Property estimated that authorities in the U.S. catch less than 2.3% of the total volume of counterfeit goods.[16]

Counterfeiters have gained strength due to a variety of factors, of which the most important has been the growth of online channels (including e-commerce marketplaces and social media platforms) that have transformed how companies connect with customers. E-commerce sales now make up nearly 15% of all U.S. retail spending, up from 5.5% of total sales a decade ago.[17] Those figures show that e-commerce sales in the U.S. reached $870.8 billion in 2021, more than double the volume from just five years before. [18]

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[13] OECD, "OECD takes first step in accession discussions with Argentina, Brazil, Bulgaria, Croatia, Peru and Romania," Jan. 25, 2022.
[14] National Association of Manufacturers, "Countering Counterfeits: The Real Threat of Fake Products," July 2020.
[15] OECD and EUIPO, "Global Trade in Fakes: A Worrying Threat," June 2021.
[16] Commission on the Theft of American Intellectual Property, "Update to the IP Commission Report."
[17] This figure matches the most recently statistics as of the third quarter of 2022: see U.S. Census Bureau, "Quarterly Retail E-Commerce Sales: 3rd Quarter 2022," Nov. 18, 2022. For statistics from the third quarter of 2012, see U.S. Census Bureau, "Quarterly Retail E-Commerce Sales: Time Series, Adjusted Sales," last accessed Jan. 13, 2023.
[18] U.S. Census Bureau, "Quarterly Retail E-Commerce Sales: 4th Quarter 2020," Feb. 19, 2021; U.S. Census Bureau, "Quarterly Retail E-Commerce Sales: 4th Quarter 2016," Feb. 17, 2017.

While these platforms have created opportunities for manufacturers to sell their products and provided new conveniences for consumers, they have also created a pipeline directly to customers that bad actors can exploit. The online environment in which these sales take place is easier for counterfeiters to exploit by:

- Hiding their identity or other business details in ways that make it more difficult to enforce penalties when counterfeit products are discovered;
- Misrepresenting products online by posting authentic pictures while shipping fake products directly to consumers or posting fake reviews to promote the impression that their products are legitimate;
- Deflecting suspicion by maintaining a small stock of legitimate products to fulfill orders placed by law enforcement officials or brand representatives; and
- Fulfilling product orders through postal channels to avoid customs entry and import processes that would otherwise subject packages to government monitoring and inspection.

Online platforms present unique challenges for manufacturers—particularly small and medium-sized manufacturers—that must devote ever-increasing resources and time to monitoring search engine results, e-commerce channels, social media postings, payment providers and others that may all play a role in driving online traffic to counterfeit products. The COVID-19 pandemic has added an extra challenge, providing an opportunity for counterfeiters to expand their reach by taking advantage of consumers' increased anxiety and fear, the high demand for certain goods and the substantial increase in e-commerce necessitated by social distancing measures.

The significant volume of counterfeit goods sold on e-commerce platforms necessitates stronger mechanisms to address instances of this unlawful activity and more work to hold these platforms liable for their role in the rise of counterfeits. This must include efforts to ensure that e-commerce providers prevent counterfeiters from abusing their platforms by exercising stronger oversight. Manufacturers also urge stronger transparency requirements for providers to require users to provide verifiable contact and other information to platforms and consumers. This approach would help to limit the ability of counterfeiters to remain anonymous and circumvent applicable IP laws.

Counterfeiters are also taking advantage of third-party operated fulfillment centers based in the U.S., including those run by e-commerce platforms, as a means to shorten shipping times and obscure the origins of these products. Such facilities receive inventories of products either directly from counterfeiters or through in-country intermediaries, then fulfill final orders from consumers. This approach obscures the counterfeiter's identity and creates an additional obstacle to manufacturers seeking legal redress, as these third-party fulfillment centers may disclaim responsibility for the products that they ship.

Additionally, counterfeiters continue to exploit additional loopholes that allow them to sell and send their products to customers. For example, counterfeiters continue to ship counterfeit goods through the international postal system to take advantage of the U.S. Postal Service's weak-to-nonexistent detection and compliance infrastructure. The volume of packages carrying counterfeit goods into the U.S. through this route has accelerated in recent years due to several factors.

- First, shipping subsidies provided by the USPS to foreign shippers under the Universal Postal Union's international terminal dues system pad profit margins for counterfeiters.[19]
- Second, USPS has been slow to collect reliable advanced electronic data to aid CBP in package screening, despite a clear mandate in U.S. law such as the Synthetics Trafficking and Overdose Prevention Act of 2018 (Public Law No. 115-271).
- Third, if these counterfeit shipments avoid detection and are admitted, they then enter the USPS postal mail stream where they generally may not be inspected without probable cause.[20]

The U.S. government responded to these concerns by pushing for structural reforms to the UPU's terminal dues system, resulting in negotiated changes announced in September 2019 to allow countries like the U.S. to impose "self-declared rates" for distributing foreign mail.[21] These were welcome changes, but the new UPU agreement needs to be closely monitored to ensure consistent implementation and enforcement.

Manufacturers also face a steadily growing flow of counterfeit products being sold or transshipped through free trade zones. Though the more than 5,400 estimated FTZs worldwide contribute positively to global free trade,[22] criminals often take advantage of the fact that these zones are outside of their host countries' customs' territory and are thus subject to significantly less rigorous regulations or inspections, which further facilitates counterfeiting and other illicit activity. A 2018 study by the OECD and the EU IP Observatory estimated that each FTZ is associated with a nearly 6% increase in the value of counterfeit exports from that FTZ's economy.[23]

Counterfeits can often be a significant challenge for manufacturers beyond their country of origin. For example, manufacturers have increasingly seen counterfeit products from key hubs (such as China) unfairly targeting third-country markets (such as markets throughout Southeast Asia and Africa) with counterfeit, poorly regulated and potentially unhealthy counterfeit products. The U.S. must work with trading partners to address more directly third-country counterfeiting issues through enforcement, capacity building and joint advocacy. Counterfeit and pirated goods arrive in the U.S. from numerous countries around the world, but manufacturers remain concerned by the role of **China** (both directly and via **Hong Kong**) as the world's biggest hub for counterfeiting and the source of 61% of all counterfeit goods by value seized at U.S. borders in the latest available CBP statistics (2021).[24] **India**, **Korea**, **Turkey** and **Vietnam** are consistent sources for counterfeit products coming into the U.S., with **Canada**, the **Netherlands**,

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[19] *See* Memorandum from President Donald Trump to Sec. of State, Sec. of Treasury, Sec. of Homeland Security, *et al.*, "Modernizing the Monetary Reimbursement Model for the Delivery of Goods Through the International Postal System and Enhancing the Security and Safety of International Mail," 83 FR 47791, 47792 (August 23, 2018).
[20] U.S. Postal Service, "Basic Eligibility Standards for Priority Mail," November 1, 2010.
[21] Harris, Laurie Beth, "Universal Postal Union Changes Deliver Win for Manufacturers," NAM, Sept. 25, 2019.
[22] U.N. Conference for Trade and Development, "World Investment Report 2019: Special Economic Zones," June 19, 2019.
[23] Stryszowski, Piotr and Bill Below, "Free Trade Zones: A Free Ride for Counterfeiters?", OECD On the Level, March 14, 2018; OECD and EUIPO, "Trade in Counterfeit Goods and Free Trade Zones: Evidence from Recent Trends," May 2018.
[24] Office of Trade, U.S. Customs and Border Protection, "Intellectual Property Rights Seizure Statistics: Fiscal Year 2021," September 2022.

Singapore, **Taiwan** and **Thailand** also appearing regularly and recently as problematic shipment points for manufacturers.

To address both domestic and international counterfeiting concerns, the U.S. government should work more closely with foreign counterparts and private sector actors to take a series of key actions, including working with foreign policymakers to strengthen penalties for counterfeiters, closer engagement with foreign law enforcement officials to tackle counterfeit shipments, and improved capacity building with international counterparts to boost their authority, expertise and resources to address these issues. The U.S. should also accelerate efforts to fully implement existing laws and authorities aimed at addressing counterfeits, including the 2022 INFORM Consumers Act, the Trade Facilitation and Trade Enforcement Act of 2015, the STOP Act of 2018 and other steps to address issues identified in previous government reports such as the Department of Homeland Security's January 2020 counterfeiting report. For a more detailed list of recommendations to address both the domestic and international dimensions of counterfeiting, see the NAM's July 2020 report, "Countering Counterfeits: The Real Threat of Fake Products."

C. Growing Foreign Country Pressure to Undermine Core IP Protections for Manufacturers

Innovative manufacturers in the U.S. also face increasing challenges from growing efforts to erode IP at the national level, purportedly to address other public policy prerogatives. Ignoring the fact that global rules and standards for innovation and IP have fostered decades of U.S. manufacturing innovation, supported millions of well-paying jobs, saved millions of lives and expanded consumer choice for millions of people around the world, some foreign governments and their regulators argue that IP rights should be eliminated or abrogated based on the false premise that the use and protection of IP are inherent barriers to public policy priorities such as health or environmental protection.

Regulators and national authorities in multiple foreign countries increasingly seek to narrow the ability of manufacturers to obtain, use and protect patents, trademarks and other forms of IP, claiming that such restrictions are being adopted to address policy areas such as public health or environmental protection, despite clear evidence that existing IP rules are not an impediment to such protection. They also erect numerous market access barriers for innovative products that negate the effectiveness of the products' IP protection. This push has impacted multiple forms of IP, including efforts to expand compulsory licensing and other TRIPS flexibilities to undermine patents and the expansion of plain packaging restrictions that violate core trademark protections.

1. Patents: Compulsory Licensing and Other TRIPS Flexibilities

Compulsory licensing—government actions to compel licensing of a patent under protection in the name of domestic interests—has seen an uptick in recent years, with a growing number of countries weighing or taking steps to force patentholders to license their technologies and products through policy, administrative action or judicial ruling.

Compulsory licenses, as recognized by the more than 160 WTO members that agreed to the international rules laid out in the TRIPS Agreement and the subsidiary Doha Declaration on the TRIPS Agreement and Public Health must broadly operate under specific guidelines, including strict limitation to exceptional circumstances so as not to undermine the substantial benefits that IP protection provides. Compulsory licenses should only be granted and used when they meet

the criteria laid out in those agreements and must constitute decisions clearly based on the facts of the individual case through transparent processes that involve close consultation with all stakeholders. Such international consensus around compulsory licenses, and the clear processes, are critical to protecting both public health and IP.

Manufacturers have long been concerned with the expanded use of compulsory licensing actions that do not meet the carefully crafted criteria in the Doha Declaration, but this issue has become increasingly problematic as stakeholders that have long pressured for greater licensing to undermine global IP rules have grown louder. The WTO's May 2022 decision to sharply revise compulsory licensing rules for vaccine patents, and ongoing negotiations to expand these rules to other COVID-19 products, present an immediate concern, but manufacturers are also concerned with specific compulsory licensing actions and processes at the national level. The ongoing COVID-19 pandemic underscores just how important IP protections are to create the public health products that the world needs, and that it is more important than ever to adhere to these carefully negotiated processes to avoid undermining those protections.

With past compulsory licensing decisions in markets such as **Colombia**, **Ecuador**, **India**, **Indonesia** and **Malaysia** still in place, moves in the last three years by countries such as **Hungary**, **Indonesia** (again), **Israel** and **Russia** to grant compulsory licenses and decisions by countries such as **Saudi Arabia** and the **United Arab Emirates** to grant marketing authorizations to local manufacturers for patent-protected products raise significant questions for innovative manufacturers. In addition to the recent moves above, manufacturers have closely followed a series of actions taken during the pandemic designed to make compulsory licensing actions easier. **Australia**, **Brazil**, **Canada**, **Colombia**, **Germany**, **Hungary**, **Indonesia** and **Russia** passed legislation or issued formal decrees expanding the ability to issue compulsory licenses, while **Chile**, the **Dominican Republic, Ecuador**, **El Salvador**, the **European Union** and the **Netherlands** have all considered potential changes in recent months. Manufacturers are also watching how governments handle ongoing compulsory licensing petitions filed in countries such as **Canada**, **Chile**, **Colombia**, **Costa Rica**, the **Dominican Republic** and **Peru**.

In addition to IP-related policies such as compulsory licensing and patent flexibilities, many countries are increasingly using policies and regulations in areas such as procurement, standards, competition, pricing and reimbursement that negatively impact innovative manufacturers or raise questions about whether they are sufficiently fair, reasonable, non-discriminatory or based on market-based approaches that appropriately recognize the value of innovation. Manufacturers are closely watching activities in the **European Union** in follow-up to their November 2020 Action Plan for Intellectual Property, which included positive initiatives in areas such as counterfeiting but also raised cross-sector questions due to language on compulsory licensing, standard-essential patents, geographical indications and the EU's supplementary protection certificate regime. In follow-up to the IP Action Plan, innovative manufacturers are watching European Commission consultations under the Pharmaceutical Strategy for Europe, which include a number of proposals with troubling implications for innovation and IP. Current proposals could weaken regulatory data protection, reduce or eliminate incentives for research and development of a diverse mix of new products and condition IP incentives on product launches in all EU member states within a certain period. Beyond the EU, manufacturers also note troublesome policy developments related to

procurement, pricing and reimbursement taking place in countries such as **Australia**, **Canada**, **China**, **Japan**, **Korea**, **Mexico** and **Turkey**.

To address these and other challenges to global IP rules that undermine manufacturing jobs and innovation, manufacturers urge USTR to continue its longstanding efforts to end the moratorium on TRIPS-related "non-violation nullification and impairment" disputes. This moratorium originally was planned as a short-term measure, but it continues to be extended in the WTO by unanimous consent—and will come up again at the next WTO Ministerial Conference. The continued moratorium limits the ability of member states to demonstrate that they are abiding by their international commitments to protect IP. Lifting it would send a strong and timely signal that TRIPS signatories should be held accountable for their compliance with the framework, while ensuring the U.S. and other countries have the tools at their disposal to address TRIPS-violating behaviors.

2. Trademarks: Continued Expansion of IP-Restrictive Regulatory Approaches

In the meantime, manufacturers in a range of industries remain highly concerned with the expansion of regulatory approaches that undermine companies' ability to use longstanding and vital trademark rights. Trademarks enable the public to identify and recognize goods or services as originating from a particular company and being a particular known product. They are the most valuable assets owned by many manufacturers and are essential for fair and effective competition in the global marketplace. As a result, governments around the world have long agreed to binding international rules at the WTO and WIPO to protect trademarks, obligations on which manufacturers of all sizes have relied as they continue to make significant investments to develop, promote and protect their trademark rights.

Governmental acts restricting or prohibiting the use of trademarks that eliminate consumers' ability to distinguish readily between products, has highly negative consequences, not just in severely impairing the value of trademarks for manufacturers and their workers in the U.S., but also denying consumer information, undermining fair global commerce and promoting increases in harmful and sometimes dangerous counterfeiting.

Manufacturers in a range of other sectors are concerned about growing calls to apply plain packaging and other IP-restrictive approaches to other sectors, which in some cases have prompted specific regulatory proposals. **Chile** was one of the first countries to expand the use of these approaches with the imposition of a number of trademark-restricting actions as part of a broader regulation on nutritional labelling. Other countries have followed Chile's lead, most notably **Mexico**, which has issued a series of actions over the last year to curtail trademark use and IP related to food and beverage products. Similar actions appear well underway in markets such as **Brazil**, **Colombia**, **Ecuador**, **Israel**, **Peru**, **Saudi Arabia** and **Uruguay** (and regional groupings such as the **Gulf Cooperation Council**). Manufacturers see the same signals in proposals underway or being considered in additional markets such as **Argentina**, **Canada**, **Poland**, **Romania**, **South Africa**, the **United Kingdom** and **Vietnam**.

II. Country-Specific IP Challenges

The NAM has seen progress in some markets, including high-profile new IP strategies in countries such as **Saudi Arabia**[25], sustained efforts in **Brazil** and **India** to reduce patent and

[25] "Saudi crown prince launches National Intellectual Property Strategy," *Arab News*, Dec. 22, 2022; "Saudi Arabia allocates $267m to Intellectual Property Strategy," *Arab News*, Dec. 27, 2022.

trademark backlogs and ongoing government consultation around efforts to update core IP laws in markets such as **Indonesia** and **Thailand**. Manufacturers welcome these initiatives and opportunities to engage with both the U.S. government and foreign government officials to create opportunities for, and share perspectives of, innovative manufacturers in the U.S.

Yet manufacturers and their workers in the U.S. face serious obstacles to adequate and effective IP protection and enforcement in a range of specific developed and developing countries. Discriminatory IP policies limit U.S. manufactured goods exports, shelter domestic companies, create competitive challenges around the world and challenge the ability of manufacturers in the U.S. to compete fairly in these and third-country markets.

This year's submission focuses on a targeted list of companies with specific designations reflecting member feedback on developments over the last 12 months. NAM members, however, continue to have concern with longstanding issues in a broad mix of countries, including those highlighted in previous NAM submissions such as **Argentina**, **Australia**, **Chile**, **Saudi Arabia** and **South Africa**.

A. *Priority Watch List*

Canada

In recent years, Canada has worked with the U.S. under the new USMCA and other channels to improve core areas of IP law and practice in ways broadly welcomed by manufacturers. Yet innovative manufacturers have also seen contrasting trends in Canada and continue to have longstanding concerns about a number of IP-related issues that impact their businesses. Manufacturers urge USTR and its interagency counterparts to prioritize IP and market access concerns for innovative manufacturers through all appropriate forums, including USMCA discussions and other bilateral dialogues. Broadly and based on the concerns below, the NAM continues to recommend that Canada be included in the Priority Watch List in 2022.

Importantly, Canada has taken positive legislative steps to improve its IP legal framework and better promote innovation. These include strong Canadian commitments under the USMCA that benefit manufacturers across the range of IP that matters for our industry, including patents, trademarks, trade secrets, industrial designs, copyrights and geographical indications. Canada has also worked in recent years to update and improve its core IP laws, including revisions to its Industrial Design Act (in effect as of Nov. 5, 2018), Trademark Law (in effect as of Jun. 17, 2019), and the Patent Act (in effect as of Oct. 30, 2019) along with similarly revised Patent Rules and new guidelines on patentable subject-matter under the Patent Act. The Canadian government in June 2019 implemented a range of updates to its core IP laws and strategies included in the 2018 Budget Implementation Act.[26]

Even so, manufacturers still have concerns regarding Canadian policies. Manufacturers continue to closely watch **patent-related administrative and judicial challenges** in Canada that are relevant to innovative products.

- Canada's Patented Medicines (Notice of Compliance) Regulations (PM(NOC)) continue to raise significant questions about Patent Register listings, patent dispute proceedings and damages that disproportionately impact innovative products versus their generic counterparts. The Supreme Court of Canada's June 2017 decision to strike down

[26] See Budget Implementation Act, No. 2 (S.C. 2018, c. 27).

Canada's troubling "promise doctrine," which had imposed higher-level requirements for a patent to demonstrate utility at the time of filing, was a welcome decision. Decisions since that point have continued to reflect a more circumspect approach, rejecting several attempts to revive the promise doctrine under other guises, but manufacturers continue to watch the judicial docket closely for efforts to undermine the Supreme Court's decision.

In other areas, innovative manufacturers remain concerned about the Patented Medicines Pricing Review Board's policy direction, which will not only hamper its ability to develop smart policies but will also have a directly harmful impact on U.S. innovation and exports. For example, PMPRB in August 2019 published final regulations that impose new reporting requirements on patent holders, introduce new troublesome regulatory factors, adjust PMPRB's basket of reference countries to exclude comparable markets like the U.S. and limit available input to narrowly selected market data. Although a December 2020 decision by the Federal Court of Canada ruled that provisions requiring manufacturers to report all indirect price reductions are invalid, other provisions were retained and came into force on July 1, 2022. PMPRB issued interim guidelines on the implementation of this regulation in August 2022, and a draft of final guidelines in October 2022 with plans to implement the final guidelines on Jan. 1, 2023, though that implementation date has been postponed.[27]

Broadly, innovative manufacturers remain concerned about PMPRB's policy direction, which will not only hamper PMPRB's ability to develop smart policies but will also have a directly harmful impact on U.S. innovation and exports. Manufacturers urge the Canadian government to deepen its engagement with stakeholders to address outstanding concerns prior to finalizing the guidelines.

Canada's actions related to **patent term restoration** have also raised concerns. Despite commitments that Canada made under both the USMCA (Article 20.44) and the Canada-**EU** Comprehensive Economic and Trade Agreement (Article 20.27) to compensate manufacturers for regulatory delays associated with patent and market approval, Canada's Ministry of Health is interpreting these commitments narrowly under its 2017 Certificate of Supplemental Protection Regulations, with eligibility and process barriers that limit access to this relief for innovators. Manufacturers believe that Canada should work to ensure that its patent term restoration system works as intended to address the negative impact of lengthy IP approval and regulatory processes.

Manufacturers have also raised issues related to **government protection of sensitive business information**. Manufacturers remain watchful of regulations that require them to provide significant amounts of sensitive information.

- 2014 revisions to Canada's Food and Drugs Act provided the Minister of Health wide discretion to share test data without safeguards to protect against unfair commercial use,[28] concerns exacerbated by a 2018 court decision ordering the release of clinical

[27] Patented Medicines Pricing Review Board, "2022 Proposed updates to the PNPRB Guidelines," last accessed Jan. 13, 2023.
[28] The 2014 Protecting Canadians from Unsafe Drugs Act (Bill C-17) amended several provisions of the Food and Drugs Act to give the Minister of Health wide discretion to share test data without safeguards to protect against unfair commercial use.

trial data.[29] Canada's approach, with broad room for official discretion, creates significant risk for business confidential information.

- Additionally, Canada's revised Workplace Hazardous Materials Information System forces companies into a set of challenging options: they must provide the government with sensitive business information (either exact chemical concentrations or product-specific concentration ranges), or they must pay a per-product application fee for review and approval of the confidentiality of chemical concentrations, an option that quickly becomes expensive. These requirements do not align with either corresponding U.S. or European regulations.

Manufacturers are also concerned about regulatory **measures that curtail the legitimate use of trademarks**, such as plain packaging for a range of products, that have advanced in Canada.[30] As discussed above, manufacturers have taken a strong stance against the elimination of trademarks through plain packaging programs, as envisioned by this draft regulation, and would be similarly concerned if this legislation moved forward. Manufacturers have also carefully monitored the trademark implications of Canada's amended Food and Drug Regulations, which were originally scheduled to fully come into effect in December 2021. Manufacturers appreciate that the Canadian Food Inspection Agency worked with industry during the COVID-19 pandemic to delay their full implementation until Dec. 14, 2022;[31] but will continue to watch this closely as well as the results of a joint public consultation from CFIA and Health Canada on future changes to food labelling requirements that ran in the spring of 2021.[32]

Canada has sought to strengthen customs authority to address **counterfeiting**, both with provisions in the December 2014 enactment of Bill C-8 (Combating Counterfeit Products Act) and with commitments in the USMCA (Article 20.83). Manufacturers have reported some increase in detentions of counterfeit goods by Canada Border Services Agency activity, but the scope of CBSA's efforts remains unclear, given limited CBSA transparency about their efforts.[33] Regardless, Canada's regular appearance among the top sources of counterfeit goods coming into the U.S. suggests possible transshipment through the country that could be addressed through more rigorous enforcement at Canada's borders. Manufacturers urge USTR and its fellow U.S. government agencies to encourage CBSA to increase its efforts and work more closely with industry to tackle counterfeit products originating in and transiting through Canada.

Finally, manufacturers remain concerned about the implementation of IP-relevant chapters of Canada's trade agreement with the **EU**[34], particularly measures that provide stronger protection for European **GIs** outside of trademark-provided protections for food and agricultural products. The USMCA contains stronger language to ensure transparent registration and opposition

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[29] The Federal Court of Canada in a Jul. 9, 2018 ruling ordered Health Canada to release significant amounts of data from pharmaceutical clinical trials to a researcher; Health Canada did not appeal the ruling. See *Doshi v. Canada (Attorney General)*, 2018 FC 710.
[30] See Tobacco Products Regulations (Plain and Standardized Appearance) and Regulations Amending the Food and Drug Regulations - Healthy Eating Provisions including Front-of-Pack Labelling, Other Labelling Provisions, Industrially Produced Trans Fats and Vitamin D.
[31] Health Canada, "COVID-19 Food Labelling Support Measures," last accessed Jan. 17, 2022.
[32] Health Canada and Canadian Food Inspection Agency, "Consultation on Proposed Joint Policy Statement on Food Labelling Coordination," last accessed Jan. 17, 2022.
[33] CBSA does report counterfeits as a category of products it seizes in its annual statistics, but previous reporting had put its numbers quite low See Beeby, Dean, "Canada seizing few shipments of fake goods despite law targeting counterfeits," Canadian Broadcasting Company, Mar. 22, 2018.
[34] CETA went into force provisionally in September 2017, though final implementation is still pending passage by EU member states. See Government of Canada, Canada-European Union Trade Agreement Final Text.

procedures for potential GIs, but those already covered as *sui generis* GIs under the agreement undermine the ability of the U.S. and other countries to protect existing trademarks in these products as well as to ensure fair treatment for those making products on terms already treated as generic. It is important to ensure strong implementation of these USMCA commitments in order to avoid the negative impact on American jobs and workers supported by exports to Canada.

China

China remains a broadly challenging market for a wide array of manufacturers on innovation and IP issues, with manufacturers large and small facing significant, longstanding, structural challenges with IP. China has made important steps forward in key areas of law and policy in recent years, including changes to its IP framework that reflect both a growing domestic sense of the value of IP as well as implementation of key commitments in the U.S.-China Phase One Economic and Trade Agreement. Despite this, manufacturers continue to face longstanding structural issues that prevent effective enforcement of U.S. IP rights and face IP-related challenges with the proliferation of industrial policies and other discriminatory steps. Given the importance of these issues, the NAM recommends that China remain on the Priority Watch List in 2022.

In recent years, China has increasingly recognized the value of innovation and IP to grow its economy, fostering more attention on IP at home through both high-level plans (such as the October 2021 14th Five-Year Plan on IP Protection and Utilization and key April 2020 and November 2022 Implementing Plans for Guidelines on Strengthening IP Protection) and specific regulatory changes. This recognition has expanded both opportunities and challenges for U.S. companies in China. In recent years, NAM members have reported important positive developments related to IP in China, particularly revisions to key Chinese laws and regulations such as the new Foreign Investment Law and revisions to its Patent, Trademark, Copyright and Anti-Unfair Competition Laws as well as Technology Import-Export Regulations. These changes have been matched by other operational developments in China's IP system, including expanded judicial channels such as China's new national-level appeals court for IP disputes and notable growth in IP cases in China's courts.

The U.S.-China Phase One Economic and Trade Agreement signed in January 2020 represented important progress across multiple areas of IP, while also creating an important channel for U.S. officials to press for further progress. That deal included substantive commitments on trade secrets, patents, trademarks and enforcement, cementing and providing new dispute resolution mechanisms for many of the legal changes listed above as well as securing Chinese commitments for additional legal changes. Manufacturers continue to view these commitments as critical measures that, if fully implemented in a commercially meaningful way, would directly improve the IP environment in China for manufacturers. Yet senior U.S. officials have had little substantive dialogue with their Chinese counterparts to hold China accountable for these commitments or to tackle additional IP issues identified by the investigation that were not covered under that deal. Manufacturers urge USTR to use this and other strategic tools to address these IP concerns.

Manufacturers in the U.S. continue to face challenges with **state-led economic plans** that discriminate against innovative manufacturers in the U.S., including broad economic plans such as China's "dual circulation" strategy designed to reduce opportunities for manufacturers in China's economy as well as specific industrial policies such as the Made in China 2025

program. These policies not only set policy direction at the national level but also fuel a patchwork of local programs that promote local firms and technologies at the expense of fair market opportunities for manufacturers in the U.S. (The NAM detailed many of these policies, as well as other areas of broad market concern, in its September 2022 submission to USTR on China's compliance with its WTO commitments.)

China's Cybersecurity Law and other privacy and security-related regulations (such as the National Security Law, Counterterrorism Law, Personal Information Security Specifications, Human Genetic Resources Regulations, Regulations on the Security and Protection of Critical Information Infrastructure and others) have imposed extensive **data localization** requirements and restrictions on cross-border data flows that harm a broad range of innovative manufacturers using advanced technologies such as cloud computing or big data analytics. And the pace of regulatory change appears to only be accelerating, with a flurry of new rules and certification requirements released by the Cyberspace Administration of China and National Information Security Standardization Technical Committee of China (TC260) in the last seven months.[35]

China remains the leading source of **counterfeit and pirated goods** traded around the world, with nearly $2.5 billion in counterfeit goods seized at U.S. borders in 2020 coming from either China (nearly $1.9 billion) or **Hong Kong** ($613.5 million), even though its share of the overall total has fallen.[36] Manufacturers welcome steps taken by Chinese courts over the last year to increase penalties for IP infringements, including December 2020 revisions to China's Criminal Law to increase maximum sentences and fines for some types of IP crime and the March 2021 Supreme People's Court guidance to more clearly define punitive damages in civil cases related to IP infringement. Yet deeper structural barriers remain to effective enforcement against both counterfeits and other types of IP infringement, including insufficient coordination among different agencies and levels of government and insufficient resources to address IP infringement. Specific value thresholds prevent criminal prosecution for IP infringement in most cases, and low administrative fines and civil damages provide little deterrence as counterfeiters and pirates often see fines merely as a cost of doing business.

Protection of **trade secrets and confidential business information** in China remains a concern. Manufacturers have seen clear improvements on formal trade secret protection with the revised Anti-Unfair Competition Law, the continued expansion of specialized IP courts and decisions in a handful of trade secrets cases to grant preliminary injunctions. Yet manufacturers in the U.S. need China to take additional steps to boost practical trade secrets enforcement, address evidentiary burdens, legitimize contractual arrangements needed to protect against trade secret theft, and strengthen judicial enforcement through meaningful access to tools such as preliminary injunctions and higher damage awards to serve as a meaningful deterrent to trade secret theft. Manufacturers have also long faced concerns with inadequate protection of confidential business information provided as a part of regulatory and judicial processes. While China's revised Foreign Investment Law bars government officials from revealing sensitive information or trade secrets, manufacturers continue to report concerns about the implementation of these provisions, as well as challenges with requests from Chinese agencies for sensitive business data, such as chemical formulations, manufacturing process information and batch records, that go beyond what other international regulators generally request.

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[35] These new rules include the June 2022 Security Certification Specifications for Handling Cross-Border Transfer of Personal Information; the July 2022 Cross-Border Data Transfer Security Assessment Measures, the November 2022 Implementation Rules for Personal Information Protection Certification; and a second December 2022 version of the Security Certification Specifications.
[36] CBP Office of Trade, "Intellectual Property Rights Seizure Statistics: Fiscal Year 2020."

Despite helpful steps in the patent and associated regulatory space for some innovative manufacturing sectors, manufacturers continue to face a number of patent-related issues in China.

- China still suffers from longstanding issues with **patent quality**, due to the lack of substantive examination for utility model and design patents and government subsidies that can fuel high numbers of "junk patents" that enjoy a high level of protection but often carry a low level of inventiveness.[37] Steps in early 2021 by the China National Intellectual Property Administration to cancel government subsidies for patent applications and increase penalties against junk patent filers have been helpful but must be fully and consistently enforced at the national and provincial level. In the meantime, broader Chinese government encouragement for companies to file patents at home and abroad, and use of raw patent numbers as a core benchmark, may continue to feed these challenges.
- Patent filers in the pharmaceutical industry have long faced patentability and patent invalidation issues related to inconsistent interpretation of new rules requiring examiners to consider submitting **supplemental data**, a practice that deviates from international best practices—including best practices followed by patent offices in the U.S., the **EU**, **Japan** and **Korea**—and has resulted in challenges for patents in China easily granted in those other jurisdictions. China began implementing revised Patent Examination Guidelines in January 2021 that allowed CNIPA to conditionally accept supplemental data to demonstrate that the patent meets the "inventive step" criterion. Manufacturers continue to monitor this issue, but report that Chinese patent examiners are not consistently accepting supplemental data under the revised guidelines.
- China continues to lack an effective system for **regulatory data protection**, despite commitments made as part of its 2001 WTO accession process to provide a six-year period of protection. Despite the National Medical Products Administration's April 2018 Implementation of Drug Clinical Trial Data Protection and its May 2022 Drug Administration Law Implementing Regulations, innovative product manufacturers continue to report that there is no effective mechanism to apply for regulatory data protection for key products.
- While China has taken steps in recent years to establish a long-overdue **patent linkage** system, its current system remains problematic. A functioning patent linkage system is critical to ensuring early resolution of patent disputes and preventing potentially infringing products from entering the market inappropriately. China's revised Patent Law, which went into effect in June 2021, established a patent linkage framework. China has also moved forward on key regulations needed to implement a patent linkage system, including issuance of July 2021 interim measures to set up new information and enforcement mechanisms to prevent marketing approval of patent-infringing products, as well as February 2021 draft measures for an early resolution system for patent disputes. Yet manufacturers have outstanding concerns with the current linkage system, including the still-limited scope of patents for which notice is provided and the inadequate stay period. Manufacturers want to see speedy implementation of an effective patent linkage system, operating in line with international best practices, that addresses outstanding concerns with the current system.

[37] For more on these issues and areas for patent reform that could address them, see reports such as Thomas T. Moga, "China's Utility Model Patent System: Innovation Driver or Deterrent," U.S. Chamber of Commerce, November 2012.

Inadequate trademark procedures also make manufacturers more vulnerable to pirates registering marks in bad faith or to other parties infringing upon their legitimate trademarks. Under the current Trademark Law, if a trademark owner opposes a bad-faith third-party application to register a mark and loses, the registration is granted without appeal, forcing the trademark owner to go through another timely and costly proceeding to seek invalidation of that mark (and may even have to halt the use of its mark in the meantime if it is similar to the bad-faith mark). Trademark squatting issues also remain a problem and not one covered well under existing law.

Manufacturers are also closely monitoring the evolution of rules and enforcement practices in IP-related areas—areas generally not covered by recent legal changes or the U.S.-China trade deal—such as:

- **Antitrust**, where China continues a strong focus on IP in the context of competition law with a number of outstanding guidelines and a series of regulations from key regulators that have raised concerns about how they may treat the legitimate exercise of IP in consideration of competition concerns. Coupled with clear government signals of efforts to expand antitrust enforcement under the new Antimonopoly Bureau, manufacturers remain strongly concerned about these issues.
- **Standards**, where China's IP-related standard-setting practices continue to cause significant concerns, with a growing number of court cases involving standard-essential patents (SEPs), China's ongoing reforms to its standards system and longstanding questions about the ability of manufacturer participation in standard-setting activities.
- **IP licensing** due to challenges manufacturers face licensing technology into China even to their own subsidiaries. 2018 revisions to the Technology Import-Export Administrative Regulations to remove measures limiting the ability of foreign companies to include contract clauses to protect their IP were a key step, but manufacturers remain watchful for other measures in this space.

Across these and other areas of concern on IP and technology transfer, manufacturers urge USTR to engage directly with China to not only hold China accountable for its commitments under the U.S.–China Phase One Economic and Trade Agreement, but also address additional IP concerns raised by U.S. stakeholders.

Colombia

Colombia has taken a series of actions in recent years that have raised concerns in recent years about their commitment to a pro-IP environment, despite repeated USTR engagement with the Colombian government through multiple channels. Given these continued concerns, the NAM recommends that Colombia be included on USTR's Priority Watch List in 2022.

Colombia has taken a series of actions that put IP at risk in ways that are not fully consistent with Colombia's international commitments, harm manufacturers and their workers in the U.S. and risk long-term damage to Colombia's business climate. These include concerns with **patent processes** under provisions in Colombia's National Development Plan 2014-2018 (NDP), continued statements and actions related to **compulsory licensing** processes that appear to violate Colombia's IP-related commitments made in the U.S.-Colombia Trade Promotion Agreement (TPA) and **market access challenges for innovative manufactured products** due to regulatory barriers such as Colombia's subjective application of regulations related to

innovation incentives. Colombia continues to use the NDP to justify actions to curb IP protection for innovative medicines and includes a number of problematic provisions:

- Article 70 grants authority to the Ministry of Health and Social Protection (MHSP) to issue nonbinding opinions to Colombia's patent office on the patentability of medical products undergoing patent review. This authority is inconsistent with global best practices on patentability, introduces subjectivity into patent reviews and will have the practical effect of delaying patent review, slowing innovation across the board.
- Articles 69 and 70 allow MHSP to review health technology patents to consider potential compulsory licensing on protectionist economic grounds such as a shortage in domestic manufacturing. Such provisions run contrary to Colombia's international IP commitments in the TRIPS and the TPA that require "national emergency," "circumstances of extreme urgency" or "cases of public non-commercial use" before a country can unilaterally impose a compulsory license without negotiating authorization from the patent holder on reasonable commercial terms."[38] These provisions are also inconsistent with OECD standards of which Colombia is the newest member.
- Article 72 requires the MHSP to issue a price determination as part of the sanitary registration process for medicines and medical devices, and also allows the National Institute of Food and Drug Supervision (INVIMA) to add indications (specific usage circumstances such as treatment of a specific disease) to a pharmaceutical product based on a subjective review of evidence, sometimes in reliance on evidence submitted in other jurisdictions. The delay and unpredictability created by these regulatory hurdles impede market access and depart from Colombia's international commitments.

In addition, manufacturers in the U.S. are concerned with **compulsory licensing** issues. In recent years, manufacturers have seen the increased use of declarations of public interest (DPIs) to drive compulsory licensing reviews or to devalue innovation for innovative manufactured products in Colombia.[39] Due in part to significant concern from U.S. stakeholders surrounding a June 2016 DPI decision, Colombia committed to revising its DPI process. Despite Colombian government claims that it has revised the DPI process to address questions, the National Pricing Commission's November 2016 Circular 3 sets out a general pricing methodology that will apply to all medicines subjected to a DPI. Such broad use of DPIs and compulsory licensing unnecessarily and harmfully revokes basic, internationally accepted property rights and runs contrary to Colombia's international commitments in this area, including its TRIPS obligations. More broadly, such actions undermine the TPA and the U.S.-Colombia commercial relationship, signaling that investments and technologies made under the TPA could be at risk.

Colombia is actively pursuing a significant update of its front-of-pack labelling regulations that may have important implications for **trademark use**. In December 2022, Colombia began implementing a Ministry of Health resolution (Resolution 810 of 2021) that included front-of-pack regulations that aim to restrict use of trademarks as part of expanded warning label proposals. These steps, which reflect and give further momentum to troubling regional trends to curtail IP use, have raised trademark and IP concerns that should be addressed through bilateral and regional consultations with Colombia.

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[38] Article 31(b), World Trade Organization Trade-Related Aspects of Intellectual Property Rights Agreement.

[39] The most recent example of a DPI came from the Ministry of Health's Resolution 5246 (December 2017) to initiate an administrative process to assess whether a DPI is required to ensure access to a specific hepatitis C treatment.

India

India continues to be a priority market for innovative manufacturers across the board: not only for those concerned with patents, but also for those focused on trade secrets, copyrights and brand protection. Manufacturers note a series of positive steps that the Indian government has taken to improve IP protection in the last few years, including steps to reduce long backlogs for patent and trademark approvals and efforts to boost state-level enforcement and increased engagement with the U.S. government on IP issues. Yet longstanding structural barriers for innovation, and the widely prevalent anti-IP attitude among policymakers, remain. As such, the NAM recommends that India remain on the Priority Watch List in 2022.

Over the past several years, India has taken steps that reflect its stronger recognition of the value of innovation and IP for the Indian economy. In December 2020, India's Department for Promotion of Industry and Internal Trade signed a new memorandum of understanding with the U.S. Patent and Trademark Office to cooperate on IP examination and protection for the next ten years, representing an important mechanism for IP improvement if fully implemented.[40] Similarly, USTR and the Ministry of Commerce and Industry have relaunched an IP-focused working group under the reinvigorated U.S.-India Trade Policy Forum, which included substantive conversations on topics such as protection of business confidential information related to working of patents, procedures for patent application oppositions and streamlining of trademark infringement investigations.[41]

Similarly, Prime Minister Narendra Modi and other senior level officials have released statements and broad policies about the importance of innovation and IP protection (such as the 2016 National Intellectual Property Policy), with tangible steps such as IP training and public awareness campaigns, steps to expedite patent approval process and increase examiner capacity and efforts by selected states to create new IP enforcement teams. The Delhi High Court in July 2021 launched a new Intellectual Property Division to assume key responsibilities from the Intellectual Property Appellate Board, and issued final rules for the division that were implemented as of April 2022.[42] India has made significant improvements in its efforts to reduce pendency for registered IP, reducing the time from an application to a final decision for trademarks from 450 days in 2016 to 40 days in 2020.[43] India has also reduced patent pendency for a first office action from 6 years in 2016 to 6 months in 2021, though significant delays remain in key innovative sectors such as pharmaceuticals. The Indian government has also taken some small but positive steps to create opportunity for innovative manufacturers, including amendments to the Drugs Prices Control Order to allow equal exemption treatment for U.S.-developed innovative products, a Supreme Court decision overturning a lower court ruling that invalidated patents for an innovative agricultural product and published draft revisions to the Patent Rules that lowered patent fees.

Beyond these high-level steps, however, manufacturers urge India to translate broad rhetoric into more robust action to tangibly improve the IP environment for manufacturers. India's 2016

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[40] USPTO, "USPTO and India's central IP department agree to cooperate on IP examination and protection," Dec. 2, 2020.
[41] U.S. Trade Representative Katherine Tai and Minister of Commerce and Industry Piyush Goyal, "Joint Statement of the U.S.-India Trade Policy Forum," Jan. 11, 2023.
[42] Delhi High Court, "Creation of Intellectual Property Division in the Delhi High Court," Jul. 6, 2021; Delhi High Court, "Delhi High Court Intellectual Property Rights Division Rules, 2022," Feb. 24, 2022; Delhi High Court, "Notification No. 28/Rule/DHC," Apr. 11, 2022.
[43] See WIPO's "World Intellectual Property Indictors 2017," (Dec. 6, 2017); "World Intellectual Property Indicators 2021" (Nov. 8. 2021) and "World Intellectual Property Indicators 2022," (Nov. 21, 2022).

National Intellectual Property Policy remains the country's guiding approach to IP both at home and abroad, with high-level language that positively calls for stronger IP laws, more robust enforcement and increased public awareness, while also insisting that the country's longstanding approach to patents and trade secrets is fully compliant with international obligations.[44] Moreover, the plan had little detail about how the country would improve its core IP framework or address concerns raised by both domestic and international stakeholders, and intervening years have seen little appetite to work towards fundamental change.

India continues to deny **patent protection**, or invalidate existing patents, for inventions that meet internationally accepted criteria. Under TRIPS, patents must be granted for inventions that are new, involve an inventive step and are capable of industrial application. Section 3 of India's 2005 revised Patent Act, however, creates a fourth "enhanced efficacy" test for a number of categories of inventions that allows them to reject TRIPS-compliant patent applications, and the Indian Patent Office has not provided clear guidance as to how patent examiners should interpret this criterion, leading examiners and courts to interpret it subjectively and inconsistently in patent proceedings. Using Section 3(d), India over the last decade has rejected, invalidated or otherwise revoked dozens of patents for innovative products, including products and therapies widely patented in other countries around the world. India's unique pre-grant opposition process, which allows any person to file an opposition to a patent grant, has often been used to prevent the granting of patents widely accepted around the world and has been a significant contributor to patent backlogs on priority sectors. Even more troubling, manufacturers report a rise in "benami oppositions" filed by fictitious persons as a particularly alarming trend.[45] Other burdensome policy challenges, such as problematic evidentiary standards for pre-grant opposition proceedings, Section 8 requirements to notify when filing outside of India upon threat of invalidation of their Indian patents and the lack of a patent information system that allows state-level authorities to grant marketing approval for a generic version of patented medicines without verifying whether there is a related patent, all undermine the value of patent protection and ultimately confidence in India's innovative patent system.

Compulsory licensing also remains a key challenge with India. While India has not formally issued any compulsory licenses since 2012, Indian officials keep the threat alive with continued insistence on their unfettered right to issue them, and Indian companies continue to seek compulsory licenses through the courts. The continued presence of vague legal criteria that permit their broad use (such as under Sections 66 and 92 of the Patent Act) without clear process or transparency requirements mean that Indian government and judicial officials have the power to use compulsory licensing to shield India's domestic industries at the expense of U.S. innovation and IP and a continued flow of patent challenges in India's courts. Additionally, patent holders face a direct risk of a compulsory license due to India's unique "working requirements," which require an invention to be directly "worked" in the country within three years of its initial grant and for patent holders to provide onerous Statements of Working on an annual basis that require the disclosure of confidential business information. Despite repeated attempts by the U.S. government to engage on these issues, India has remained unwilling to consider any steps, large or small, to address these concerns. Domestic pressure for compulsory licensing has also arisen in other areas, such as environmental technologies and "essential facilities."

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[44] Department of Industrial Policy and Promotion, "National Intellectual Property Rights Policy," May 12, 2016.
[45] Verma, Ankush and Shukadev Khuraijam, "Court curtails straw man patent oppositions in India," Managing IP, Apr. 6, 2022.

India has taken significant steps to reduce backlogs for **patent and trademark reviews** in recent years, a highly welcome step. As noted above, these reductions have been prompted by concrete reforms by India's Office of the Controller General of Patents, Designs & Trademarks, such as hiring more examiners, expanding electronic filing procedures and meeting with public stakeholders to collect ideas for further improvements. The NAM remains vigilant in monitoring India's IP review processes and actions, particularly for efforts to reduce patent and trademark backlogs that inappropriately require localization or promote domestic industry. For example, the 2015 Patent Rule Amendments issued by the Ministry of Commerce and Industry that offer expedited patent examination for applicants that manufacture or commit to manufacture their inventions in India are discriminatory and do not align with international patent norms.

India does not provide adequate and effective protection for **trade secrets, confidential business information** or **regulatory test data**. India lacks a stand-alone trade secrets law, forcing businesses to rely on contracts in order to protect their trade secrets. In practice, this approach guarantees a narrow application of trade secrets that fails to cover key challenges such as trade secret theft where there is not a direct contractual relationship between the trade secret owner and the infringer. This contract-law-based approach allows only civil remedies, not criminal remedies.[46] Moreover, India does not offer adequate and effective protection against unfair commercial use, as well as unauthorized disclosure, of test data or other information generated to obtain marketing approval for pharmaceutical and agricultural chemical products. Despite intermittent positive signals of progress on these issues, including broad language calling for research on future trade secret policies in the National IP Policy and a 2016 workshop between USTR and India's Department of Industrial Policy and Promotion, there has been no real change in this area to improve trade secrets protection in the country.

India continues to create challenges through **investment restrictions or regulatory hurdles for some IP-intensive industries**. These can include a variety of policy barriers, such as high tariffs, price controls, procurement issues, regulatory concerns in areas such as clinical trials and localization barriers in industries from energy and pharmaceuticals to medical devices and information technology. Such restrictions limit market opportunity for innovative manufacturing sector while also undermining India's investment and business climate.

In addition to the challenges that manufacturers continue to face in India itself, India's desire to be a **vocal challenger of IP in multilateral fora** has prompted major concerns among manufacturers. At the WTO TRIPS Council, at WIPO and at the WHO, India has championed efforts to undermine international rules and standards to promote strong IP protections, denying links between IP and innovation and robustly advocating maximum use of TRIPS flexibilities in relation to health products. India has also sought to weaken IP protection for green technology, with senior Indian government officials in December 2022 unveiling plans to use the country's 2023 presidency of the G20 to press for a broad waiver of IP for technologies related to green energy and the clean energy transition.[47] Manufacturers remain concerned about India's positions and the impact they could have in shaping international opinion in a way that prevents open, constructive discussion about innovation and IP, as well as the reflection they provide of India's true domestic views on these topics.

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[46] As some have pointed out, Indian law does allow plaintiffs to use the common law tort of 'breach of confidence' in some cases, but in practice these cases can be challenging, and rulings are not always consistent enough to provide clear confidence for investors. See Library of Congress, "Protection of Trade Secrets: India," June 2015; Chandni Raina, "Trade Protection in India: The Policy Debate," Working Paper, Indian Institute of Foreign Trade Centre for WTO Studies, September 2015.
[47] Baruah. "India to seek IPR waiver," Dec. 27, 2022.

Indonesia

Indonesia remains a concern for manufacturers in the U.S. due to a range of problematic legal and policy changes. Indonesia has worked with USTR and other agencies to improve aspects of its IP system, including the notable deletion in October 2020 of local manufacturing requirements for patents. Yet many aspects of Indonesia's current approach to IP, particularly for patents and trade secrets, continue to be highly problematic. As such, the NAM recommends that USTR continue to designate Indonesia on its Priority Watch List in 2022.

Manufacturers recognize that Indonesia has taken some important steps forward in recent years, most notably Indonesia's deletion of problematic provisions from its Patent Law that required local manufacturing as a part of the Omnibus Bill on Job Creation passed by Indonesia's House of Representatives in October 2020. While that law was declared partly unconstitutional by Indonesia's Constitutional Court in November 2021 due to process concerns, Indonesia is working now to re-pass the law through appropriate procedures. Additionally, Indonesia's Directorate General of Intellectual Property has been actively working toward draft revisions to the Patent Law to broaden the scope of patentable products and technologies and allow patent licensing. Key patent law amendments have been listed as a priority in 2023 for Indonesia's parliament. Finally, Indonesia has also taken some positive steps to improve enforcement against counterfeit and pirated goods, including the creation of a new Intellectual Property Task Force and the establishment of new procedures for businesses to record their IP with customs and increased seizures of fake products.

While recognizing key progress on the local manufacturing requirements for patents and active efforts underway to promote reform, Indonesia's current Patent Law still contains a number of concerning provisions, particularly provisions that authorize **compulsory licensing** on vague and arbitrary grounds, narrow the scope of patentable subject matter, require disclosure of the origin of genetic resources and discourage voluntary licensing of technology. The follow-up Regulation No. 39/2018 (implementation of compulsory licensing) had raised further raised concerns among patent holders, though Indonesia's MLHR and the Directorate General of IP worked with stakeholders to reissue them (as Regulation No. 30/2019) in December 2019 with revisions that provided much better clarity on the processes and criteria for a compulsory licensing provision with critical references to TRIPS requirements. Yet in July 2020, President Joko Widodo issued Presidential Regulation 77/2020 that detailed the government's right to issue a compulsory license broadly for patents related to national defense, security or the vague circumstance of "very urgent need in the public interest" (Article 2), with further language defining the scope of technologies in this scope, including high pricing, public health emergencies, food security and environmental disasters (Article 13). Those broad provisions raise significant concerns for manufacturers in a wide range of sectors. In November 2021, President Widodo invoked that regulation to issue compulsory licenses on two key COVID-19 treatments, even though imports of those products were sufficient.[48] Similarly, DGIP's proposed Patent Law revisions include a problematic provision enabling government use of patents for imported pharmaceutical products.

Although the provision regarding local manufacturing for patentability has been deleted from the Patent Law, Indonesia maintains other **localization requirements** that impact innovative

[48] These included presidential decrees allowing government exploitation of patents for remdesivir and favipiravir. See "Presidential Decree 100/2021: Tentang Pelaksanaan Paten Oleh Pemerintah Terhadap Obat Remdesivir," Nov. 10, 2021; and "Presidential Decree 101/2021: Tentang Pelaksanaan Paten Oleh Pemerintah Terhadap Obat Favipiravir," Nov. 10, 2021.

manufacturers. For example, Indonesia maintains market access barriers related to domestic manufacturing and technology transfer in multiple sectors, and also continues to require trademark owners must have a local office to register (and protect) their trademarks with Indonesia's Directorate General of Customs and Excise. Such discriminatory and unfair moves to promote local manufacturing must be robustly addressed.

Finally, a series of Indonesian regulations related to food products raise IP concerns. The NAM has serious concerns about the **trademark implications** of potential revisions to Indonesia's Law on Food and Regulations on Food Labelling and Advertising to expand promotional, advertising, educational, labeling and branding activities for specific types of food products. Additionally, recent changes to Indonesian law (in 2014, 2019 and most recently, February 2021) require companies in affected industries—including chemicals, cosmetics, food and beverages and pharmaceuticals—to **disclose sensitive business confidential information** to Indonesian government agencies in order to obtain required certification. While these requirements are being implemented in different ways for impacted industries, the broader concerns about requirements and protection of such confidential information are a common concern for many manufacturers in the U.S.

Manufacturers also note continued challenges in **IP registration and enforcement** in Indonesia, particularly in manufacturing-relevant copyrights. Enforcement against fake and counterfeit products remains weak, reflecting insufficient government coordination to tackle IP enforcement. Manufacturers also report a series of practical challenges, including localization requirements for trademark registration noted above, short validity periods for Customs registration of trademarks and ongoing challenges with the registration of manufacturing-relevant copyrights with the Directorate General of Intellectual Property Rights that serve as a prerequisite to enforcement, despite Indonesia's commitments under the Berne Convention. Additionally, manufacturers who frequently register artwork used on packaging as copyrights in other markets continue to have challenges registering those copyrights with Indonesia's DGIP.

Mexico

Mexico agreed to a number of critical commitments under the USMCA to improve core areas of IP law and practice, commitments that if implemented fully and consistently will have significant benefits for manufacturers across sectors. Yet despite those commitments, manufacturers report both longstanding issues in Mexico, particularly related to enforcement, as well as new policy developments that will negatively impact innovative manufacturing in the country. Due to these issues and the increasing need for stronger efforts to ensure that Mexico meets its USMCA commitments, the NAM recommends that USTR add Mexico to its Priority Watch List in 2022.

The USMCA marked an important step forward on IP issues in Mexico, as the government made important commitments in areas such as patent protection, trade secrets, GIs, and enforcement against fake and counterfeit products. The Mexican Congress passed the new Federal Law for the Protection of Industrial Property (or LFPPI) in July 2020 as part of a package of five bills to implement USMCA provisions, though not without a last-minute push for revisions to undermine critical IP protections. To date, the Instituto Mexicano de la Propiedad Industrial has been slow to work on follow-up regulations that would provide critical detail on the implementation of key LFPPI provisions in areas such as patent term adjustment, patent linkage and other areas. Manufacturers encourage USTR to engage IMPI on the timing and process for

releasing these follow-up regulations, and to work with U.S. stakeholders to address areas of priority.

Mexico has issued a series of policies to update its front-of-pack labelling regulations that have a significant negative impact on manufacturers and their **use of trademarks**. Mexico has moved quickly to implement a new front-of-pack labelling scheme for a wide range of pre-packaged, non-alcoholic food and beverage products sold in Mexico, with specific efforts to restrict the use of trademarked brand names, logos, symbols and packaging that consumers depend on to identify safe, effective products. These efforts have come through a series of standards and regulatory changes, including a September 2022 Ministry of Health decree to revise core health regulations[49], October 2020 amendments to the General Rules on Foreign Trade Matters and new standards for nutritional labelling (NOM-051 and NOM-086). Manufacturers urge USTR and other senior government officials to support manufacturers in the U.S. by addressing concerns with Mexico's efforts in these areas. (More on the NAM's full concerns with these developments can be found in the NAM's October 2022 submission for the 2023 National Trade Estimate report.)

Manufacturers are also concerned about Mexican level of **IP enforcement**. Fake and counterfeit goods continue to be widespread in Mexico, particularly due to the continued prevalence of counterfeit markets. Yet the Servicio de Administración Tributaria, Mexico's customs service, still initiates a relatively small number of cases, and key IP enforcement agencies are not sufficiently resourced or coordinated in their activity. Manufacturers encourage USTR and its fellow agencies to urge Mexico to strengthen interagency coordination and devote more time and resources to battling IP infringement. Patent enforcement is also an issue, as manufacturers also report little to no notice that a potentially patent infringing product is entering the market and face ongoing challenges with securing effective preliminary injunctions or final decisions on cases regarding IP infringement within a reasonable time. Even when injunctions are granted based on evidence of infringement and likely irreparable harm and supported by payment of bonds, it remains easy for an alleged infringer to submit a motion to the court to lift the injunction and allow the challenged product to enter the market at any point during lengthy infringement proceedings. Manufacturers subsequently have difficulties collecting adequate damages, requiring further proceedings that take additional time and resources.

Manufacturers are also closely watching issues impacting **market access for innovative industries** in Mexico in the wake of the USMCA. For example, the Federal Commission for Protection against Health Risks (COFEPRIS) has significantly delayed approval processes for key innovative manufacturing industries, including biopharmaceutical and agriculture biotechnology products, despite USMCA provisions on product approvals in these areas.[50] Moreover, the Mexican government has taken steps in the area of procurement that have negatively impacted fair market access in these products. These include August 2020 revisions to its federal procurement law (Ley de Adquisiciones, Arrendamientos y Servicios del Sector Público) to bypass the public bidding process envisioned in the USMCA in favor of procurement from international organizations such as the Pan-American Health Organization and the United Nations Office for Project Services for health products. Since then, manufacturers have seen significant operational challenges with the new process, including a lack of transparency or

[49] This decree, published on Sept. 8, 2022 in the Diario Oficial de la Federación, would revise the Regulation for Sanitary Control of Products and Services (Reglamento de Control Sanitario de Productos y Servicios) and the Regulation of the General Law of Health in the Matter of Advertising (Reglamento de la Ley General de Salud en Materia de Publicidad).
[50] See, for example, USMCA provisions on regulatory approvals for agricultural biotechnology products (Chapter 3) and for biopharmaceutical products (Annex 12-F).

meaningful engagement with participating stakeholders, a lack of coordination between UNOPS and Mexican government agencies and ongoing logistical barriers that are limiting users' ability to accept procured goods and even recent government signals of allowing companies without marketing authorizations or IP rights in Mexico for products under tender to participate in public bidding processes. These issues are not only disrupting the flow of these products to Mexican patients but are also causing payment challenges for some manufacturers. Mexico's Chamber of Deputies has also debated further revisions to LAASSP that could be used to exclude tenders from the U.S., and its General Council for Health in October 2022 amended regulations for its National Medicines Compendium that create new market access barriers for innovative products from the U.S.

The USMCA included important provisions to ensure that the protection of **GIs**, including those negotiated through FTAs, may only be granted after a fair and transparent examination and opposition process. Yet in April 2020, Mexico reached an "agreement in principle" on an updated FTA with the **EU**, which included agreements to strengthen protection for European **GIs** outside of trademark-provided protections for food and agricultural products. Those provisions undermine the ability of the U.S. and other countries to protect existing trademarks in these products as well as to ensure fair treatment for those making products on terms already treated as generic. Both issues would have a negative impact on American jobs and workers supported by exports to Mexico.

Watch List

Brazil

The Brazilian government has taken steps to improve its IP system in key areas and to signal openness to foreign trade and investment in manufacturing. These efforts include Brazil's ratification of the Madrid Protocol on trademarks, and concrete steps to address its backlog of patents and trademarks. In recent years, Brazil has shifted its tone at the multilateral level, shifting from a frequent critic of IP protection to a more nuanced voice that is willing to partner with the U.S. on innovation issues. Yet Brazil remains a challenging market for innovative and IP-intensive manufacturing sectors, with issues in registering, utilizing and enforcing their IP. Moreover, longstanding protectionist and anti-IP threads in Brazilian policy remain, manifesting themselves over the last year with a series of troubling anti-IP developments. For these reasons, we recommend that Brazil remain on USTR's Watch List in 2022.

Brazil's IP office, the National Institute of Intellectual Property (INPI), has taken concrete steps designed to accelerate reviews and tackle Brazil's notoriously long **patent and trademark backlogs**, and to ensure that these backlogs do not meaningfully diminish the value and protection of IP in Brazil. Steps to reduce these backlogs included include INPI's agreement with the U.S. Patent and Trademark Office to expand its Patent Prosecution Highway agreement to allow both an expanded scope and a higher quota of applications that could qualify for expedited patent applications. INPI has in recent years issued multiple plans to improve the country's system, including ambitious annual IP action plans as well as specific initiatives focused on patents (such as a July 2019 plan focused specifically on reducing the patent backlog and increase the efficiency of patent prosecution) and trademarks (such as January 2018 rules to accelerate trademark applications and reviews). Additionally, Brazil acceded to the Madrid system for global trademarks in July 2019, with applications beginning in October 2019. These commitments are paying off, as Brazil cut its patent pendency by 3.25

years and its trademark pendency by 2.3 years between 2016 and 2021.[51] These steps are welcome, though Brazil's patent processes are still long across sectors (with a pendency of 5.2 years as of the end of 2020) and have not been reduced for certain sectors (such as pharmaceuticals).

At the same time, manufacturers also note a number of problematic backward steps. In 2022, the Brazilian government sharply reduced funding for INPI,[52] a development with broad implications for IP processes and protection in Brazil. Given Brazil's longstanding challenges with patent pendency and patent backlogs, **patent term adjustment** provisions under Article 40 of the Patent Law of 1996 that ensured a term of protection of no less than 10 years from the grant date for invention patents were a critical backstop to restore a portion of the patent term for unreasonable delays during examination of a patent application. Manufacturers remain concerned about the impact of the Brazilian Supreme Court's May 2021 decision to rule that language unconstitutional across patents, and to apply it retroactively to key sectors such as pharmaceutical and medical products, as it leaves innovative manufacturers across a broad range of sectors with no reasonable recourse for such delays that have been a challenge in Brazil in years past.

Brazil's National Congress has also actively moved to expand authorities for **compulsory licensing**, passing in August 2021 new legislation to broadly expand compulsory licensing provisions in ways that raise significant concerns. The bill, as passed by the Congress, gave the Brazilian executive and legislative branches of government broad powers to issue compulsory licenses based on vague and ambiguous grounds (by declaration of "public health emergency," in instances of "public calamity," or even with a broader determination that granting such a license would be of "national or international interest"). Additionally, the bill requires the executive branch to prepare a broad list of targeted patents on which compulsory licenses could be issued, and in the event of a compulsory license also requires patent owners to share necessary trade secrets, technical information and know-how to exercise or face the full loss of their patent. Although then-President Jair Bolsonaro vetoed some of the most problematic portions of the legislation in September 2021, the remainder of the legislation was issued as Law No. 14.200. In the meantime, the initial legislation's Senate champion has reintroduced legislation (Bill No. 2505/2022) including several of the vetoed provisions.

Additionally, Brazil does not provide **regulatory data protection** to all sectors. Although Brazil has enacted federal laws to ensure adequate data protection for veterinary and crop products (Law 10.603/02), it still does not provide for adequate regulatory data protection for pharmaceuticals and allows marketing approval for pharmaceuticals to competitors relying on test and other data submitted by innovators to prove the safety and efficacy of their products.

Brazil also creates extra hurdles for manufacturers in **trademark registration and enforcement**. INPI has set a very high bar for 3D trademark registrations, with the level of descriptiveness set at levels much higher than other jurisdictions. Manufacturers continue to

[51] According to WIPO statistics, Brazil cut its patent pendency from 84 months in 2016 to 45 months in 2021, and similarly cut its trademark pendency from 41.4 months (1,260 days) to 13.8 months (420 days). See "average pendency times for first office action and final decision at selected offices" (patents) and "duration of trademark examination from filing to final decision" (trademarks) from WIPO's 2017 and 2022 editions of the World Intellectual Property Indicators, as well as WIPO's IP Statistics Data Center.
[52] Cezar Alves, Fernando, "Concurso INPI: com carência de pessoal, órgão deve entrar em colapso em maio, diz president," JCConcursos, Feb. 11, 2022; and Ferreira, Marcos, "Court Order Imposes the Release of Funds by the Federal Government to Expedite the Analysis of Patents," Drummond, Apr. 22, 2022.

report challenges in IP enforcement in Brazil, with customs surveillance against counterfeits an ongoing challenge. Bureaucratic challenges with the Brazil's Central Coordination of Customs Affairs (known as COANA) mean that companies seeking to file inspection requests to halt the flow of counterfeit goods often must file inspection requests in specific Brazilian ports of entry when aware of a potential shipment of counterfeit goods. This adds significant time and burden for rightsholders, and also depends on their awareness of a pending counterfeit shipment. Different Brazilian ports also have different procedures and requirements to trigger suspension and seizure procedures, making the system very challenging to navigate and use effectively.

In recent years, Brazil has started to move away from its traditionally strong support for **multilateral efforts to undermine global IP protections**, working more closely with pro-innovation voices to oppose expansion of unfettered TRIPS flexibilities, such as compulsory licenses, limited patentability criteria and increased patent challenges. Manufacturers are strongly encouraged by Brazil's shifting approach on these issues, and strongly encourage USTR and other U.S. government agencies to continue to support this evolution and strengthen the working relationship with Brazil in Geneva.

Brazil (as part of Mercosur) is also engaged in negotiations with the **EU** for a potential FTA. Manufacturers are watching these negotiations closely, including any discussions on IP issues. That would include any EU advocacy to strengthen protection for European **GIs** outside of trademark-provided protections for food and agricultural products. As in other markets, such measures would undermine the ability of the U.S. and other countries to protect existing trademarks for these products in Brazil, developments that would have a negative impact on American jobs and workers supported by exports to Brazil.

Given the OECD's June 2022 release of a roadmap for accession negotiations with Brazil, including language under the OECD Trade Committee, the U.S. should engage robustly with Brazil to strengthen protection and enforcement of IP rights in Brazil. The U.S. must hold firm on the need for Brazil to demonstrate its commitment to the high IP standards to which the OECD community ascribes by making changes to both law and practice to meet to those standards.

Japan

After years of important reforms in critical policy areas and government systems to support greater market entry for innovative products into Japan, Japan has moved backwards over the last several years with policy steps that undermine the country's pro-innovation environment. Given the importance of the U.S.-Japan relationship and key bilateral mechanisms for dialogue such as the U.S.-Japan Partnership on Trade, manufacturers urge USTR to ensure that IP is a priority in ongoing discussions with the Japanese government. Given the ongoing need and opportunities for progress on critical IP issues in Japan in the coming months, the NAM recommends that Japan be added to USTR's Watch List in 2022.

Japan's recent backward steps, particularly **discriminatory government policies that harm market access for innovative products and undermine patent protection**, raise questions about Japan's long-term commitment to valuing, and promoting, innovation. For example, in 2017, Japan launched a series of reforms to a critical program (known as the Price Maintenance Premium System (PMP)) that was established in 2010 to lower practical barriers that had slowed market access and entry for innovative health manufacturers into Japan. These reforms introduced changes to criteria and timing for processes that had long ensured access to innovative products. In parallel, the Japanese government in April 2019 revised a critical

regulatory system to determining cost-effectiveness of innovative products (health technology assessments), with changes that could undermine critical innovation incentives. Despite the COVID-19 pandemic and the ongoing uncertainty to medical supply chains, the Japanese government in December 2020 issued a new rule that shifted to an annual price review process that included an automatic price cut for certain types of medicines beginning in April 2021. While industry has appreciated discussions on these topics under a new Ministry of Health, Labor and Welfare expert panel established in August 2022, manufacturers remain concerned about the impact of these developments, including the tiered structure that appears designed to favor domestic companies at the expense of manufacturers in the U.S., particularly small and medium-sized manufacturers.

In addition, manufacturers are concerned about patent enforcement, given implementation issues with Japan's patent linkage system illustrated in recent government decisions. In late 2020, MHLW ignored findings of the Japanese Patent Office by issuing multiple generic versions of an on-patent product even though the JPO had upheld two of the four claims on the underlying method of use patent. Despite current litigation in Japanese courts against the approved generics, MHLW permitted those products to enter the market in December 2020, before any ruling on injunctive relief. These actions, and their surrounding legal uncertainty, have created significant uncertainty for innovative and generic manufacturers. These actions sent damaging signals about Japan's commitment to innovation and about its commitment to effective, well-functioning patent enforcement systems. Each of these developments undermines confidence in Japan's commitment to innovation and R&D needed to create and bring new innovative products to market, as well as the effectiveness of its patent enforcement systems.

Manufacturers note other areas where improvements to the Japanese **patent regime** are also needed, including improvements to patent term adjustments to cover unreasonable delays in the issuance of patents and reforms to extend and clarify regulatory data protection for key innovative sectors. Manufacturers have raised concerns about current JPO procedures in considering patent term restoration for subsequent pharmaceutical product approvals. Currently, JPO provides an extension period based only on what is considered "necessary testing" for the subsequent approval. This practice often means uneven extensions, with initial approval periods being longer than subsequent extensions. In practice, this approach can act as a disincentive to conduct research on additional medical uses and indications, including new formulations for an approved pharmaceutical product, and thus weakens Japan's innovation ecosystem. Further, Japan has failed to implement legislation establishing a regulatory data protection system. While Japan's system generally provides eight years of regulatory data protection, it has yet to formally establish such protection through legislation that would create more certainty and predictability for innovators and support investment in innovative manufacturing sectors.

Additionally, manufacturers are closely monitoring the ongoing implementation of IP-relevant chapters of Japan's Economic Partnership Agreement with the **EU**, including measures that provide stronger protection for European **GIs** outside of trademark-provided protections for food and agricultural products. As in other markets, such measures would undermine the ability of the U.S. and other countries to protect existing trademarks for these products in Japan, developments that would have a negative impact on American jobs and workers supported by exports to Japan.

Korea

Korea continues to suffer from strategic weaknesses related to market access for innovative products, with policies that not only discriminate against foreign innovative manufacturers but also violate key commitments made under the U.S.-Korea FTA related to pricing. Although the U.S. government secured a March 2018 commitment to revise key policies that had undermined innovation as part of amendments and modifications to KORUS, Korea's implementation has continued to be problematic. Given these challenges and the urgent need to ensure that Korea meets its commitments under KORUS and its update, the NAM suggests that Korea stay on the Watch List in 2022.

Manufacturer challenges in Korea include **discriminatory government policies that harm market access for innovative products**. For example, Korea's 2016 Drug Expenditure Rationalization Plan requires a multi-step process for setting government prices with specific criteria that effectively discriminate against patented products and do not reflect the value of innovation. Follow-up policies, such as the 2016 Plan of Improving the Drug Pricing System, deepened the market access problems facing innovative manufacturers. The system also suffers from transparency and due process concerns by not providing an independent mechanism for innovators to appeal government determinations of specific prices. This, coupled with other regulatory actions that similarly undercut innovative manufacturers, have slowed market access and entry for critical products and have undermined confidence for Korea's commitment to supporting the R&D needed to create the next generation of innovative manufactured products.

In March 2018, bilateral renegotiation of key provisions of KORUS included a Korean commitment to amend key pricing and reimbursement policies to be consistent with language in the agreement. In particular, Chapter 5 of that agreement includes language in which both sides committed to recognize the value of innovative products and ensure that all rules are fair, reasonable and non-discriminatory. Under its 2018 commitments, Korea's Health Insurance Review & Assessment Service (HIRA) was to revise the problematic policies. Although revised rules came into effect in January 2019, the new criteria remain so strict as to serve as a continued market access barrier for innovative manufacturers, and a September 2021 HIRA announcement that it would use past results as opposed to updating their methods further illustrates this challenge. HIRA has also announced plans to adjust its approach to pricing for procurement of key innovative products in ways that would undervalue the innovation inherent in those products. These developments together have created significant uncertainty for innovative manufacturers. Manufacturers urge further engagement with industry, increased transparency in decision-making and efforts to ensure that these rules and practices meet both the letter and the spirit of Korea's commitments and provide meaningful market access for manufacturers.

As with other markets, members are also monitoring ongoing implementation of Korea's free trade agreement with the **EU**, including any efforts to expand protections for European **GIs** that could block effective market access for food and agricultural products in the U.S. Such measures undermine the ability of the U.S. and other countries to protect existing trademarks in these products as well as to ensure fair treatment for those making products on terms already treated as generic. Both developments would have a negative impact on American jobs and workers supported by exports to Korea.

Thailand

Thailand has worked more actively with the U.S. government in recent years to address manufacturers' concerns related to IP, including ongoing work to amend its Patent Act and the Department of Intellectual Property's March 2021 memorandum of understanding to protect IP rights online. Manufacturers also welcome proactive steps to reduce the patent backlog through greater hiring of patent examiners. In addition, manufacturers have noted increased willingness by Thai officials, including DIP and the Royal Thai Police, to work with manufacturers to support raids and investigations of IP. While manufacturers welcome each of these steps, they remain concerned about key areas of IP policy and practice in Thailand, including discriminatory innovation policies, continued issues with patent approvals and challenges in trademark enforcement. For these reasons, the NAM requests that Thailand be included on the Watch List in 2022.

Despite Thailand's efforts to streamline patent processes above, **patent pendency and patent backlogs** remain an issue in Thailand. Overall statistics show that patent applications in Thailand have gotten considerably longer in recent years (five years as of 2020[53]). These challenges are exacerbated by the lack of patent term adjustments in Thailand that could compensate for unreasonable delays in the patent approval process.

Manufacturers are monitoring DIP's ongoing work to **revise Thailand's Patent Act**, building on the publication and follow-up work on DIP's September 2020 draft. That draft had included changes designed to streamline patent process in order to reduce Thailand's patent backlog and patent pendency, and also included provisions to allow the country's accession to the Hague Agreement on protection of industrial designs. The draft, however, also included new authorizations for compulsory licensing that raise concerns for innovative manufacturers.

Counterfeiting remains also a significant challenge for manufacturers in Thailand. Manufacturers across sectors also report a significant increase of counterfeit products sold in Thailand, both produced locally and imported from China, with counterfeit sales expanding nationwide through both online and offline sales channels. Counterfeit goods in Thailand cut across a wide range of manufacturing sectors, including textiles and apparel, pharmaceuticals, luxury goods, cigarettes and electronic products. The sophistication of these counterfeit products has also improved, making them much more difficult for manufacturers and government enforcement officials to detect. Manufacturers urge the U.S. government to work with its Thai counterparts to strengthen enforcement at the border as well as to expand domestic enforcement to include online channels and physical channels beyond just the retail level.

Manufacturers face difficulties with consistent **IP enforcement**, reporting significant inconsistency between government officials in different agencies, and in different locations, when addressing IP concerns. Thai customs officials often do not proactively seize shipments, instead relying upon and only acting on stakeholder-reported shipments of infringing goods. This challenge is exacerbated by the lack of full channels to register IP with Customs, specifically for manufacturing-relevant copyrights. Manufacturers also report that government agencies often require a high value threshold in order to proactively tackle an IP infringement case, or even in some cases demand compensation in order to enforce existing IP law and not release seized counterfeit goods back into the marketplace. Many authorities are also

[53] Latest available statistics from WIPO, as Thailand is not listed among selected countries in WIPO's 2022 report. See WIPO, "World Intellectual Property Indicators 2021," Nov. 8. 2021.

particularly reluctant to seize infringing goods sourced in Thailand. Significant discrepancies remain, as well, between Customs authorities in different ports. Manufacturers also face significant time and cost addressing DIP approval of infringing trademark applications.

Manufacturers urge USTR to work with Thai officials under the bilateral U.S.-Thailand Trade and Investment Framework Agreement, including the relevant subcommittee on IP enforcement.

Appendix: Index of Countries, Territories and Regional Organizations in NAM Submission to 2022 Special 301 Report

COMMENTARY · DIVERSITY AND INCLUSION

To understand why America's lead in tech and innovation is eroding, look at China's investment in women inventors

BY **HOLLY FECHNER**

April 18, 2023 at 3:35 AM EDT

A minority of patents list at least one woman among their inventors globally–but China is bridging that gap almost twice as fast as the U.S.

CFOTO/FUTURE PUBLISHING/GETTY IMAGES

In the race for global technology leadership, China understands that it needs more inventors to compete with the United States and has worked systematically to expand its capacity to innovate. That's why China is eating America's lunch on a critical measure of technological capacity: women inventors.

A new World Intellectual Property Organization (WIPO) study of international patent applications found that from 2001 to 2005 and 2016 to 2020, China grew its capacity of women inventors at almost *double* the rate of the U.S.–42% in China compared to 22% in the U.S. To continue outpacing China in cutting-edge technologies so, as President Biden vowed in his State of the Union, "they're not used against us," the United States must access all available talent by changing the culture around invention and expanding its pipeline of inventors.

Our elected officials already know the risks of letting other countries out-innovate us. In a rare and powerful show of bipartisanship, Congress passed the CHIPS and Science Act last summer to bolster U.S. innovation in next-generation technologies such as artificial intelligence, clean energy, 5G, and other advanced technologies to make sure American innovators can keep up with China by not only maintaining American leadership in these areas but also by inventing the next breakthrough technologies.

The WIPO study shows that the U.S. lags behind China and much of the world in our efforts to fully mobilize our inventive talent. From 2016 through 2020, the U.S. ranked just 13th–well below the global average–based on the share of patents that includes women. China ranked fourth, behind Colombia, Spain, and Egypt.

Globally, the WIPO report found that only one in eight inventors listed on a patent was a woman, and only 4% of international patents covered inventions by women-only inventors or teams. These figures portray not only a massive global underutilization of talent but also sustained gender bias in innovative fields worldwide.

According to the WIPO study, global patent filings could potentially reach gender parity in about four decades. That already disappointing pace could be slowed even more by crises like the COVID-19 pandemic, which forced more women scientists than men out of the lab to care for their families.

Inventing plays a central role in economic growth and job creation. The strength of a country's patent protections is a strong predictor of its commitment to the rule of law and its ability to provide incentives to innovate. In the U.S., where patent rights are enshrined in the Constitution, the U.S. Patent and Trademark Office (USPTO) has estimated that intellectual property-intensive industries account for more than 40% of U.S. economic activity and support 63 million jobs–44% of the U.S. workforce.

A dearth of U.S. women among named patent inventors can be remedied. In his first two years in office, President Biden drove a resurgence of "Made in America." Now we must ensure that everyone has the opportunity to "Invent in America." New laws, policies, and private sector practices can expand access to education, mentorship, and careers in science and technology: for example, by increasing access and funding for research and legal assistance for patenting inventions, improving the availability of child care and family and medical leave, and making sure that university and private sector workplaces are welcoming for all.

The need for change is as much about economic and technological competitiveness as it is about equality and righting historical wrongs. A series of studies has shown the more diverse a team of inventors, the more creative and innovative their output.

The USPTO Office of the Chief Economist issued a report last October, calling the persistent underrepresentation of women in patenting a "drag on American innovation and prosperity," and citing projections for significantly increased economic output if women were to patent at the same rate as men. "Gender diversity boosts the inventive process in essential ways: women's experiences and viewpoints help inform, and thus improve, the quantity and quality of innovation," the report noted.

Government, educational institutions, and the private sector must promote broad participation in invention and patenting to make sure that women, people of color, and other historically underrepresented groups have the opportunity to contribute fully to the innovation economy.

The global innovation race is on—and the stakes are higher than ever. America can continue to lead—but only if we harness the power of all of our talent to maximize our inventive potential.

Holly Fechner is the executive director of Invent Together, an alliance of universities, nonprofits, companies, and other stakeholders committed to ensuring that everyone has the opportunity to invent

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