

**THE CHINA CHALLENGE:
REALIGNMENT OF U.S. ECONOMIC POLICIES
TO BUILD RESILIENCY AND COMPETITIVENESS**

HEARING

BEFORE THE

SUBCOMMITTEE ON SECURITY

OF THE

COMMITTEE ON COMMERCE,
SCIENCE, AND TRANSPORTATION
UNITED STATES SENATE

ONE HUNDRED SIXTEENTH CONGRESS

SECOND SESSION

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JULY 30, 2020
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SENATE COMMITTEE ON COMMERCE, SCIENCE, AND TRANSPORTATION

ONE HUNDRED SIXTEENTH CONGRESS

SECOND SESSION

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**THE CHINA CHALLENGE: REALIGNMENT
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THURSDAY, JULY 30, 2020

U.S. SENATE,
SUBCOMMITTEE ON SECURITY,
COMMITTEE ON COMMERCE, SCIENCE, AND TRANSPORTATION,
Washington, DC.

The Subcommittee met, pursuant to notice, at 10 a.m. in room SR-253, Russell Senate Office Building, Hon. Dan Sullivan, Chairman of the Subcommittee, presiding.

Present: Senators Sullivan [presiding], Blunt, Cruz, Blackburn, Young, Wicker, Capito, Markey, Klobuchar, Blumenthal, and Rosen.

**OPENING STATEMENT OF HON. DAN SULLIVAN,
U.S. SENATOR FROM ALASKA**

Senator SULLIVAN. Good morning. This hearing will now come to order.

I am pleased to welcome our distinguished panels of witnesses today as the Economic and Security Subcommittee focuses on a very important topic that I think there's a lot of bipartisan interest in and that is the economic and geostrategic challenge that the rise of China poses for the United States not just today but in the future.

The Communist Party-led People's Republic of China through unfair trade practices, intellectual property theft, market manipulation, and very prominently, in my view, non-reciprocal treatment not just in the economic realm but in many realms has been a force in the global economy that undercuts the resiliency and strength of the U.S. economy.

China has been one of the world's fastest-growing economies, averaging close to 10 percent growth from 1979 to 2015. In 2014, China overtook the United States as the world's largest economy in purchasing power parity basis, according to the International Monetary Fund.

I believe that there is a strong and bipartisan interest, hopefully we will see that today, in establishing a long-term economic United States strategy with our allies that focuses on reciprocity, intellectual property theft, and ultimately from the United States' perspective outcompeting the Chinese.

In May, the White House issued its document called The United States Strategic Approach to the People's Republic of China. This

document stated, “The Chinese Communist Party’s expanding use of economic, political, and military power to compel acquiescence from nation states across the globe harms vital American interests and undermines the sovereignty and dignity of countries and individuals around the world.”

This document is part of the broader national security strategy issued a couple years ago by the Trump Administration and national defense strategy issued by the Department of Defense.

These documents, although you don’t see it in the press, in my view, have very strong bipartisan support in the Congress for laying out the challenge that our Nation faces with regard to China.

What they lack right now is implementing documents, implementing strategies, particularly as it relates to the economic challenge that China poses. So what our hearing intends to do today is to start the focus on the implementation and execution of these strategies.

As I mentioned, I think these strategies have broad-based bipartisan support, but we’re going to need to be able to bring our government, our society together for the long-term, literally decades, like we did in the Cold War with the Soviet Union, if we’re going to execute these in a way that protect American interests, our workers, our economic and national security interests.

I’m hopeful that that’s the path that we are beginning on. The Trump Administration, in a series of speeches through Cabinet members in the last few weeks, has started to lay out this strategy. I know that Secretary Pompeo, as we speak, is testifying in front of the Senate Foreign Relations Committee, and I am hopeful with our two panel witnesses today, government witnesses and experts from the private sector and think tank community, we’ll be able to start informing the Congress on this issue, which I think is one of the most important issues facing the United States.

So that’s our goal, and I’m excited to have Ranking Member Markey as my Ranking Member here. I know he feels the same on a lot of the issues with regard to the challenges that China poses, and with that, I will turn to the Ranking Member for his opening statement.

Senator Markey.

**STATEMENT OF HON. EDWARD MARKEY,
U.S. SENATOR FROM MASSACHUSETTS**

Senator MARKEY. Thank you, Mr. Chairman. Thank you so much for convening this hearing and for your continued partnership on the Subcommittee, and I want to thank our witnesses for their willingness to participate today.

As the Ranking Member of both this subcommittee and the East Asia Subcommittee of the Foreign Relations Committee, I believe that meeting the China challenge should be a bipartisan priority.

We must compete against Beijing’s efforts to unfairly tilt the playing field against American workers and businesses. Those actions include state support for companies, intellectual property theft, as well as increasingly using multilateral institutions to set standards that privilege Chinese companies and technology.

China also uses its vast economic tools to threaten freedom around the world. Beijing is already exploiting the size of its mar-

ket to coerce American citizens and business leaders as well as foreign governments into self-censorship to protect official Chinese Government messaging.

We know China is using exports and foreign assistance, including through the Belt and Road Initiative, to embed around the world not only surveillance technologies but also the values and practices that activate those technologies for authoritarian repression.

As we engage in this competition of systems, we must remember that the Chinese Government is testing their authoritarian tools, first and foremost, on the people of China, and I want to make clear that in today's hearing and otherwise, we are focused on the threats posed by the Chinese Government.

But while countries around the world look to the United States to lead an international coalition to push back on Chinese aggression, they note that the United States has retreated from our historic support of democracy and human rights as a key pillar of our foreign policy. They note that the Trump Administration has abandoned international institutions, such as the World Health Organization, while the Chinese Government has only stepped up their influence campaign, and they note this Administration's unprecedented support for a variance over allies.

Rather than take a leadership role in pulling together a global coalition to combat Chinese policy objectives, this Administration has pursued an aggressive go-it-alone approach that swings between pandering to China, including an apparent green light from President Trump for detention camps to the closing of the Chinese Consulate in Houston, without any clear reason or explanation of what we seek in return.

We cannot consider our China policy in a vacuum. Every policy decision from the past three and a half years impacts how the rest of the world views the current conflict. When I assess these policy decisions, it's clear to me that we have failed to rise to this moment.

As China steps up its propaganda campaign in the midst of the coronavirus, it's hard for the United States to point fingers when our own virus response has been so inadequate.

The President's inexplicable failure to lead a national response to the coronavirus crisis and his attacks against science, free speech, and the media has left the United States flailing as other countries lead in responding to the pandemic.

As China continues to dominate manufacturing and requires companies to bring on Chinese partners and share intellectual property, the United States has cut relevant areas of domestic spending and hasn't leveraged the full resources of the government to spur economic development.

We should be investing in our research and development and technology sectors and putting money into education with a particular focus on STEM. We should also be utilizing the Defense Production Act to its full potential to mobilize the economy during the pandemic.

As China engages in a comprehensive campaign to exploit international institutions for their own purposes, we have retreated even further from the world stage. When the United States is absent on the world stage, China is only too happy to fill the void.

Competition with China is fundamentally about a free society versus authoritarianism. We must utilize all of the tools at our disposal to make the United States economy competitive and resilient in this as we work with Democratic countries around the world which act in a connected way to protect the values we hold so dear.

The challenges are too important, the stakes are too high. The United States simply cannot afford to cede leadership.

So thank you, Mr. Chairman, for this very important hearing. Thank you to all of the witnesses who are participating today. This is clearly a very important subject.

Senator SULLIVAN. Thank you, Senator Markey, and I appreciate your partnership on this subcommittee where we've had a lot of really good hearings and I think a lot of overall bipartisan agreement on a number of issues. I think that's important, particularly as it relates to China.

I noticed that the Chairman of the Commerce Committee, Senator Wicker, is here, and I would ask him to give an opening statement, as well.

Mr. Chairman.

**STATEMENT OF HON. ROGER WICKER,
U.S. SENATOR FROM MISSISSIPPI**

The CHAIRMAN. Thank you very much, Mr. Chairman.

I appreciate your leadership on this issue and that of Ranking Member Markey. This is an ambitious two-panel hearing this morning and should be quite valuable.

The focus, of course, is the Chinese Communist Party and their predatory economic practices and their impact on American companies and workers, both at home and abroad.

Confronting these practices and protecting our economic advantages into the future will require an aggressive U.S. Government response supported by congressional action and oversight.

In May, the White House published its Whole of Government Response Plan in a document called The United States Strategic Approach to the People's Republic of China.

Today's hearing will focus on the economic dimensions of the overall U.S. strategy. As the White House Strategic Approach points out, the CCP uses a variety of weapons to undermine America's economic competitiveness, including cyber attacks, intellectual property theft, force technology transfers, and illegal subsidies to state-owned enterprises.

I hope our witnesses will describe the particular impacts of China's campaign with respect to industries under the Commerce Committee's jurisdiction, such as telecommunications, maritime, aviation, and space.

America's future economic prosperity is not the only thing at stake in this strategic competition. As the COVID-19 pandemic continues, China is apparently using tactics from its predatory playbook against our public health sector.

Last week, the Department of Justice indicted two Chinese hackers for a widespread cyber attack campaign supported by the Chinese Intelligence Service. The targets allegedly included at least four U.S. pharmaceutical and biotech firms working on a COVID-19-related testing and treatment project.

The COVID-19 crisis has revealed unacceptable vulnerabilities caused by years of letting the CCP engage in disruptive and damaging economic practices without an effective coordinated response. Hopefully that's about to change.

During the initial phase of the COVID-19 outbreak, for example, Chinese exporters and shipping ground to a halt and many U.S. businesses were forced to go without essential supplies. In particular, the United States pharmaceutical industry has been shown to be overly reliant on Chinese suppliers. We cannot tolerate having these economic vulnerabilities.

The CCP is unlikely to stop its predatory practices. Therefore, the U.S. Government should help our economy become more resilient against constant pressure from Beijing.

I would ask our witnesses from the State Department and the Commerce Department, respectively, to detail the measures they are taking to support a multi-Cabinet approach.

Congress can play a significant role in supporting the efforts of the executive branch. The Commerce Committee is doing its part to help by producing bipartisan legislation, such as the recently enacted Secure and Trusted Communications Network Act, known as the Rip and Replace, and there are funds in the COVID-19 Phase 4 proposal by the Majority Leader in this regard.

This law will help protect American communications networks from threats posed by CCP bat suppliers, such as Huawei and ZTE, by supporting the removal of that equipment. I would welcome suggestions from all of our witnesses on how Congress can continue to bolster the Administration's efforts.

But, Mr. Chairman and Ranking Member Markey, you have both been champions in this regard, and I appreciate your bipartisan support.

I thank the witnesses for their time today and look forward to their recommendations.

Thank you very much.

Senator SULLIVAN. Great. Thank you, Mr. Chairman.

I want to welcome our witnesses. I have instructions here that say if the witnesses have not taken their seats, please ask them to do so. We have no witnesses actually here in the room, but I think they've taken their seats virtually. So I can see them on the screen.

I want to welcome Mr. Michael Wessel, Commissioner of the U.S.-China Economic and Security Review Commission, and Mr. Rush Doshi, Director of the China Strategy Initiative at The Brookings Institution.

Gentlemen, you each will have 5 minutes to deliver an oral statement. A longer written statement will be included for the record.

Thanks again for being here. Mr. Wessel, why don't we begin with you?

STATEMENT OF HON. MICHAEL WESSEL, COMMISSIONER, U.S.-CHINA ECONOMIC AND SECURITY REVIEW COMMISSION

Mr. WESSEL. Thank you for the invitation to appear before you today. The topic of today's hearing directly affects every one of our citizens.

My name is Michael Wessel, and I'm appearing before you today as a Commissioner on the U.S.-China Economic and Security Re-

view Commission, but as a normal Washington disclaimer, I'm speaking for myself, although my comments are informed by my service on the Commission and other work I've been involved in for many years.

Today's hearing raises the critical issue of how to respond to the China challenge. While China's policies and actions pose the greatest current threat to our competitive posture, other nations are watching America's response to determine whether they should emulate China's actions or whether America will stand tall and defend and promote its interests.

Last week, China's Foreign Minister Wang Yi said that, "The current situation in Chinese-U.S. relations is not what China desires to see. The United States is responsible for all of this."

I agree that we don't want the current state of relations to continue, but I strongly disagree that the U.S. is solely responsible.

Years of repeated attacks on our industrial base, the continuous theft of our intellectual property, countless unfair trade practices, massive subsidies of state-owned and state-supported entities, and many other predatory and protectionist policies, along with China's human rights abuses, current actions in Hong Kong, and power projections in the South China Sea and elsewhere required that we more seriously confront China. China's actions led to the response.

China's leadership has made clear their intentions through numerous policy pronouncements and activities. They don't pose their approach as being win-win but, rather, winning and dominate.

The Chinese Communist Party's policies have contributed to the hollowing out of production, the dangerous reliance on uncertain and sometimes risky supply chains, and a loss of resiliency. Countless jobs have been lost.

In my prepared testimony, I outline many of the CCP's policies and practices that form the basis for our concerns. They're well-documented. The dangerous dependence on China for our medicines, medical devices, and personal protective equipment has painted a stark picture for the public but that dependence exists in many other sectors and could increase if the CCP achieves its stated goals.

But ministry is right as it relates to policy failures here in the U.S. that must be addressed. Our inaction on certain fronts and actions on others have contributed to the current problems.

After the accession of China, the World Trade Organization, many U.S. businesses began to set up operations in China with the stated goal of serving the Chinese market. Despite chasing requirements for joint ventures, technology transfer, and other policies, the amount of investment by U.S. firms in China increased as did their employment which rose by almost 600 percent to 1.7 million people by 2017.

R&D by U.S. firms in China has increased an average of 13.6 percent per year since 2003, almost double the rate of their domestic R&D here. The promise of serving the Chinese market has not yielded all the claimed benefits. Research shows that 60 percent of China's exports to the U.S. emanate from foreign invested enterprises. Not all of those are U.S. but many are.

Now with China's rising debt load and need for capital is beginning to open its financial sector to foreign firms, it's not doing that

to advantage these firms but to serve its own needs. The risk to foreign investors, our investors, is significant in economic terms and in terms of advancing China's military and technological capabilities.

Hundreds of billions of dollars may flow into China over the next 2 years. This bears careful and strict scrutiny. On these and many other fronts, we should examine some policy options to promote our interests.

In my testimony, I identify several recommendations made by the Commission as well as several of my own, but we need a comprehensive approach, and I believe that emulating the congressional effort that foster the Omnibus Trading and Competitiveness Act of 1988, which this committee played a critical role in, is worth considering.

We not only need to confront the acts and policy fostered by the CCP but need to invest in our own competitiveness and adopt rules that will advance our interests.

We also need to focus not only now on today's challenges but those over the horizon.

Thank you for the opportunity to appear before you this morning, and I look forward to your questions.

[The prepared statement of Mr. Wessel follows:]

PREPARED STATEMENT OF HON. MICHAEL WESSEL, COMMISSIONER, U.S.-CHINA
ECONOMIC AND SECURITY REVIEW COMMISSION

Chairman Sullivan, Ranking Member Markey, Members of the Subcommittee. I want to thank you for the invitation to appear before you today on "The China Challenge: Realignment of U.S. Economic Policies to Build Resiliency and Competitiveness." This is a critical issue for U.S. economic and national security interests and directly affects every one of our citizens.

My name is Michael Wessel and I am appearing before you today as a Commissioner on the U.S.-China Economic and Security Review Commission (Commission), where I have served since its creation in 2001. But, as a disclaimer, I am speaking for myself, although my comments are informed by my service on the Commission and other work I have been involved in for many years.

The Commission was created by Congress in 2001 in conjunction with the debate about the grant of Permanent Normal Trade Relations (PNTR) to China, paving the way for its accession to the World Trade Organization. The Commission was tasked with monitoring, investigating and submitting to Congress an annual report on the national security implications of the bilateral trade and economic relationship between the United States and the People's Republic of China, and to provide recommendations, where appropriate, to Congress for legislative and administrative action.

The grant of PNTR ended the annual debate about whether to extend most favored nation status to China. But as it passed PNTR, Congress created the Commission because it did not want to forego the annual review of our relationship with China. Since the creation of the Commission, our mandate has been extended and altered as the U.S.-China relationship evolved.

The Commission is a somewhat unique body: We report to and support Congress. Each of the four Congressional leaders appoint 3 members to the Commission for 2-year terms. In 7 of the last 10 years, we have issued unanimous reports. In the 3 years where it was not unanimous, there was only one dissenting vote. In many ways, the evolving challenges and opportunities posed by the relationship with China have united us in our analysis. All of our hearings, testimony, annual reports and research are available at our website www.uscc.gov.

Today's hearing raises the critical issue of how to respond to the China challenge. While China's policies and actions pose the greatest current threat to our competitive posture, other nations are watching America's response to determine whether they should emulate China's actions or whether America will stand tall and defend its interests. The long-term question is whether we will shed an ideological, outdated approach to trade and competition in favor of an approach based on prag-

matism and reality that focuses on our economic, health, food and national security interests.

The China Challenge

There is substantial documentation on the unfair, exclusionary and predatory trade and economic policies that China has used to promote its own interests, at the expense of the U.S. and other countries. China, indeed, has been very public in its plans—ranging from its Long and Medium Plan for Scientific and Technological Development (which included calls for indigenous innovation) to its five-year plans, to the Made in China 2025 Initiative, the Standards 2035 program, and numerous other industrial policy blueprints. Economists, academics and the press have often discounted China’s statements, all-too-often to the detriment of our own national and economic security.

The U.S.-China Economic and Security Review Commission has documented China’s plans, and their impact since China’s entry into the World Trade Organization in 2001. China has identified the industries and sectors it wants to excel in, and often, dominate. China indicated that it would allocate more than \$1.5 trillion to support the goals of its 13th Five Year Plan (2016–2020).

The USTR’s Section 301 “Investigation into China’s Acts, Policies, and Practices Related to Technology Transfer, Intellectual Property, and Innovation” is the most comprehensive government study on those topics done to date. Various estimates over the years have identified hundreds of billions of dollars of lost intellectual property due to China’s legal and illegal policies. As Dennis Blair and Keith Alexander stated in an op-ed for the *New York Times* upon the initiation of the USTR’s investigation, “All together, intellectual-property theft costs America up to \$600 billion a year, the greatest transfer of wealth in history. China accounts for most of that loss.”¹

China’s IP policies have enhanced their economic and military competitiveness and undermined our own. Companies have found their ability to profit from their investments in research and development undermined by the transfer of technology, which is often a requirement based on market access rules and other provisions adopted by the Chinese government. And, coupled with exclusionary as well as preferential policies, many companies have expanded their R&D and production in China, at the cost to our country.

China has identified market-share allocations for key sectors. For example, in robotics, China has indicated that it wants to be 70 percent self-sufficient by 2025 and has invested money in the sector², supported it with preferential policies, identified key foreign companies for acquisition (*e.g.*, Germany’s Kuka) and engaged in other legal and illegal activities to acquire key technologies.

In 5G, a critical communications area, China has a broad array of policies in place to advantage its leading players—most notably, Huawei. China has allocated a minimum of two-thirds of its telecommunications market to domestic companies. Over time, it sought, and won, leadership positions on more subcommittees at the standards-setting International Telecommunication Union than any other nation seeking to ensure that international standards promoted and preferred the equipment and designs of Chinese manufacturers. It has engaged in subsidization, dumping and other policies to spread its technologies across the globe—including as part of its efforts via the Belt and Road Initiative to create a Digital Silk Road.

But, let’s understand, before 5G is even fully realized or deployed at even a fraction of its eventual geographic reach, experts are already talking about 6G. Both of China’s leading companies—Huawei and ZTE—have made public announcements about their work on 6G. We can not afford to be left behind.

As any good soccer player knows, you need to focus not on where the ball is right now, but where it will be as you move down the field and seek to score. China has a long-term strategy and is committed to winning—it’s focusing on where the ball needs to be. We need to have a similar mindset, be just as committed and define and implement an industrial policy to win.

Impact on U.S. Jobs

The debate about the impact of China’s policies and practices on the U.S. continues to be divisive. There are some who believe that China’s willingness to subsidize and dump products into the U.S. with lower consumer costs should be the

¹Dennis C. Blair and Keith Alexander, “China’s Intellectual Property Theft Must Stop,” *New York Times*, August 15, 2017.

²Mercator Institute for China Studies, *Made In China 2025: The making of a high-tech super-power and consequences for industrial countries*, August 12, 2016.

primary measure and, by this measure, our people are better off. While fewer and fewer people subscribe to this view, some still cling to it.

I couldn't disagree more and believe that the wealth of opinion has come to the conclusion that China's predatory and protectionist trade and economic policies undermine U.S. interests. The cost of products cannot be the only measure of economic benefit. The public understands that, while the flat screen television in their living room may be cheaper, that the production jobs to support that product are not here in the U.S. They know, all too well, that globalization has increased the downward pressure on wages and our standard of living. It has contributed to rising income inequality.

And, predatory pricing can lead to loss of capacity with the outsourcing of jobs and offshoring of production. Industry after industry has faced this problem. Steel. Aluminum. Solar cells. Rare earths. Many others.

The Economic Policy Institute estimated that "the growing trade deficit with China eliminated 3.7 million U.S. jobs between 2001 and 2018."³ In their research for "The China Shock" a number of noted economists found that "(a)t the national level, employment has fallen in the U.S. industries more exposed to import competition, as expected, but offsetting employment gains in other industries have yet to materialize."⁴ While classic trade theory would suggest that displaced workers would migrate to other sectors, many of which would be expected to be higher value-added, that has not been the case. China has also targeted those sectors for development as well—putting pressure on a much broader cross-section of our economy than classical theory accounts for.

And, as we have seen, the jobs at stake are not only in the manufacturing sector. China's non-market economic policies have threatened and undermined our agricultural interests as well. Over time, China has used exclusionary and arbitrary policies to limit access to many of our agricultural products. In soybeans, for example, they have managed their purchases for political gain and have also largely refused to allow crushed-soy exports into their country as those are value-added jobs.

In pork, a preferred protein source for the Chinese people, they have limited access to their market. As their level of income rose, hitting a tipping point where protein consumption increased significantly and demand for pork exceeded domestic supply, rather than open their market to U.S. exports broadly, a state-supported company purchased one of our preeminent pork producers—Smithfield Foods. A free-market approach would have produced more general benefits for all U.S. producers, rather than a select producer. In the first year after their purchase of Smithfield, 97 percent of all China's imports were from that company. The percentage has dropped, but the preference is still there. And, the Chinese company that purchased Smithfield also acquired intellectual property in the form of genetic stock and farming techniques—which will advance Chinese domestic production capabilities rather than U.S. jobs and economic interests. Only the swine flu epidemic has mediated those concerns for the moment.

In many other sectors, we see the corrosive impact of CCP policies and practices on U.S. interests that are hollowing out U.S. production and adversely affecting U.S. employment.

Resilience

More than ever, the American people are uniquely focused on our dependence on China for critical supplies and materials. The COVID-19 crisis has put a spotlight on supply chains for medical supplies, medical devices, and Personal Protective Equipment. The outsourcing and offshoring of production and jobs and the decline of productive capacity in that sector has garnered attention on China as a supplier like never before.

The public learned not only about our loss of production capacity, but China's ability to control supplies and use them as foreign policy leverage. The failure to have adequate inspections and limited quality control all became nightly news stories. Masks sold as meeting the N95 standard were often found to be almost ineffective—possibly less effective than simply using a bandana as a face mask.

And, in the early days, as we all know, the offshoring of manufacturing limited our capacity to surge production of ventilators and other critical equipment.

While the COVID-19 crisis brought all of this to the front pages and to the nightly news, the threats to our economic health and security have been building for years. In 2014, the Commission held a hearing entitled "China's Healthcare Sector,

³Rob Scott and Zane Makhiber, Growing China Trade deficit cost 3.7 million American jobs between 2001 and 2018, *Economic Policy Institute*, January 30, 2020.

⁴David H. Autor, David Dorn, and Gordon H. Hanson, the China Shock: Learning from Labor-Market Adjustment to Large Changes in Trade, *MIT Economics*, August 11, 2016.

Drug Safety, and the U.S.-China Trade in Medical Products.” Last July, former Senator Jim Talent and I co-chaired a hearing at the Commission, “Exploring the Growing U.S. Reliance on China’s Biotech and Pharmaceutical Products”. Our work, and the witness testimony we heard, along with staff research, identified broad and deep dependence on China for our medical needs and deep vulnerabilities.

We no longer have the fermentation capacity in the U.S. to make penicillin and are completely dependent on foreign sources. Eighty percent of the active pharmaceutical ingredients (APIs) we use come from abroad, with a substantial portion coming from China. Of the 10 active ingredients in Remdisivir, one of the therapeutics reportedly showing promise for treating COVID-19, 8 come from China.⁵ For many other products, we are partially, or entirely, dependent on China.

As Christopher Priest, the Acting Deputy Assistant Director of the Defense Health Agency told our Commission, “the national security risks of increased Chinese dominance of the global API market cannot be overstated.”⁶

Today, the focus is on medical supplies, but our dependence on China for many products—some of them critical products—is broad and deep.

As you know, China has in many ways cornered the market on rare earth minerals—the input needed for rare earth magnets used across the defense sector and in critical technology products. Years ago, the U.S. mined rare earths in California, but China’s predatory pricing policies contributed to that facility going bankrupt. That occurred after CFIUS approved the sale of Magnequench, a rare earth magnet supplier, to a Chinese entity in 1996. The production equipment acquired in that deal was moved to China in the early 2000s.

China has shown its willingness to weaponize these supply chains, as it threatened to do with Japan because of a dispute in the East China Sea. While that was a decade ago, recent writings show the intent is still there: Research by Horizon Advisory shows a Chinese government funded research institute indicated that, “Amid the heated trade conflict between China and the United States, China will not rule out using rare earth exports as leverage to deal with the situation.”⁷

Mr. Chairman, your home state, along with several other states, has rare earth deposits that could be mined, separated, melted and transformed into magnets. We should not continue to rely on China for these critical minerals.

After Hurricane Sandy, the East Coast found that rebuilding the electric grid, replacing transformers and providing power to many communities was hampered by inadequate supplies of grain oriented electrical steel. A dumping and subsidy cases to address China and other countries unfair trade proved unsuccessful. This Administration initiated a Section 232 investigation related to these products because our electric transmission system is critical to our economy and national security. It’s critical that we ensure that there is the capacity to meet our needs in this sector.

Our nation’s reliance on other products from China continues to grow, reducing our potential resilience. Last year, despite rising trade tensions and the imposition of Section 301 tariffs, the U.S. ran a trade deficit in advanced technology products with China of more than \$100 billion and an overall goods deficit of \$345 billion. As has been seen with 5G, the predatory actions of China’s Huawei have undermined the ability of market-oriented firms to develop the technology to ensure safe sources of supplies. Our dependence on China for telecom products has created dangerous vulnerabilities that our Nation is only now really grappling with.

Reliance on China extends to many other sectors. While work has been done by this Administration and other entities on single sources of supply from China, or dangerous sourcing dependence, Congress should carefully evaluate supply chain risks to determine what the potential impact is on our national and economic security.

U.S. Business Activity in China and Its Security Implications

At the beginning of July, the Commission issued a staff paper entitled “Trends in U.S. Multinational Enterprise Activity in China, 2000–2017.”⁸ Since China’s ac-

⁵Mary Denigan-Macauley, written testimony for U.S. House of Representatives Subcommittee on Oversight and Investigations, Committee on Energy and Commerce, *Hearing on Securing the U.S. Drug Supply Chain: Oversight of FDA’s Foreign Inspections Program*, December 10, 2019, 1.

⁶Christopher Priest, testimony for U.S.-China Economic and Security Review Commission, *Hearing on Exploring the Growing U.S. Reliance on China’s Biotech and Pharmaceutical Products*, July 31, 2019. <https://www.uscc.gov/sites/default/files/Priest%20US-China%20Commission%20Statement.pdf>.

⁷Horizon Advisory, “Absolute Competitive Advantage: China’s Rare Earth Leverage and Strategy Planning,” June 2020.

⁸Kaj Malden and Ann Listerud, “Trends in U.S. Multinational Enterprise Activity in China, 2000–2017,” U.S. China Economic and Security Review Commission, July 1, 2020.

cession to the WTO in 2001, U.S. business operations in China have expanded dramatically. The staff report found that “as U.S. MNE [multinational enterprise] activity in China increasingly focuses on the production of high-end technologies, the risk that U.S. firms are unwittingly enabling China to achieve its industrial policy and military development objectives rises.”⁹

Summarizing the finding of the report:

- *China’s vast consumer market and the Chinese government’s coercive policies have incentivized many U.S. MNEs to move their manufacturing operations to China.* U.S. Department of Commerce Bureau of Economic Activity (BEA) data explored in this report indicates the major destination for goods and services supplied by U.S. MNEs in China is the Chinese market itself. In 2017, U.S. MNE foreign affiliates in China sold 82 percent of the goods and services produced in China directly to Chinese customers. At the same time, trade barriers, including localization requirements and export restrictions on key raw materials, have further induced production within China. Sales to Chinese consumers may also constitute sales of intermediate goods and services which might be used in final goods for export to the United States.
- *U.S. MNEs employ more people in China than in any other country outside of the United States, primarily in the assembly of computers and electronic products.* As of 2017, U.S. MNEs employed 1.7 million people in China, a 574.6 percent increase from the 252,000 people employed in 2000. China ranks as the top destination for all U.S. MNE employment across all manufacturing categories with the exception of food and transportation equipment. Outside of manufacturing, U.S. MNE employment in China is second highest in accommodations and food services, likely due to growing disposable income levels of China’s rising middle class, who purchase more services.
- *China is the fourth-largest destination for U.S. MNE research and development (R&D) expenditure and increasingly competes with advanced economies in serving as a key research hub for U.S. MNEs.* The growth of U.S. MNE R&D expenditure in China is also comparatively accelerated, averaging 13.6 percent year-on-year since 2003 compared with 7.1 percent for all U.S. MNE foreign affiliates in the same period. This expenditure is highest in manufacturing, particularly in the production of computers and electronic products, but has diversified over time. For example, R&D expenditure on the improved manufacture of chemicals, including pharmaceuticals, surged nearly 30-fold from a low base of \$13 million in 2000 to \$392 million in 2017.
- *U.S. MNE capital expenditure in China has focused on the creation of production sites for technology products.* This development is aided by the Chinese government’s extensive policy support to develop China into a hub for electronics production, address gaps in the domestic production of technology goods, and maximize access to the technical expertise of multinational firms. For example, U.S. MNE capital expenditure in China for the production of semiconductors, a strategically important electronic component, accounted for nearly a third of all U.S. MNE global capital expenditure on semiconductor manufacturing assets in 2017.
- *China has grown from the 20th-highest source of U.S. MNE affiliate value added in 2000 (\$5.5 billion) to the fifth highest in 2017 (\$71.5 billion), driven primarily by the manufacture of computers and electronic products as well as chemicals.* The surge is especially notable in semiconductors and other electronic components, which accounted for \$5.6 billion of total manufacturing value added in 2017, up 250 percent from \$1.6 billion in 2009. Separately, pharmaceutical manufacturing serves as the largest chemical sector in terms of value added, accounting for \$2.6 billion in 2017.

It is important to recognize that the staff report was prepared based on the Department of Commerce’s annual Multinational Enterprise survey. In my view, the findings understate the impact of U.S. multinational outsourcing and offshoring to China as well as business relationships with Chinese entities. There are many questions left unanswered by the Commerce data. Has outsourcing displaced U.S. exports to China and, if so, by how much? What are the overall sourcing patterns of U.S. MNEs in China? Are the products they sell in China and elsewhere products that could have been produced in the United States, but were shifted to China as a result of policy incentives and direction? That’s just the tip of the iceberg.

⁹ Ibid, at 3.

For example, while the MNE survey indicates that firms sold 82 percent of their products to Chinese customers, that does not tell the entire story. Many of those sales are of products that may simply be inputs into goods sold to the U.S. As Mary Lovely testified before the Commission, 46 percent of China's overall exports emanate from foreign-invested enterprises with 60 percent of China's exports to the U.S. coming from such enterprises.¹⁰ Foreign firms, all-too-often, use China simply as an export platform. Is it really in our interest to see more U.S. firms move to China?

In aerospace one of the two critical limitations on Chinese state-owned aerospace companies' ability to field competitive commercial aircraft has been substandard avionics and limitations on engine capabilities. A number of years ago, General Electric was allowed to form a joint venture with China's AVIC to share avionics technology. In my view, that was a blow to our long-term competitiveness as it has assisted China in its development of commercial aircraft which, when normal economic conditions return, may enable Chinese-owned firms to win more aircraft sales. In addition, the avionics technology can potentially assist China in the development of its military capabilities.

In auto production, U.S. firms have, through joint ventures, provided enormous technological and production boosts to Chinese firms. This was a requirement for market access imposed by China but the advantages provided to indigenous Chinese firms cannot be discounted. The benefits of this relate not only to direct production and development, but in assisting local parts suppliers to become world-class competitors. Before the outbreak of the pandemic, we saw increased plans to ship Chinese-produced vehicles into the U.S. market.

In terms of market access for U.S. financial services firms, a key component of the recently signed Phase One China trade deal, U.S. firms will be assisting China in accessing capital from world markets—a critical issue as China's rising debt levels demand new sources of funds. In combination with China's access to world capital markets—and U.S. markets in particular—this advances China's interests while potentially jeopardizing the financial security and interests of our people.

For example, MSCI, a financial firm that develops investment indexes, expanded its emerging market index to cover equities issued in China and increased the weighting of those securities in that fund. Included in the index are Chinese firms that have been placed on the U.S. "Entities List" as well as firms that are engaged in Chinese "military-civilian fusion" activities. As the Senators know, there has been concern about the use of the MSCI index in the Thrift Savings Plan's "I fund" which is an investment vehicle for Federal employees and military servicemembers. Thus, their retirement funds could be contributing to the development and success of Chinese firms directly challenging our own security interests. Between the MSCI equity and bond indices, the opening to Chinese firms will result in hundreds of billions of foreign funds supporting that country's development.

And, as we all know, larger investments by U.S. firms in China make them susceptible to pressure from the Chinese Communist Party (CCP) to engage on policy matters here in Washington. China has made clear that it will use every tool in its toolbox to advance its interests and can use exclusionary and preferential policies to get its way. China, just last week, indicated that it may sanction Ericsson and Nokia as many countries seek to protect their security interests by limiting Huawei products in their communications networks. Wall Street firms are not shy about seeking to influence policymakers as they seek trading and deal making fees. And, China has begun to roll-out its Corporate Social Credit Score system which may advantage or disadvantage firms based on their actions in support of, our counter to, CCP interests.

In many of the sectors where U.S. companies have invested and operate in China, they have helped promote China's rise. Of course, we all support the betterment of the Chinese people and the fact that hundreds of millions have risen out of poverty is a tremendous success. But, increasingly, activities by U.S. firms in China pose risks to our economic and national security interests, and we must carefully evaluate what policy course must be charted for the future.

Undermining Private Industry in the U.S.

There is very little work that has been done regarding the activities and operations of Chinese companies operating in our market. While the investment by Chinese companies in our market has hit some speedbumps in the last two and a half years, the presence of these companies in our market is extensive. And, while Rho-

¹⁰Mary E. Lovely, testimony for U.S.-China Economic and Security Review Commission, *Hearing on Risks, Rewards, and Results: U.S. Companies in China and Chinese Companies in the United States*, February 28, 2019. https://www.uscc.gov/sites/default/files/M%20Lovely_Testimony%20for%20the%20USCC%20revised.pdf.

dium, a leading investment tracking firm, has indicated that the amount of new Chinese foreign direct investment (FDI) in the U.S. has dropped significantly since its high of \$45.6 billion in 2016, investments are still occurring. Indeed, at \$444 million, investments in biotech by Chinese firms were significant last year. Furthermore, Chinese companies are using U.S. markets to raise capital in significant amounts. The Commission staff prepared an inventory of listings by Chinese firms on our three major exchanges which totaled more than \$1.2 trillion in capital raised last year.¹¹

Investments by Chinese companies in the U.S. market, the capital they raise, and the operations they maintain, need greater scrutiny. The Commission has tried to assess this issue, with limited results. There are few sources of comprehensive case studies examining the activities of Chinese firms in our market. Do they operate based on market principles? What are their key objectives? What are their employment practices? Are they profitable? These and other issues are of critical interest.

The last time I checked data from the Internal Revenue Services Statistics of Income publication for foreign controlled corporations, data indicated that Chinese-controlled entities operating here in the U.S. filed 7,360 returns. With total receipts of more than \$49 billion, their total income tax after credits was only \$227 million. That, to me, deserves further examination not only to understand and identify the more than 7,000 entities filing returns, but to determine how they operate. In an earlier period, Congress passed legislation to address transfer pricing schemes where foreign input costs were inflated to reduce the tax payments here in our market. I believe scrutiny on Chinese-controlled entities operating here is also appropriate.

During a hearing at the Commission we questioned the potential negative consequences of Chinese state-owned, state-controlled or state-directed entities operating here after potentially receiving support from the government in the form of loan subsidies, no-cost capital or subsidized inputs. We heard from witnesses that there is no provision in U.S. competition law that would allow action by a U.S. competitor against what I would view as unfair competition.

As an example, take a Chinese state-owned steel pipe firm that is receiving low-cost, or no cost-financing and, potentially, getting subsidized inputs in the form of what is known as “green pipe” (*i.e.*, pipe that has to only undergo minor finishing operations here). The parent company in China could sell that pipe, which is not directly entering U.S. commerce, at a subsidized price. Coupled with not having to go to the capital markets, their cost of capital would also be dramatically lower. The result? They could underprice any of our domestic firms, potentially putting them out of business.

U.S. competition laws require that, to be actionable, a company would have to seek “recoupment.” As I understand that, it means that they would have to have a plan to raise prices later to “recoup” lost profits for it to violate our laws. If they never planned to recoup lost profits because they were acting on behalf of the CCP, their domestic competitor would have no recourse.

CRRC, the State-Owned Chinese rail company has been winning subway contracts in major cities in the U.S. by dramatically underbidding their competitors. This is supported by massive state subsidies and a plan to dominate the world’s rail systems. CRRC reportedly already has 83 percent of world’s rail market. This is anticompetitive and it is dangerous.¹²

The impact of the CCP’s programs is broad and deep. They use an “all of the above” approach to advancing their interests. For example, work by private sector forensic accounting experts¹³ uncovered acts of espionage to undermine the market value of firms which were later acquisition targets for Chinese firms. In other words, they undermined a company’s value to put it into a “distress” situation, to reduce its attractiveness to other companies and to make it cheaper for them to acquire.

Chinese state directed and controlled entities have engaged in massive cyber incursions in the U.S. The first major indictment on this was brought forward by David Hickton, U.S. Attorney for the Western District of Pennsylvania, in 2014 alleging that five People’s Liberation Army hackers had accessed the computer networks of the United Steelworkers union and five major U.S. firms to obtain trade secrets and other information. The next year, President Obama reached an agree-

¹¹A list of the companies is available at <https://www.uscc.gov/chinese-companies-listed-major-us-stock-exchanges>

¹²John Adams, “Stop China’s Infiltration of U.S. Railroads,” *Defense One*, November 26, 2019.

¹³Jeffrey Z. Johnson, testimony for the U.S.-China Economic and Security Review Commission, *Hearing on Chinese Investment in the United States: Impacts and Issues for Policy Makers*, January 26, 2017.

ment with General Secretary Xi where China agreed that they would not engage in hacking for economic gain. The premise of the agreement was faulty from the start as China treats economic and national security as inextricably intertwined: In short, all hacking was for national security reasons and therefore, not covered by the agreement.

Massive hacking continued with incalculable harm. Indeed, press reports indicate that China, as well as Russia, have been trying to hack into our major medical firms to obtain vaccine information. As former FBI Director James Comey said, “There are two kinds of big companies in the United States. There are those who’ve been hacked by the Chinese, and those who don’t know they’ve been hacked by the Chinese.”¹⁴ The current FBI Director, Christopher Wray, recently said “The greatest long-term threat to our Nation’s information and intellectual property and our economic vitality is the counterintelligence and economic espionage threats from China . . . It’s a threat to our economic security and, by extension, to our national security.”¹⁵

In the area of medicine, multiple hacks attributed to actors in China, have obtained the longitudinal health data of U.S. citizens. While today’s medicines are largely composed of APIs and chemical compounds, tomorrow’s medicines are likely to be biosynthetics. With the massive amount of data that Chinese entities collect—legally and illegally—they have the opportunity to develop new drugs and biosynthetics at a faster pace because of “big data.” Industries that fall under the umbrella of biotechnology are worth hundreds of billions of dollars annually, and their development will have a profound impact on U.S. economy and national security. There is also the potential to enable personalized medicine, to produce vaccines faster and more effectively and develop other products which have enormous national security implications. Earlier this year, the Theodore Roosevelt aircraft carrier was sidelined because of COVID-19. The implications are endless.

Chinese-directed researchers are aggressively working to obtain America’s secrets. Through China’s Thousand Talents Program—with bounties of \$150,000 or more—China’s government seeks to obtain the support of some of our best researchers. Chinese-affiliated venture capital funds—more than 1,000 according to some estimates—seek to invest in, and obtain, technology and trade secrets to support the CCP’s industrial policies.

In many other areas the Chinese government and the CCP are aggressively pursuing opportunities to advance their interests, often at the cost to our own national and economic security.

Recommendations

The policies of the Chinese Communist Party and the actions of their government have already triggered a reaction by the U.S. While the honeymoon period after China’s entry into the World Trade Organization lasted too long, and the period of engagement and dialogue yielded too few results, policy makers have identified many actions that will make a difference. Among these are provisions advanced by Congress to tighten up the underlying authority for the Committee on Foreign Investment in the U.S. (CFIUS) and actions to limit the impact of China’s major telecommunications firms—ZTE and Huawei—to supply our critical telecommunications systems. Other provisions are under consideration as a vast array of legislative proposals have been introduced in both Houses and the National Defense Authorization Act for FY 2021 includes additional provisions.

But the challenges posed by China’s policies and practices are broad and deep and countering their negative impact on our interests will require concerted action. Action is needed not only in the economic policy realm, but on the diplomatic, human rights, health policy, military and other fronts. Let me, however, offer several recommendations for the Subcommittee’s consideration. First, I will identify some of the recommendations of the Commission in our last two annual reports. Second, I will offer several of my own recommendations for your consideration. While I would be happy to discuss recommendations and issues relating to the pharmaceutical and medical supply chain issue, a topic the Commission has addressed, I have not included those recommendations here.

¹⁴Maria Tadeo, “FBI’s James Comey accuses China of hacking into every major American company,” *The Independent*, October 6, 2014.

¹⁵Christopher Wray, Director, Federal Bureau of Investigation, “The Threat Posed by the Chinese Government and the Chinese Communist Party to the Economic and National Security of the United States,” remarks as delivered, Hudson Institute, July 7, 2020.

COMMISSION RECOMMENDATIONS

Congress enact legislation to preclude Chinese companies from issuing securities on U.S. stock exchanges if:

- The Public Company Accounting Oversight Board is denied timely access to the audit work papers relating to the company's operations in China;
- The company disclosure procedures are not consistent with best practices on U.S. and European exchanges;
- The company utilizes a variable interest entity (VIE) structure;
- The company does not comply with Regulation Fair Disclosure, which requires material information to be released to all investors at the same time.

Congress enact legislation requiring the following information to be disclosed in all issuer initial public offering prospectuses and annual reports as material information to U.S. investors:

- Financial support provided by the Chinese government including: direct subsidies, grants, loans, below-market loans, loan guarantees, tax concessions, government procurement policies, and other forms of government support.
- Conditions under which that support is provided, including but not limited to: export performance, input purchases manufactured locally from specific producers or using local intellectual property, or the assignment of Chinese Communist Party (CCP) or government personnel in corporate positions.
- CCP committees established within any company, including: the establishment of a company Party committee, the standing of that Party committee within the company, which corporate personnel form that committee, and what role those personnel play.
- Current company officers and directors of Chinese companies and U.S. subsidiaries or joint ventures in China who currently hold or have formerly held positions as CCP officials and/or Chinese government officials (central and local), including the position and location.

Congress direct the U.S. Department of Justice to reestablish a higher education advisory board under the Federal Bureau of Investigation. In concert with the U.S. Department of Commerce's Bureau of Industry and Security, U.S. Department of Homeland Security, and U.S. Department of State, the higher education advisory board would convene semiannual meetings between university representatives and relevant Federal agencies to review the adequacy of protections for sensitive technologies and research, identify patterns and early warning signs in academic espionage, assess training needs for university faculty and staff to comply with export controls and prevent unauthorized transfer of information, and share other areas of concern in protecting national security interests related to academic research.

Congress direct the U.S. Government Accountability Office to conduct an assessment on the risks posed by Beijing's efforts to co-opt foreign researchers or students at U.S. universities to unlawfully appropriate research and other knowledge for the benefit of the government, companies, or interests of the People's Republic of China. This report should:

- Include the number of foreign students and researchers from China studying in science, technology, engineering, and mathematics fields; past and current affiliations; primary areas of research; duration of stay in the United States; and subsequent employment;
- Identify whether federally funded university research related to emerging technologies may have been unlawfully appropriated by individuals acting on behalf of Chinese entities; and
- Evaluate the efficacy and ability of the U.S. Department of State's visa screening mechanism to mitigate the risk of inappropriate technology transfer to China, including but not limited to: assessing the ability of that process to identify students, researchers, and research entities, through a visa disclosure requirement, that are receiving funding from the government of China or an intermediary entity acting in support of China's government.

Congress amend Internal Revenue Code Section 41 to extend the research and development tax credit to initial stages of deployment for new products, processes, computer software, techniques, formulae, or inventions that increase the production of final and intermediary goods manufactured primarily in the United States. The tax credit should also extend to precompetitive commercial development of basic and applied research performed in the United States, particularly in industrial sectors

where the People's Republic of China threatens the technological leadership of the United States.

Congress direct the U.S. Geological Survey, in coordination with the U.S. Department of Energy, U.S. Department of Commerce, U.S. Department of the Interior, and U.S. International Trade Commission to develop and maintain a risk assessment framework that identifies materials used in manufacturing industries critical to both national security and commercial vitality. Such a framework should provide an early warning mechanism for any threats to the U.S. supply of these critical materials, including an increasing concentration of extraction and processing by another country or entity and acquisition of significant mining and processing facilities; increasing export restrictions by another country; large gaps between domestic prices for these materials in another country versus prices on international markets; sharp increases or volatility in price; and substantial control in supply of minerals used within the same industry or related minerals that serve as substitutes by another country.

Congress direct the National Science Foundation, in coordination with other agencies, to conduct a study on the impact of the activities of Chinese government, state-sponsored organizations, or entities affiliated or supported by the state in international bodies engaged in developing and setting standards for emerging technologies. The study should examine whether standards are being designed to promote Chinese government interests to the exclusion of other participants.

Congress direct the Government Accountability Office to conduct an assessment of U.S.-China collaborative initiatives in technical cooperation. This assessment should describe the nature of collaboration, including funding, participation, and reporting on the outcomes; detail the licensing and regulatory regime under which the initiatives occur; consider whether the intellectual property rights of U.S. researchers and companies are being adequately protected; examine whether Chinese state-owned enterprises or the military are benefitting from U.S. taxpayer-funded research; investigate if any Chinese researchers participating in the collaboration have ties to the Chinese government or military; investigate if any U.S. companies, universities, or labs participating in U.S. government-led collaboration with China have been subject to cyber penetration originating in China; and evaluate the benefits of this collaboration for the United States. Further, this assessment should examine redundancies, if any, among various U.S.-China government-led collaborative programs and make suggestions for improving collaboration.

ADDITIONAL PROPOSALS

Automatic trade cases. While this and the past Administration have initiated action on illegal trade policies, a significant enforcement burden still falls on private parties. Existing trade law is expensive to access and time consuming to pursue. Relief, when granted, is only prospective in nature allowing illegal trade practices to inflict considerable harm. A more automatic approach to trade complaints—primarily antidumping and countervailing duty cases—can be data driven and provide more timely and effective relief and create some “automaticity” in the process. There is substantial trade data which, coupled with data from other government sources, could identify increasing imports, looking at per-unit pricing and domestic demand. Where imports are increasing, prices are dropping and domestic demand is constant, trade officials could use that as an early warning of unfair trade and engage in additional review. Business leaders, and the employees, should not have to be significantly injured before market forces are restored.

Review and Reform of Competition Laws: As noted earlier, the non-market actions of certain Chinese state-owned, state-supported or state-directed companies operating in the U.S. market could inflict considerable harm without domestic firms having an effective tool to respond. Coupled with the fact that the authority for CFIUS is limited to acquisitions of existing U.S. firms, rather than establishment of new firms, this problem is expected to grow in intensity, should current trade tensions diminish. Domestic firms should not have to compete here, or internationally, with countries masquerading as commercial firms.

Net economic Benefit Test: Economic and national security interests are inextricably intertwined. While the Foreign Investment Risk Review Modernization Act of 2018 (FIRRMA) strengthened and expanded the authority for CFIUS additional authority should be considered to include a net economic benefit test such as Canada and Australia have in their laws. The interpretation of the term “national security” can be too narrowly defined so as to allow for certain transactions to proceed although the underlying corrosive impact could be considerable.

Tax Attributes: As noted, there are more than 7,000 Chinese-controlled entities filing tax returns in the U.S. Understanding the nature of those businesses and their

tax attributes is an appropriate area for examination by the Internal Revenue Service. There is substantial opportunity to mask the true economic returns and resulting tax liabilities for companies where intra-company transfers occur.

Conclusion

America was faced with similar challenges in the 1980s in terms of competition with Japan, although the threats from, and impact of, that country's policies at that time pale in comparison to the China challenge today. I was deeply involved in that debate as a staffer for former Democratic Leader Richard Gephardt. Remember that Japan's exports of automobiles,—supported by a sanctuary market and industrial policies, were a major threat to our Big Three auto companies. In semiconductors—an industry where the U.S. had been a leader—Japan was threatening our lead. Other sectors were challenged as well.

Bipartisan calls for action helped invigorate our approach to competition. I was one of the lead House staffers helping to put together the 1988 Omnibus Foreign Trade and Competitiveness Act which cobbled together discreet, but vitally important provisions from a variety of committees, to address the problems our country faced. The original bill, H.R. 3, was introduced by my former boss. This Committee was one of the key Senate Committees involved in the legislation.

That legislation enhanced the authority for the Committee on Foreign Investment in the U.S. (CFIUS). It included a number of other provisions including: the creation of what was known as "Super 301" to help prioritize action on key foreign unfair trade barriers; it dealt with export promotion; national security impacts from trade; currency manipulation; expanded authority for the National Institute of Standards and Technology and created an Advanced Technology Program; reformed the Trade Adjustment Assistance program; expanded STEM education and language literacy and included a variety of other policy initiatives.

During this period, President Reagan initiated trade negotiations with Japan to address their predatory and protectionist policies across a range of industries. One of those negotiations was on the so-called MOSS talks, or "market-oriented sector-selective" negotiations. As part of negotiations on semiconductors, a market-share target was used as a basic metric to gauge the openness of Japan's market and whether "success" was being achieved.

The U.S. government also led an effort through a public-private partnership known as Sematech to revitalize the domestic semiconductor industry and invest in its future. That effort was a key step in sending signals to the market, and supporting the industry, that America wanted to ensure that an industry it led did not vanish.

President Reagan, a conservative, joined with liberal Democrats in fostering many of those policies. The lessons of that time can help guide some of our thinking today, including the focus on bipartisanship and Congress playing a leading role in updating our laws and ensuring the resources needed to compete are available. In addition to the recommendations I have outlined, and the work of this Subcommittee, a broader engagement by Congress and a comprehensive set of provisions to promote production, employment and innovation is needed.

I have tremendous faith in America's ability to restore its economic footing, to meet the China challenge, and to prosper. But, that requires, as your hearing today addresses, a recognition of what the problems are and what are some of the solutions that should be considered.

I look forward to your questions and working with you and your staff in the coming days.

Senator SULLIVAN. Thank you, Mr. Wessel.
I'd like to now ask Mr. Doshi for his opening statement.

**STATEMENT OF DR. RUSH DOSHI, DIRECTOR,
BROOKINGS INSTITUTION CHINA STRATEGY INITIATIVE;
FELLOW, YALE LAW SCHOOL CHINA CENTER**

Dr. DOSHI. Thank you very much, Chairman Sullivan, Ranking Member Markey, Distinguished Members of the Committee.

Again, thank you for the privilege of being able to testify today at this important hearing on the China Challenge and efforts to build U.S. resiliency and competitiveness.

As requested, I'll be focusing my remarks on three subjects. First, Beijing's ambitions for global technology leadership; second,

Beijing's current activities and the challenges they pose to our supply chains and our global technology leadership; and third, policy recommendations to bolster our competitiveness and resilience, what some call super power marathon with China.

So, first, I'll talk about China's technology ambitions. Beijing is pursuing a robust state-back effort to displace the United States from global technology leadership. China's leaders believe we're in the middle of the fourth industrial revolution made up of artificial intelligence, quantum computing, 5G, applied technology, et cetera, and it wants to lead that revolution. That desire is not driven purely by commercial motivations. It's also driven by geopolitical ones.

According to party texts, Beijing argues that the last three industrial revolutions caused a divergence that allowed some countries to become geopolitical leaders and left others as geopolitical laggards. Their overview of that history is worth surveying.

It argues that the first industrial revolution brought steam power and coal and helped build the British Empire. The second industrial revolution, which brought electrification, made the United States a leading state, and the third industrial revolution which brought information technology and kept the U.S. a leading state.

Beijing missed out on these revolutions but now it hopes to ride the fourth industrial revolution to global leadership. Top party-connected scholars in China almost all agree that technology is the main battlefield between the U.S. and China.

That leads to a second subject. What is China doing to seize global technology leadership? Here, there are a few broad activities.

First, China's R&D spending already in some cases is equal to ours, if not greater, even though China has a smaller economy. For example, in the technology central to the fourth industrial revolution, China may be outspending us. It spends 10 times what we do on computing in one clear case.

Second, Beijing believes its industrial policies give it an advantage. Beijing has a \$1.4 trillion plan to build 5G across China. It launched a Made in China 2025 Initiative to gain leadership in 10 sectors of power in the industrial revolution.

They have spent multibillions of dollars to acquire foreign technology and, of course, it has a hundred scientific technology plants with varying degrees of success.

They have engaged in predatory behavior in state-backed takeovers and, of course, technology transfer, all to close the gap with the United States.

Chinese sources agree—rather, they argue that although the U.S. is better at innovation, we cannot bring our products to market without first-class factories, which gives China an opportunity to use reverse engineering and force technology transfer to catch up and surpass the United States.

Beijing understands that post-COVID, the free world is trying to diversify supply chains away from China. For that very reason, General Secretary Xi Jinping has declared that protecting China's supply chains is now one of the country's top national priorities and so far, the European and American Chambers of Commerce in China have indicated that the vast majority of their members are not yet considering leaving the country.

It's not all about cost. China is the world's factory and center of supply chains and it keeps those companies stocked and in many cases adversely affecting our security and our technological leadership.

That leads to a third and final broad question. What can we do about this? I have much more in my submitted testimony, but I'll say here that I do not believe that China's advantages are insurmountable.

As a bipartisan committee of people thinking about how to compete and have resilience and the ideas I'll offer come from some of those individuals.

First, we need information on our supply chains. We need to know where we're vulnerable with Beijing and that requires some kind of entity that can audit our supply chains, stress test them, and build institutionalized knowledge about them to perhaps assist in our reporting requirements.

Second, we need better coordination. Some of this is at the strategy level and we have a strategy document. We don't have a national strategy yet for competitiveness and resilience. Some of us at the agency level, as well, and in fact, Taiwan is inspiring this regard.

We're the only government that's been successful in penalizing reshoring from China over 33 billion since 2019 and one way they did it was to have one office serves as a one-stop shop for all businesses thinking about moving back to Taiwan.

Maybe we should consider a corporate structure. Congress could consider pushing our corporations to look beyond quarterly earnings cycles, for example, with tax policies, encourage shareholders to hold equity positions longer, and we need pro-competition approaches, as well.

On the innovation frontier, companies are making big speculative bets on the future. If we only have one company in the high-tech industry and it makes the wrong bet on aviation or semi-conductors, we're out of luck. If we have multiple companies making multiple bets, then we've got multiple options and that's an advantage that we can uniquely have relative to china's more consolidated industrial policy approach.

Finally, we should reinvest in America's strengths, fixing our immigration system and, of course, Federal spending.

In closing, our super power marathon with China is as much about what we do at home as it is about what we do abroad. This committee will, of course, be the center of those efforts.

Thank you very much for your time and your consideration. I look forward to your questions.

[The prepared statement of Dr. Doshi follows:]

PREPARED STATEMENT OF DR. RUSH DOSHI, DIRECTOR, BROOKINGS INSTITUTION
CHINA STRATEGY INITIATIVE; FELLOW, YALE LAW SCHOOL CHINA CENTER

THE UNITED STATES, CHINA, AND THE CONTEST FOR
THE FOURTH INDUSTRIAL REVOLUTION¹

Introduction

Chairman Sullivan, Ranking Member Markey, distinguished members of the Committee, thank you very much for the opportunity to testify at today’s hearing on the China challenge and efforts to build U.S. resiliency and competitiveness. As requested, I will be focusing my remarks on three subjects. First, I will discuss Beijing’s challenge to U.S. global technology leadership and its ambitions to dominate what it often refers to as the “Fourth Industrial Revolution.” Second, I will discuss some of the challenges the United States faces in reshoring or diversifying supply chains presently based in China as well as in sustaining its technology leadership. Finally, I will offer recommendations for U.S. policy focusing on a few broad categories of effort: (1) information gathering; (2) government coordination; (3) immigration and basic science; (4) reforms of corporate and financial incentives; and (5) coordination with likeminded stakeholders. It is hoped that these policies might build long-term U.S. resilience and competitiveness as we enter what some call a “superpower marathon” with China.²

I. China’s Challenge to U.S. Global Technology Leadership

It is increasingly clear to most observers that China is pursuing a robust, state-backed effort to displace the United States from global technology leadership. This effort is not driven entirely by commercial considerations but geopolitical ones as well. Beijing believes that the competition over technology is about more than whose companies will dominate particular markets. It is also about which country will be best positioned to lead the world.

China’s leaders have often seen technology and economic exchange through a political lens, particularly as a way to create or avoid dependency, strengthen China’s “comprehensive power,” and build order. This perspective appears to be rooted in the Party’s Leninist and mercantilist traditions as well as in its nationalist history. China’s “century of humiliation,” which stretches from the Opium Wars to the founding of the People’s Republic of China in 1949, is seen as a product of the country’s failure to achieve “wealth and power” [Chinese] relative to the industrialized West and Japan.³ Accordingly, technological advancement has long been seen as a means to achieving “wealth and power,” whether during China’s pursuit of strategic weapons during Mao Zedong’s leadership or its push to achieve what his successor Deng Xiaoping labeled as the “fourth modernization” of science and technology progress—both of which were self-consciously styled as efforts to boost China’s power. Now, as China perceives a new period of technological change, the Chinese Communist Party’s writings suggest geopolitics is again at the forefront.

China’s Ambitions—Seizing the Fourth Industrial Revolution

The Chinese Communist Party believes that the world has entered a period of “great changes unseen in a century.” At the core of these changes is a shift in the balance of power between the United States and China, and one key driver of that change is the onset of a new round of technological innovation which Xi Jinping and others have sometimes referred to as the “Fourth Industrial Revolution” [Chinese].

Although the idea of a “Fourth Industrial Revolution” initially emerged from the World Economic Forum in 2015, the concept has been embraced by the Chinese Communist Party. As Xi Jinping argued in a 2018 speech: “From the mechanization of the first industrial revolution in the 18th century, to the electrification of the second industrial revolution in the 19th century, to the informationization of the third industrial revolution in the 20th century,” each round of “disruptive technological innovation” has shaped history.⁴

¹ This testimony draws from the author’s forthcoming book. See Rush Doshi, *The Long Game: China’s Grand Strategy to Displace American Order* (Oxford: Oxford University Press, 2021).

² Michael Brown, Eric Cheuning, and Pavneet Singh, “Preparing the United States for the Superpower Marathon with China,” The Brookings Institution, April 2020, https://www.brookings.edu/wp-content/uploads/2020/04/FP_20200427_superpower_marathon_brown_cheuning_singh.pdf

³ Orville Schell and John Delury, *Wealth and Power: China’s Long March to the Twenty-First Century* (New York: Random House, 2013).

⁴ “What is the Fourth Industrial Revolution? Xi Jinping described the blueprint like this! [Chinese].” *Qiushi* [Chinese], July 27, 2018. http://www.qstheory.cn/zhuanyu/2018-07/27/c_1123186013.htm.

China's leaders believe the next decade will largely determine who leads the next industrial revolution. "The next ten years will be a key decade," Xi argued, "a new round of technological revolution and industrial change—artificial intelligence, big data, quantum information, and biotechnology—are gathering strength." They would bring "earth-shaking changes" while offering an "important opportunity to promote leapfrog development," allowing China to bypass legacy systems and overtake competitors.⁵

China's leaders have long employed the phrase "catch up and surpass" [Chinese] to describe their technological ambitions, with the United States and West seen as the critical benchmark. But revolutionary technological changes, in the eyes of some Chinese commentators, now make this lofty goal actually achievable.⁶ The Fourth Industrial revolution could create the kind of "great divergence" that accompanied past industrial revolutions, where some countries and early adopters leapt ahead of rival competitors with historical implications for global politics. And while Party officials are generally guarded in describing China's ambitions in this fashion, many commentaries and think tank pieces seem to suggest that surpassing the United States in high technology would end its era of global leadership, and presumably, usher in one of Chinese leadership.

A wide range of Chinese commentators all agree that technology is increasingly at the center of U.S.-China competition. "In the next decade. . . the competition for the fourth industrial revolution will begin between China and the United States," writes Jin Canrong, a well-known international relations professor and a dean at Renmin University.⁷ "Scientific and technological capabilities have become an important indicator of a country's comprehensive strength, and it has also become the main battlefield for great power competition," argues Zhu Feng, another well-known scholar and professor at Nanjing University.⁸ And countless other prominent scholars express similar sentiments.

A typical discourse on the geopolitical stakes of technology competition comes from an authoritative and apparently pseudonymous commentary posted on the website of the Central Party School journal *Study Times* [Chinese] roughly two months after Xi's 2018 address on the Fourth Industrial Revolution.⁹ "Britain seized the opportunity of the first industrial revolution" which provided it an empire; afterwards, when the second industrial revolution arrived, "the United States seized the dominant power of advanced productivity from Great Britain and jumped into position as the world's number one industrial power, laying a solid foundation for establishing global hegemony." Then, "the third industrial revolution originated in the United States," and the United States seized it and boosted its "comprehensive strength," providing the foundation for American hegemony. China now sees an opportunity to wield what it believes is a superior system to follow in the footsteps of Britain and the United States, seize a new industrial revolution, and become the world's leading state.

China's Advantages—What China Thinks it Does Better than the United States

China believes it is well-positioned to outcompete the United States in the competition for the Fourth Industrial Revolution and that it has four main advantages: (1) heavy investment in R&D; (2) superior institutions and industrial policies supporting China's ambitions; (3) manufacturing prowess and centrality to global supply chains; and (4) a more robust operation to set the global technology standards that could determine the future of key industries.

First, China has learned from U.S. history in crafting its own approach to basic science research. Beijing recognizes, as the United States once did, that such research cannot be supported entirely by the market and the private sector and instead must be supported by the public. China's investments have been enormous. The National Science Foundation estimates that China's total R&D spending is

⁵"Xi Jinping: Follow the trend of the times and achieve common development [Chinese]." *People's Daily* [Chinese], July 26, 2018. <http://cpc.people.com.cn/n1/2018/0726/c64094-30170246.html>.

⁶Julian Baird Gewirtz, "China's Long March to Technological Supremacy," *Foreign Affairs*, August 27, 2019, <https://www.foreignaffairs.com/articles/china/2019-08-27/chinas-long-march-technological-supremacy>.

⁷Jin Canrong [Chinese]. "Jin Canrong: The Fourth Industrial Revolution is mainly a competition between the U.S. and China, and China has a greater chance of winning [Chinese]." *Guancha* [Chinese], July 29, 2019. https://www.guancha.cn/JinCanRong/2019_07_29_511347_s.shtml.

⁸Zhu Feng [Chinese]. "A Summary of Recent Academic Research on 'Great Changes Unseen in a Century' [Chinese]." *People's Forum, Academic Frontier* [Chinese], no. 7 (2019).

⁹Li Jie [Chinese]. "Deeply understand and grasp the world's 'great changes unseen in a century' [Chinese]." *Qiushi* [Chinese], September 3, 2018. http://www.qstheory.cn/llwx/2018-09/03/c_1123369881.htm.

roughly equivalent to U.S. spending even though China’s economy is smaller.¹⁰ By some estimates, China’s government-funded R&D also already exceeds U.S. Federal R&D spending. And in the technologies central to the Fourth Industrial Revolution, the differences are significant. China spends roughly \$2.5 billion annually, a modest sum that is nonetheless estimated to be more than ten times what the U.S. spends in a sector with critical economic and strategic potential.¹¹ In addition to that annual spending, Beijing also plans to spend some \$10 billion to build the National Laboratory for Quantum Information Sciences.¹² Similarly, in artificial intelligence, China spends at least as much as the United States and likely more, according to estimates from Georgetown’s Center for Security and Emerging Technology.¹³

Second, China believes its institutions are better designed to mobilize the state, society, and market to wield industrial policy to achieve the country’s technological ambitions. For example, the *Study Times* commentary cited previously noted that institutions are key to seizing technological leadership, which in turn buttresses hegemonic ambitions—this is why, it argued, Britain replaced Spain, the United States replaced Britain, and why China might supplant the United States. The commentary followed countless similar commentaries in China arguing that the polarized U.S. political system was underperforming relative to China’s system.¹⁴ As a result, it argued, “the emergence of a new round of scientific and technological revolution and industrial transformation is conducive to China’s institutional advantages and to achieving ‘overtaking by curve,’” a reference to sprinting ahead as a competitor slows down or mishandles a turn around a racetrack.

How do these supposed institutional advantages manifest themselves in practical terms? China’s leaders have been explicit about the superiority of their industrial policy programs which are intended to help China seize the commanding heights of the Fourth Industrial Revolution.¹⁵ For example, in the aftermath of COVID-19, China’s National People’s Congress approved a plan to spend \$1.4 trillion in five to six years to build fifth generation wireless networks, install cameras and sensors to create smart cities, and integrate this network with industry to accelerate progress in smart manufacturing. Earlier this year, China had about 200,000 5G towers in use; by the end of the year, it will have more than half a million with an ultimate goal of 5 million.¹⁶

In addition, China has released more than 100 science and technology plans, including detailed plans for leadership in AI by 2030 and in standard-setting by 2035.¹⁷ It has several special purpose funds allocating tens of billions towards specific research areas. And it has developed its flagship industrial policy initiative, Made in China 2025, which targets ten high-tech industries: information technology; smart manufacturing; aerospace; maritime engineering; advanced rail; electric vehicles; electrical equipment; new materials; biomedicine; and agricultural machinery

¹⁰Beethika Khan, Carol Robbins, and Abigail Okrent, *The State of U.S. Science and Engineering 2020* (Washington, DC: National Science Foundation, 2020), <https://nces.nsf.gov/pubs/nsb20201/global-r-d>.

¹¹Arthur Herman, “The Quantum Computing Threat to American Security,” *Wall Street Journal*, November 10, 2019, <https://www.wsj.com/articles/the-quantum-computing-threat-to-american-security-11573411715>.

¹²Neel V. Patel, “China is beating the U.S. when it comes to quantum security,” *MIT Technology Review*, December 12, 2019, <https://www.technologyreview.com/2019/12/12/131600/china-is-beating-the-us-when-it-comes-to-quantum-security/#:~:text=Prisco%20says%20the%20China%20is,although%20this%20number%20is%20disputed>.

¹³Ashwin Acharya and Zachary Arnold, *Chinese Public AI R&D Spending: Provisional Findings* (Washington, DC: Center for Security and Emerging Technology, 2019), <https://cset.georgetown.edu/wp-content/uploads/Chinese-Public-AI-RD-Spending-Provisional-Findings-I.pdf>.

¹⁴These sources are discussed in greater detail in Rush Doshi, *The Long Game: China’s Grand Strategy to Displace American Order* (Oxford: Oxford University Press, 2021). For a typical example, see Zhang Yunling [Chinese], Yang Guangbin [Chinese], Wei Ling [Chinese], Zhu Feng [Chinese], Jin Canrong [Chinese], and Xie Tao [Chinese]. “How to recognize and understand the great changes in a century [Chinese].” Charhar Institute [Chinese], March 28, 2019. <http://www.charhar.org.cn/newsinfo.aspx?newsid=14706>.

¹⁵“Li Keqiang: The Internet + Double Innovation + Made in China 2025 Will Give Birth to a ‘New Industrial Revolution’ [Chinese].” Xinhua [Chinese], October 15, 2015. http://www.xinhuanet.com/politics/2015-10/15/c_1116825589.htm.

¹⁶Anjani Trivedi, “China Is Winning the Trillion-Dollar 5G War,” *Washington Post*, July 12, 2020, https://www.washingtonpost.com/business/china-is-winning-the-trillion-dollar-5g-war/2020/07/12/876cb2f6-c493-11ea-a825-8722004e4150_story.html.

¹⁷Tai Ming Cheung et al., *Planning for Innovation: Understanding China’s Plans for Technological, Energy, Industrial, and Defense Development* (Washington, DC: U.S.-China Economic and Security Review Commission, 2016), <https://www.uscc.gov/sites/default/files/Research/Planning%20for%20Innovation%20-%20Understanding%20China's%20Plans%20for%20Tech%20Energy%20Industrial%20and%20Defense%20Development072816.pdf>.

and equipment. Made in China 2025 seeks to indigenize these key technologies, gain favorable positions in global supply chains, win market share within China, and ultimately capture global market share from foreign markets. To do so, it wields the full power of the state and the market power of the Chinese economy to elevate local champions over their high-tech foreign competitors globally, with specific quotas set in each industry for China's anticipated share.¹⁸ The initiative relies on technology transfer, market access restrictions, state-backed foreign acquisitions, and subsidies. While Beijing has formally deemphasized it in its official discourses following backlash from the United States and Europe, the core of the initiative remains very much alive.

Third, Chinese sources suggest an understanding even though the United States may have superior innovation capabilities relative to China, in many industries, that advantage matters little without manufacturing capabilities and will almost certainly evaporate unless they return. Chinese scholars see the country's centrality to global manufacturing and supply chains as an enormous strategic advantage; in contrast, they argue that the United States has allowed "the hollowing out of its industrial base" which means it cannot convert its innovations into products without China's factories. This dependence on China's manufacturing capability—when combined with China's large numbers of engineers, its penchant for reverse-engineering, and robust state support—gives it long-term advantages in the competition with the United States.¹⁹ As the researcher Dan Wang notes, "China remains unmatched as a manufacturing site given its numbers of skilled workers, deep supplier networks and the government's credible public support for manufacturers and provision of reliable infrastructure."²⁰ Even amid the pandemic, companies like Tesla are deeply invested in China while others like Honeywell have announced new investments in Wuhan, China.

Fourth, China is increasingly focused on setting standards in technical bodies relative to the United States. China's objectives include promoting its industries, earning lucrative royalties when its patents are used, and embedding its values and governance approaches in the architecture of technology. This year, China released its China Standard 2035 Plan as part of an effort to advance its standards globally. Even before this plan was announced, however, China had already grown influential in key bodies like the Third Generation Partnership Project (3GPP) and the International Telecommunication Union (ITU) and in some cases sought to shift standard-setting discussions to bodies where its influence was greater. Chinese firms are expected to gain enormous royalties from having succeeded in the competition over 5G standards. Moreover, with respect to governance, Chinese companies like ZTE have proposed standards for street light architecture that would allow video monitoring capabilities to be built in; for facial recognition that would require specific and extraneous demographic and biometric data to be stored; and for a new Internet architecture that would advantage monitoring, censorship, and control.²¹ Beijing's success in these bodies is in part a product of its successful investments in next-generation technologies like 5G but also the more "hands-on" approach the Party appears to take relative to the more industry-led and "hands-off" approach that the United States takes. Although many standard-setting bodies are primarily comprised of companies that are supposed to vote based on their own interests, at least in China's cases, companies like Lenovo that initially voted to endorse approaches backed by U.S. companies were criticized by nationalists for doing so and pressured to instead endorse approaches backed by major Chinese companies like Huawei. As Lenovo's leadership team noted in an apologetic message posted online, "We all unanimously believe that Chinese companies should unite and should not allow outsiders to play them against each other."²² If China's efforts continue to be successful, Beijing may be able to lock-in its approaches and extend its lead in certain key global technologies to the detriment of universal values and U.S. interests.

¹⁸ *Made in China 2025: Global Ambitions Built on Local Protections* (Washington, DC: United States Chamber of Commerce, 2017), <https://www.uschamber.com/sites/default/files/final-made-in-china-2025-report-full.pdf>.

¹⁹ Jin. "Jin Canrong: The Fourth Industrial Revolution is mainly a competition between the U.S. and China, and China has a greater chance of winning [Chinese]."

²⁰ "Can the U.S. End control of the Global Supply Chain," *Bloomberg*, June 9, 2020, <https://www.bloombergquint.com/global-economics/why-the-u-s-can-t-easily-break-china-s-grip-on-supply-chains>

²¹ Lindsay Gorman, "The U.S. Needs to Get in the Standards Game—With Like-Minded Democracies," *Lawfare*, April 2, 2020, <https://www.lawfareblog.com/us-needs-get-standards-game%E2%80%9494-minded-democracies>.

²² "Take action and fight to the death to win Lenovo's honor defense war! [Chinese!]," WeChat Post, May 16, 2018, https://mp.weixin.qq.com/s/JDlMq6GFkxu_D2jsqNz3w.

II. Challenges to U.S. Reshoring, Diversification, and Technology Competition

Despite a growing consensus across the political spectrum that the erosion of U.S. manufacturing and technology leadership has weakened U.S. resilience, competitiveness, and security, efforts to reverse these trends face a wide range of challenges.

Challenges to Reshoring Industry and Diversifying from China

Several advanced economies are launching efforts to “reshore” manufacturing currently in China or to diversify supply chains to markets outside China. Taiwan was one of the first to do so, and in pursuit of what it called a “non-red supply chain,” it began mounting a robust effort to lure Taiwanese manufacturers currently in China back to Taiwan.²³ Others have followed suit. Japan has subsidized exit from China for eighty-seven companies, expending \$2 billion on efforts to bring production back to Japan or to diversify it into Southeast Asia.²⁴ Similar discussions are underway in the EU as well, with top officials discussing the possibility of reshoring or diversification of some critical industries.²⁵ And of course, the United States is also considering a variety of instruments to promote reshoring and supply chain diversification, including through low-interest loans, corporate tax cuts, a dedicated fund, and proposals to pay 100 percent of a company’s reshoring expenses.²⁶

These efforts are meeting with mixed success. While some manufacturing has left China for Vietnam, Bangladesh, India, Mexico, and Taiwan, among others, many companies are unwilling or unable to relocate. The European Chamber of Commerce in China found that only about 11 percent of its members were considering relocation out of China; similarly, the President of AmCham China noted that the majority of the group’s members are not planning on exiting China.²⁷ For these firms, the rationale goes beyond cost alone. As the Paulson Institute scholar Damien Ma argues, it is hard for Americans to quit Amazon because it is the “everything store,” and it is hard for manufacturers to quit China because it is the “make everything country.”²⁸ Surveys of American and Chinese businesses demonstrate that most are not presently thinking of shifting out of China because their access to a diverse range of suppliers in China is an enormous advantage that offsets the value of reduced labor costs, subsidies, or tax credits. At the same time, China is working to counteract offshoring. General Secretary Xi Jinping has declared that protecting China’s supply chains is one of the country’s six national priorities in the wake of COVID–19.

Challenges to Retaining the U.S. Technology Base

Even as some industries are reluctant to leave China, others have already exited or are considering exiting the U.S. market. For example, Intel announced that it would likely outsource most of its cutting-edge chip manufacturing given “process slips” it has encountered in manufacturing 7nm semiconductors—a decision that comes even as the U.S. government has made it clear that the semiconductor industry is a priority for U.S. reshoring and despite a new round of tax credits and subsidies meant to support it.²⁹ Some financial analysts have suggested that this is the right decision for Intel, and that it would be efficient for it to sell its plants and focus on design, and allow other companies focused on production alone to manufac-

²³Matthew Fulco, “Is Taiwan Winning the U.S.-China Trade War?,” *Taiwan Business Topics—AmCham Taipei*, August 16, 2019, <https://topics.amcham.com.tw/2019/08/taiwan-winning-trade-war/>.

²⁴Simon Denyer, “Japan helps 87 companies to break from China after pandemic exposed overreliance,” *Washington Post*, July 21, 2020, https://www.washingtonpost.com/world/asia-pacific/japan-helps-87-companies-to-exit-china-after-pandemic-exposed-overreliance/2020/07/21/4889abd2-cb2f-11ea-99b0-8426e26d203b_story.html.

²⁵“Introductory statement by Commissioner Phil Hogan at Informal meeting of EU Trade Ministers,” European Commission, April 16, 2020, https://ec.europa.eu/commission/commissioners/2019-2024/hogan/announcements/introductory-statement-commissioner-phil-hogan-informal-meeting-eu-trade-ministers_en.

²⁶Jodi Xu Klein, “Is TSMC’s Arizona project a U.S. tech supply chain win? Or a cautionary tale?,” *South China Morning Post*, June 10, 2020, <https://www.scmp.com/tech/innovation/article/3088489/tsmc-arizona-project-us-tech-supply-chain-win-or-cautionary-tale>.

²⁷Joe McDonald, “Companies prodded to rely less on China, but few respond,” *Associated Press News*, June 29, 2020, <https://apnews.com/bc9f37e67745c046563234d1d2e3fe01> and “Supply Chain Challenges for U.S. Companies in China,” AmCham China, April 17, 2020, <https://www.amchamchina.org/about/press-center/amcham-statement/supply-chain-challenges-for-us-companies-in-china>.

²⁸Damien Ma (@damienics), Twitter Post, June 30, 2020, 4:54 p.m., <https://twitter.com/damienics/status/1278114690871300101?s=20>.

²⁹Ian King, “Intel Plunges as It Weighs Exit from Manufacturing Chips,” *Bloomberg*, July 23, 2020, <https://www.bloomberg.com/news/articles/2020-07-24/intel-considers-what-was-once-heresy-not-manufacturing-chips>.

ture for Intel. But what is efficient would be seriously damaging for the U.S. industrial base and for an industry critical to U.S. security and competitiveness since the outsourcing of manufacturing by the country's largest chipmaker would allow whatever chipmaking knowledge exists in the United States to essentially atrophy, thereby making any future manufacturing in that industry significantly less likely for decades to come. Meanwhile, despite the difficulties and costs, China remains determined to acquire these same manufacturing capabilities because it recognizes efficiency is not the only relevant value and has benefited directly from the ways in which manufacturing prowess has produced tacit knowledge and technical expertise that can seed a larger industrial ecosystem.

A critical reason that Intel is looking abroad is Taiwan and South Korea have made enormous investments in an ecosystem of physical and human capital within this industry and have some resilience—if one of their firms misjudge the next wave of semiconductors as Intel did, they may have more “cushion” because of that broader ecosystem that supports the industry. In contrast, the United States lacks a comparable ecosystem of specialized engineering capability, tacit knowledge, and professional networks in chip production. Its industry therefore has little resilience.³⁰ Onshoring chip manufacturing, in other words, is about more than the provision of capital—it requires a larger supporting ecosystem that can create that resilience. That kind of ecosystem will not be built overnight, it will in part have to be created with patience, and in some cases with better immigration policies, some careful experimentation with incentivizing localization, subsidies and credits where appropriate, and several other instruments.

Considerations for Competitiveness and Resilience

The geoeconomic challenge China poses is so significant that the United States will need to explore instruments beyond simple tax credits and subsidies if it hopes to reshore or diversify its supply chains and sustain its position in the Fourth Industrial Revolution.

This kind of broad strategy is sometimes referred to as “industrial policy,” which is in turn often mistakenly seen as a narrow effort to pick winners and losers in an industry. The reality, however, is that many mundane government practices might qualify as “industrial policies” and are not designed to pick winners and losers. Indeed, if industrial policy is generally understood to be “government intervention in a specific sector which is designed to boost the growth prospects of that sector and to promote the development of the wider economy”—particularly in cases where the market is believed to be inadequate—then many practices might fall under the broad umbrella of so-called industrial policy.³¹ In this sense, industrial policy is everywhere, and it includes policy instruments such as tax incentives, subsidies, trade agreements, regulation, investments in infrastructure, support for a skilled workforce, among countless others. What many effectively mean when they use the term “industrial policy” is a state strategy to boost competitiveness and resilience in a particular sector, a phraseology which is far less controversial but effectively similar in meaning.³² The question is not whether the United States should pursue such a strategy—there has long been bipartisan consensus that it should—but how it can do so in a way that avoids waste and capture and that instead sustains resilience, competitiveness, security, and technological leadership relative to China.

First, with respect to reshoring and supply chain diversification, other states have adopted practices in this vein that might be instructive for U.S. policymakers. Despite efforts by a wide range of governments to reshore or diversify supply chains currently based in China, only Taiwan has so far been particularly successful. Beginning in 2019, Taiwan pursued a “non-red supply chain” in key advanced industries including telecommunications, electronics, smart machinery, biomedicine, and green energy.³³ To lure manufacturers back from China, Taiwan used a wide range of policy instruments that went far beyond tax credits and subsidies, relying on measures like rent assistance, cheap finance, land acquisition, and simplified provisions on reinvestment, among others. The effort self-consciously addressed what Taiwan calls its “five shortages”: land, water, power, manpower, and talent to entice companies to return. Most critically, the initiative was housed in the “InvestTaiwan”

³⁰ David P. Goldman, “Intel is making a mockery of reshoring,” *Asia Times*, July 25, 2020, <https://asiatimes.com/2020/07/intel-is-making-a-mockery-of-reshoring/>.

³¹ Uri Dadush, “Industrial Policy: A Guide for the Perplexed,” OCP Policy Center, January 2016 <https://carnegieendowment.org/files/OCPPC-PB-1605industrialpolicy.pdf>.

³² Reda Cherif and Fuad Hasanov, “All the Way to the Top: Industrial Policy, Innovation, and Sustained Growth,” *IMF Blog*, November 13, 2019, <https://blogs.imf.org/2019/11/13/all-the-way-to-the-top-industrial-policy-innovation-and-sustained-growth/>.

³³ Fulco, “Is Taiwan Winning the U.S.-China Trade War?”

office at the Ministry of Economic Affairs (MOEA), which the head of the office described as a “a one-stop shop to help manufacturers return home smoothly.”³⁴ Since its establishment in 2019, the office has succeeded in achieving \$33 billion worth of reshoring in terms of investment which has boosted Taiwan’s economic growth. The office’s success was no doubt partly boosted by U.S. tariffs, but it was also due to the ease with which one office could serve as a single point of contact for all firms thinking about leaving China and the willingness of that office to proactively work with businesses to address a wide range of concerns beyond questions of credits and subsidies.

Second, with respect to efforts to boost competitiveness and resilience in high-tech industries, a range of states have adopted “industrial policy” plans. China, as discussed, has its Made in China 2025 strategy and now a \$1.4 trillion digital infrastructure plan. For its part, Germany has Industry 4.0, the United Kingdom released an Industrial Strategy, and a wide range of other states are experimenting with similar efforts.

Over the last twenty years, had the United States government been more willing to experiment with these tools and techniques to promote its high-technology industries, it is possible—though by no means guaranteed—that the competitive landscape with China could have looked very different today. The kind of approach that helped restore the U.S. semiconductor industry in the 1980s with SEMATECH and helped catalyze the genomics industry in the same period with the Human Genome Project could potentially have been attempted in other industries. And at the very least, more robust efforts to save floundering high-tech industries could have also been consequential. Indeed, at various times over the last two decades, the United States intervened to save industries like finance, automobiles, and insurance. Those efforts, however, did not generally extend to companies that were at the cutting edge of high technology. For example, the United States government did not intervene to save Motorola or Lucent, companies that today could have formed the foundation of an American 5G industry. Similarly, if the United States had mounted a more robust technology innovation policy to sustain semiconductor manufacturing, it is possible that the deterioration of that capability—and its potential loss of Intel outsources production—could have been avoided. Rather than lamenting what might have been, the past can be a useful guide to a more competitive future. Accordingly, it is worth noting that if Washington makes the right moves now, it is likely that the competitive landscape with China over the next two decades could be significantly and positively impacted.

For the United States then, as the experience with Intel demonstrates, the core question will be how Washington can reverse the loss of expertise and experience in key industries and, in a few specific cases, attract foreign companies to come to the United States and build reservoirs of tacit knowledge that could form the foundation for future manufacturing resilience. These efforts will likely require a wide range of policy instruments to boost U.S. manufacturing or incentivize others to manufacture in the United States. These might include subsidies, tax breaks, investments in education and training, use of government procurement policies to encourage local production, state-mandated production (*e.g.*, under the Defense Production Act), carefully structured trade agreements that advantage domestic manufacturing, and export controls.³⁵ In the past, particularly given the allure of the U.S. market, similar efforts have helped attract Japanese auto manufacturers to the United States, with companies like Toyota producing 70 percent of the cars they sell to Americans at their U.S. factories. By going beyond simple subsidies and tax credits, the United States could build a broader ecosystem that will sustain and attract advanced industries.

Some of the policies critical to this effort are explored below.

III. Recommendations for U.S. Policy

1. Information Gathering for Economic Strategy

- *The U.S. Congress should consider creating an entity that can audit the U.S. supply chain and craft robust reporting requirements on supply chains for industry.* China has demonstrated a willingness to use its nodal position in modern supply chains as leverage against other countries. If the United States has a less sophisticated understanding of global supply chains than China, it will not be well-positioned to resist or help allies resist these efforts. Moreover, as the recent pandemic has shown, the Federal government often has little idea until

³⁴ Fulco, “Is Taiwan Winning the U.S.-China Trade War?”

³⁵ Geoffrey Gertz, “How to Deglobalize,” *Foreign Policy*, July 24, 2020, <https://foreignpolicy.com/2020/07/24/how-to-deglobalize/>

it is too late just how dependent certain critical industries (like the pharmaceutical sector, or PPE manufacturing) are on imports from China and other countries. Accordingly, the United States needs reliable information on supply chains within and across industries. Efforts already undertaken to audit supply chains in critical minerals and in medical supplies should be expanded into a wide range of critical and high-tech industries, institutionalized in a Federal government entity, and bolstered through mandatory reporting requirements for industries.³⁶ This entity could conceivably be staffed or supported by other economic statistics-producing agencies, including the U.S. Census Bureau, the Department of Commerce's Bureau of Economic Analysis, or the International Trade Commission, among others.

- *The U.S. Census Bureau should restart and expand its Current Industrial Reports program:* These reports which were produced annually produced rich and detailed information on U.S. industries and created teams of individuals with deep, institutionalized knowledge on each industry. That information will be essential for crafting and implementing strategies to boost U.S. resilience and competitiveness, reshoring, supply chain security, reversing deindustrialization, and competing with China.³⁷
- *The U.S. government should undertake supply chain stress tests of companies in critical industries.* The proliferation of just-in-time manufacturing and lean production has reduced inventory in supply chains, leaving little “slack” in the system when confronted with foreign economic coercion, natural disasters, or other supply chain shocks. Just as the United States and European Union mandated stress tests for banks after the financial crisis, supply chain stress tests would involve efforts to determine how long a particular node in the supply chain could function after a supply shock and how long it might take to recover normal functionality.³⁸

2. Coordinating Economic Policy and Strategy

- *The U.S. Congress should consider mandating a quadrennial national strategy on competitiveness and resilience.* The United States government has published a series of annual strategy reports, including the Quadrennial Defense Review (now the National Defense Strategy), the Quadrennial Diplomacy and Development Review, the Quadrennial Energy Review, the Quadrennial National Health Security Review, and roughly a dozen strategic plans for various U.S. government departments, among other efforts. Vanderbilt Law Professor Ganesh Sitaram has proposed a similar effort for U.S. competitiveness. The document and the process of drafting it could help create sustained attention on U.S. economic and technological leadership, align various agencies, and force long-term thinking about domestic and international trends.³⁹
- *The U.S. Congress should consider various models that could integrate the U.S. government's various economic agencies and ensure coordinated approaches to competitiveness and resilience:* When Taiwan sought to reshore supply chains based in China, the government created a “one-stop shop” within one of its ministries for that very purpose, thereby streamlining corporate engagement with Taiwan's government and ensuring timely and comprehensive and bespoke attention to various challenges each company faced. Other governments that pursue technology policies or industrial policies similarly integrate a wide range of economic agencies within mission-specific offices or even entire ministries. Similar approaches could be considered within the U.S. government. On the modest side, these approaches might involve offices comprised of economic officials from

³⁶ Geoffrey Gertz, “How to Deglobalize,” *Foreign Policy*, July 24, 2020, <https://foreignpolicy.com/2020/07/24/how-to-deglobalize/> and Nedal T. Nassar et al., “Evaluating the mineral commodity supply risk of the U.S. manufacturing sector,” *Science Advances* 6, no. 8 (2020), <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7035000/>. Also see the text for the Coronavirus Aid, Relief, and Economic Security (CARES) Act on the National Academies of Sciences, Engineering, and Medicine website: <https://www.nationalacademies.org/oega/public-laws/coronavirus-aid-relief-and-economic-security-cares-act>.

³⁷ “Comprehensive List of the Commission's Recommendations,” from *2019 Report to Congress of the U.S.-China Economic and Security Review Commission* (Washington, DC: U.S.-China Economic and Security Review Commission, 2019), <https://www.uscc.gov/sites/default/files/2019-11/2019%20Recommendations%20to%20Congress.pdf>, 538.

³⁸ David Simchi-Levi and Edith Simchi-Levi, “We Need a Stress Test for Critical Supply Chains,” *Harvard Business Review*, April 28, 2020, <https://hbr-org.cdn.ampproject.org/c/s/hbr.org/amp/2020/04/we-need-a-stress-test-for-critical-supply-chains>. Also see Gertz, “How to Deglobalize.”

³⁹ Ganesh Sitaraman, “On Agency Structure,” *American Compass*, June 10, 2020, <https://americancompass.org/essays/on-agency-structure/>.

a variety of agencies with a specific and discrete task, such supply chain reshoring or diversification. As the Brookings Institution scholar Geoffrey Gertz has noted, the United States Commercial Service assists firms with exports while other entities work to attract foreign investment.⁴⁰ Similar entities could presumably be created to focus on reshoring or diversification. On the expansive side, as some like Ganesh Sitaram suggest, this could involve a reorganization and streamlining of U.S. economic agencies to better implement “industrial policy” or national strategies for competitiveness and resilience, with strong protections to ensure accountability and prevent capture.⁴¹

3. Boosting American Strengths in Immigration and R&D

- *The U.S. Congress should facilitate high-skilled immigration to the United States:* American openness is an enormous strength that has long allowed the United States to attract the best foreign minds to bolster its science and technology capabilities. U.S. labs at the forefront of the Fourth Industrial Revolution largely depend on graduate students from a wide range of countries. For example, roughly 80 percent of graduate students in electrical engineering and computer science are foreign nationals.⁴² Most prefer to stay in the United States following the completion of their degrees—with vast majorities staying a decade after graduation—though increasingly many are unable to do so.⁴³ Similarly, U.S. companies also rely on foreign talent to fill shortfalls in science and technology, though the total number of those visas has been capped since 2005 at 85,000, with only 20,000 reserved for those with graduate degrees.⁴⁴ Reforms are needed to ensure that the United States has access to the world’s best high-tech talent. Per a report by Georgetown’s Center for Security and Emerging Technology, the U.S. Congress should (1) raise the cap on H1-B visas; (2) automatically grant green cards (exempt from green card caps) to postgraduate degree holders, particularly in STEM; (3) emulate Canada’s dedicated post-graduation employment visa for international students; (4) create a visa program for entrepreneurial graduate students who wish to start companies after graduating; (5) codify the Optional Practical Training program in statute, among other policies.⁴⁵
- *The United States Congress should increase Federal R&D spending by four-fold to keep pace with China, and it should ensure increases go beyond the life sciences.* Federal R&D spending has declined for decades. As a percentage of GDP, the U.S. Federal government spends only .61 percent of GDP on R&D—the percentage is one of the lowest in seventy years, lower than ten other science powers, and lower even than pre-Sputnik funding. Moreover, half of Federal R&D spending goes to life sciences alone.⁴⁶ While it is true that business has contributed significantly to U.S. R&D spending, particularly in applied research, basic research generally comes from the Federal government and has historically formed the foundation for major breakthroughs—including radar, computing, and nuclear power.⁴⁷ One more recent example, as economist Jonathan Gruber notes, is the \$3 billion Congress spent beginning in the 1980s to

⁴⁰ Geoffrey Gertz, “How to Deglobalize,” *Foreign Policy*, July 24, 2020, <https://foreignpolicy.com/2020/07/24/how-to-deglobalize/>

⁴¹ Ganesh Sitaraman, “On Agency Structure,” *American Compass*, June 10, 2020, <https://americancompass.org/essays/on-agency-structure/>.

⁴² “The Importance of International Students to American Science and Engineering,” National Foundation for American Policy, October 2017, <http://nchap.com/wp-content/uploads/2017/10/The-Importance-of-International-Students.NFAP-Policy-Brief-October-2017.pdf>.

⁴³ Boris Granovski and Jill H. Wilson, “Foreign STEM Students in the United States,” Congressional Research Service, November 1, 2019, <https://crsreports.congress.gov/product/pdf/IF/IF11347>. The report notes that, “According to the National Science Foundation’s 2017 survey of STEM doctorate recipients from U.S. IHEs, 72 percent of foreign doctorate recipients were still in the United States 10 years after receiving their degrees. This percentage varied by country of origin; for example, STEM graduates from China (90 percent) and India (83 percent) stayed at higher rates than European students (69 percent).”

⁴⁴ Ely Ratner et al., *Rising to the China Challenge: Renewing American Competitiveness in the Indo-Pacific* (Washington, DC: Center for a New American Security, 2020), <https://www.cnas.org/publications/reports/rising-to-the-china-challenge>.

⁴⁵ Remco Zwetsloot et al., *Keeping Top AI Talent in the United States: Findings and Policy Options for International Graduate Student Retention* (Washington, DC: Center for Security and Emerging Technology, 2019), <https://cset.georgetown.edu/wp-content/uploads/Keeping-Top-AI-Talent-in-the-United-States.pdf>, 29–35.

⁴⁶ James Pethokoukis, “US Federal research spending is at a 60-year low. Should we be concerned?,” American Enterprise Institute, May 11, 2020, <https://www.aei.org/economics/us-federal-research-spending-is-at-a-60-year-low-should-we-be-concerned/>.

⁴⁷ M. Anthony Mills and Mark P. Mills, “The Science Before the War,” *The New Atlantis* (Winter 2020), <https://www.thenewatlantis.com/publications/the-science-before-the-war>.

map the human genome. That investment catalyzed the genomics industry, which employs 280,000 people in the United States and generates taxes of \$6 billion annually.⁴⁸ Meanwhile, as U.S. government research spending falls, China's is growing rapidly and may well exceed 2.5 percent of GDP in coming years. For that reason, a doubling or tripling of Federal research spending is in order, would allow us to keep pace with China, and would restore us to levels last seen in the 1960s.

4. Reforms to Stimulate Long-Term Planning and Competition

- *The U.S. Congress should consider anti-monopoly measures to build U.S. resilience in critical industries:* True resilience requires ensuring that the United States has several viable competitors in any given industry, particularly those essential to American health and security. At the innovation frontier, companies frequently make bets about the progress of future technology, some of which prove prescient and others of which prove mistaken. When only one state champion is left in a given industry, the price of making the wrong bet can be devastating for the wider economy and for the country's technological leadership. In contrast, when there are multiple companies operating in a critical industry, the odds that one will make the right bet and sustain the country's leadership in that industry are far greater. When market structure sometimes complicates efforts at ensuring competition, Congress can assist weaker competitors, a policy approach it has used in the past to ensure a competitive defense industrial base.⁴⁹ Then, as now, competition between leading firms in these essential industries is more likely to produce lower prices, higher quality products, industrial resilience, and greater innovation—advantaging the United States relative to outright mercantilist competitors with one leading state champion.
- *The U.S. Congress should consider financial sector and tax policy reforms that reduce the short-termism of corporate America and encourage a focus on longer-term decision-making:* The shareholder revolution of the 1980s helped usher in a focus on returns on capital at the expense of longer-term planning. Most shares of stock are held for less than a year now compared to eight years in the 1950s; CEO tenure is now near a historic low of roughly five years; and the pressure to generate financial returns often disincentivizes manufacturing relative to other more lucrative business activities. Efforts to adjust the institutionalized “short-termism” of U.S. capital markets will be difficult and controversial, but some prominent executives like JPMorgan Chase CEO Jaimie Dimon and Berkshire Hathaway CEO Warren Buffet are publicly supportive. As Michael Brown, Eric Chewning, and Pavneet Singh note in an April report from the Brookings Institution, Congress could incentivize the creation of new benchmark metrics that include longer timeframes as well as tax policy that encourages holding equity positions for longer periods.⁵⁰

5. International Efforts with Like-Minded Stakeholders and in Key Institutions

- *The U.S. Congress should encourage greater basic science research collaboration between the United States and its key allies and partners, who together comprise two times more spending than China.* Basic science research is already an increasingly international endeavor, and U.S.-China scientific cooperation is increasingly common. But while the United States and China spend roughly equivalent amounts on R&D presently, the combined total spent by Japan, Germany, South Korea, India, France, and the UK exceeds the U.S. and China respectively. The U.S. Congress should relax some of the people-to-people impediments to greater allied and partner collaboration (e.g., visa policies) while also encouraging basic science research organizations to engage more with allies and partners. Greater diffusion across allied and partner channels could help sharpen the American technological edge, allowing the country to benefit from others. Moreover, formal partnerships could involve efforts to “set standards and values

⁴⁸James Pethokoukis, “Jonathan Gruber on jump-starting breakthrough science and reviving economic growth: A long-read Q&A,” American Enterprise Institute, June 3, 2019, <https://www.aei.org/economics/johnathan-gruber-on-jump-starting-breakthrough-science-and-reviving-economic-growth-a-long-read-qa/>.

⁴⁹Matt Stoller, *Goliath: The 100-Year War Between Monopoly Power and Democracy* (New York: Simon & Schuster, 2019).

⁵⁰Michael Brown, Eric Chewning, and Pavneet Singh, “Preparing the United States for the Superpower Marathon with China,” The Brookings Institution, April 2020, https://www.brookings.edu/wp-content/uploads/2020/04/FP_20200427_superpower_marathon_brown_chewning_singh.pdf

around sharing data, transparency, reproducibility and research integrity,” as Georgetown’s Center for Strategic and Emerging Technology argues.⁵¹

- *Congress should support efforts to advance coordinated domestic and multilateral approaches to standard setting:* While many standard-setting bodies are comprised of companies rather than countries, China’s top-down effort to shape standards requires a response from the U.S. government. This is particularly urgent during times when standard-setting processes might be inaugurating new paradigms in critical industries, including telecommunications (e.g., 5G, O-RAN) and the Internet of things, that could long shape the future. First, Congress could support establishment of interagency working groups on standards that could coordinate internally. For example, OSTP could establish an interagency working group on technology standards that brings together the departments of State, Commerce, Justice, and Defense as well as the U.S. intelligence community and NIST—and that also consults with U.S. industry.⁵² Second, to build coalitions among different companies and countries, Congress could support the establishment of offices within the departments of Commerce and State to coordinate U.S. approaches with like-minded stakeholders.⁵³

Senator SULLIVAN. Well, thank you, gentlemen. Outstanding opening statements by both of you, giving us a lot to think about but again I think a lot to agree on.

So let me begin by asking both of you some kind of very general open-ended questions. I’ve spent a lot of time actually in China and working on this relationship from a lot of different perspectives, but one core principle that I think we need to focus on, I think it’s again something that’s considered and viewed as very bipartisan, is the issue of reciprocity.

Right now in the U.S.-China relationship across so many spheres, the relationship is not reciprocal and at the end of the day, reciprocity really is an issue of fairness. What we enable Chinese, say, journalists or businesses or academic institutions to do in America, we can’t do over there. It’s a very long list across many spheres of the relationship and in my meetings with the Chinese, they sometimes even acknowledge this.

Remarkably, what they do when they say the relationship is non-reciprocal, they say, well, and I’ve heard this as a U.S. Senator, I’ve heard it in other positions, Senator, it’s because we’re still a developing country and you’re a developed country. I heard that from the Ambassador about a year and a half ago. Pretty ridiculous statement.

But I’d like the two of you to comment on this issue of the lack of reciprocity and reciprocity as a core principle that we need in the relationship between the United States and China, and, second, if you can talk about an issue that I refer to as promise fatigue, promise fatigue.

This is the issue of over the last three decades, almost every major agreement that the Chinese have undertaken with regard to the United States, they don’t follow through on.

Two examples. During the Obama Administration, President Obama led the effort to have a comprehensive agreement on intel-

⁵¹ Alison Snyder, “Allies could shift U.S.-China scientific balance of power,” *Axios*, June 18, 2020, <https://www.axios.com/scientific-research-expenditures-america-china-743755fe-3e94-4cd3-92cf-ea9eb1268ec2.html>.

⁵² Ely Ratner et al., *Rising to the China Challenge: Renewing American Competitiveness in the Indo-Pacific* (Washington, DC: Center for a New American Security, 2020), <https://www.cnas.org/publications/reports/rising-to-the-china-challenge>.

⁵³ Lindsay Gorman, “The U.S. Needs to Get in the Standards Game—With Like-Minded Democracies,” *Lawfare*, April 2, 2020, <https://www.lawfareblog.com/us-needs-get-standards-game%E2%80%9494-minded-democracies>.

lectual property theft. The Bush Administration prior to the Obama Administration did this. They continued to steal intellectual property probably at higher levels.

In 2015, Xi Jinping, next to President Obama in the Rose Garden, said we will not militarize the South China Sea. President of China said that in the Rose Garden next to the President of the United States. Within weeks, they were breaking that promise.

So promise fatigue is another issue that I'd like the two of you to address. So if you can look at reciprocity, promise fatigue, as kind of opening questions in this hearing. Thank you.

Mr. WESSEL. Thank you for that excellent question which really goes to the heart of the relationship at this point and the challenges we face.

Let me first go to promise fatigue and then I'll address the question of reciprocity. I'm a Democrat, but one of the great statesmen, Ronald Reagan said, "Trust but verify," and I think we've failed to have the kind of provisions in place that would do just that, meaning that when a promise is made, we need to implement automatic provisions to ensure that promises are kept.

Too often, we rely on those promises and hope for the best and find out many years later or even quicker sometimes that the promises are broken and then we look at what tools might be available to fix that. We need more automatic trade measures and provisions to put in place, Number 1.

Number 2, and I'll rely on my colleague, who is skilled in the Chinese language, we need to have a much better understanding of what China actually says. That means and requires reading their core documents.

When one looks at the bilateral agreement on cyber hacking, for example, it was a fundamental misunderstanding here because the Chinese said that they would not hack for economic benefit alone. The fact is they view economics and military security as inextricably intertwined and the result is when they hack for economic gain, it is for military and national security gain. So we were using different definitions.

Finally and quickly on reciprocity, I think reciprocity is an appropriate tool to use in certain sectors, potentially not across the board. We don't want to be like the Chinese, but we want them to understand that when they take certain actions that are adverse to our interests, they have to expect the same here. So I believe reciprocity has a role in a number of sectors.

Senator SULLIVAN. Let me just—before I have Mr. Doshi answer that, just on reciprocity, I posed this issue to the Chinese when I was in Beijing a couple years ago, that the lack of reciprocity in areas like journalists, they have hundreds, if not thousands, of journalists in our country pretty much free roaming. We don't have that in their country. They have Confucius Institutes at our universities.

When I was in Beijing, the Ambassador told me they couldn't even get on the campus of Beijing University without an escort. I posed these all to the Chinese. I said if you want Confucius Institutes at hundreds of universities, then we should be able to have James Madison Institutes of Freedom and Liberty on your universities. I just made the term up, but the point was that there's not

a reciprocal relationship. Their answer was that Confucius Institutes only teach culture and language. A James Madison Institute of Freedom and Liberty would teach propaganda. I think that's a fundamental misunderstanding of James Madison, but these are examples of the lack of reciprocity.

Mr. Doshi, would you care to comment on these questions quickly before I turn to some of the other Senators who have questions for the two of you?

Dr. DOSHI. Thank you very much, Senator. I'll simply say that I agree with my colleague, Commissioner Wessel. Reciprocity should be the cornerstone of our relationship.

Of course, the question is where we want to insist on reciprocity, where we may not want to. I'll note that back in the Cold War, U.S. and Soviet Union actually had a very reciprocal relationship on when it came to journalists. We had equivalent numbers in each other's countries. We don't have that approach now. Some could say that it benefits the United States to have a bit more access than it does presently, but it's unlikely that China would provide it because they see reciprocity sometimes as a direct threat to the Chinese Communist Party's hold on power.

And so for them, reciprocity becomes, you know, a direct challenge to everything that is what they are and it becomes very difficult for us to insist on it successfully.

Senator SULLIVAN. Sorry to interrupt you. So they booted a bunch of our journalists from China recently. If they allow five American journalists in all of China, is it in our interest to say, OK, then you get five Chinese journalists? We know a lot of them are, you know, mouth-pieces for the Chinese Communist Party anyways. Some of them aren't even journalists, I suspect, but would that make sense? Should we just say, all right, you get five journalists in America? If we can't have James Madison Institutes of Freedom and Liberty on your universities, we'll boot all your Confucius Institutes off our universities. Does that make sense?

Dr. DOSHI. Thank you, Senator. It's an important question. I think that the answer will vary from issue area to issue area, and I think that with any luck, we'll be able to find some kind of an arrangement where we'll have better access to China in the long-term, but for now, it's the case that the five journalists they have in the United States, if they were to have reciprocity with us, would not do nearly as much for China as our five would do for the United States in Beijing. They're able to tell us more about what was happening on the ground.

So that's an area where we get more from that perfect reciprocity than they might since their mouthpieces aren't particularly effective, you know, and our journalists can be particularly effective in shaping global media coverage, for example.

But you raise a very important question, Senator, and I'm not sure I have a perfect answer for it.

Senator SULLIVAN. Great. And do you have a view on promise fatigue real quick before we turn to Senator Klobuchar?

Dr. DOSHI. Absolutely. I completely agree that promise fatigue is a significant issue. There are so many promises that have been broken across issue areas and that the key goes back to what Commissioner Wessel said, trust and verify.

Senator SULLIVAN. Great. Senator Klobuchar.

**STATEMENT OF HON. AMY KLOBUCHAR,
U.S. SENATOR FROM MINNESOTA**

Senator KLOBUCHAR. Thank you very much, Chairman Sullivan and Ranking Member Markey, for holding this important hearing today.

I've long been critical of China's unfair methods of competition. It hit right at home with steel dumping in Northern Minnesota, and I think we know it's not just manufacturing and trade in which we need to be vigilant. China is using both old and new tools, including expansion of state-owned businesses, required disclosures from private companies doing business in China, and outright theft of intellectual property, and as we have seen during this pandemic, our dependence on China has highlighted weaknesses in ensuring access to critical medical supplies.

I'll start with you, Mr. Wessel. I mentioned this steel dumping and both under the Obama Administration at the very end we took this on in a big way and actually made a difference and that continued into the advocacy that I have made with the Trump Administration on this issue.

Do you agree with the importance of standing up to illegal and unfair trade practices that harm our workers, such as illegal steel dumping, Mr. Wessel?

Mr. WESSEL. I couldn't agree more. The fact is that when our workers work hard, play by the rules, they deserve to know that those rules are going to be enforced and that they'll have a fair chance to compete.

China has not only in steel but in so many other industries a broad cross-section of protectionist and predatory practices designed not to promote win-win but to win and dominate and steel is a perfect example where, as you know, they will have close to a billion metric tons of capacity, far more than they need, far more than the government and the global community can consume, and that over-capacity is simply skewing market forces and undermining the ability of our companies and our workers to survive. That covers steel, aluminum, rubber, fiber optics, and probably 15 to 17 separate sectors.

So standing up to their non-market activities is vital for the preservation of our own industry but also for our own economic success.

Senator KLOBUCHAR. Very good. In your testimony, you also note reports that intellectual property theft costs America up to \$600 billion a year. China, according to your testimony, accounts for most of that loss.

Do you believe that the Administration's response to Chinese intellectual property theft has been sufficient to protect our economy from harmful influence?

Mr. WESSEL. I believe they've taken some initial steps that are helpful, but as they have pointed out and so many analysts, myself included, believe is that stage 1 or phase 1 of their agreement was insufficient. It does not get to many of the structural issues, subsidies, state-owned enterprises, and the basic core structure of Chinese non-market forces.

It is also somewhat problematic to believe that intellectual property will change as a result of the Phase 1 agreement. We've already seen the indictments that continue to be issued virtually every day, continued cyber hacking, theft, et cetera, and the cost of doing business in China is still dependent on joint ventures in so many sectors.

Those joint ventures often require U.S. companies to share their intellectual property. It's a cost of doing business and that hasn't changed.

Senator KLOBUCHAR. Exactly. So this would mean trade alliances and other things to try to push on these issues and China sees, I think, you'd agree, the continuing weakening of U.S. alliances and dis-engagement around the globe as an opportunity to fill the vacuum left by U.S. leadership.

How should the U.S. respond to efforts by China, and I guess I'll last ask this of Mr. Doshi, as well, to expand its influence with our largest economic partners in regions around the globe? Specifically, what role should strengthening alliances and U.S. leadership in multilateral institutions play in this effort? Can we just go it alone against China or do we have to work with the rest of the world?

Mr. WESSEL. Well, I think we've seen that going it alone is not working as well as it should. We are engaging, as you've seen recently, Great Britain has turned the corner, I believe, on the question of Huawei, what Chairman Wicker talked about earlier, and the leadership of this committee on Rip and Replace and looking at that threat.

We have to reform organizations like the WTO to make sure that they work for us and I think we're past the point where, as it was in the past, that our allies would hold our coat while we bloodied our nose. They realize now or increasingly realize that the China Challenge is not just posed to U.S. interests but their own, as well. They need to come to the forefront and work with us. If they don't, we need to go it alone because we need to protect our industry and our people, but I think the world is waking up. We have to work on reforming those organizations, doubling down and participating where it can be helpful, but where we need to go it alone, we've got to do it for our people.

Senator KLOBUCHAR. Thank you.

Senator SULLIVAN. Thank you, Senator Klobuchar.

Senator Blunt.

**STATEMENT OF HON. ROY BLUNT,
U.S. SENATOR FROM MISSOURI**

Senator BLUNT. Thank you, Chairman.

To both of the panelists, a couple of questions. One is, what has China done in their effort to make it difficult for us to have ownership and other things in China that makes it easy for us to leave and two is, how are the dramatic demographic changes in China going to impact their ability to continue to compete, to keep wages low?

We have a country that's going to be dramatically changing in terms of what it looks like, and how's that going to affect their global position and their continuing economic model? To both of you, let's start with Mr. Wessel and then Mr. Doshi.

Mr. WESSEL. Thank you for that question. It really is the key question in terms of how China is going to approach its own future.

As we've seen, they have an aging population with over time fewer replacement workers and that's going to put new stresses and strains on their system.

One where it would seem, you know, one of the most evident changes is in health care where, with their 1.4 billion people aging quickly or aging at a faster pace than had expected, that's why they're trying to dominate the biotechnology, synthetic biology, and medical supply areas to meet their own needs and also to dominate worldwide.

It also, of course, puts enormous stress on the need for them to promote economic growth, productivity, and efficiency, and as a result, they are trying to move up the value chain in terms of products they've produced.

When China entered the WTO, the old view was it was about toys and textiles. Now it's about quantum computing, biotechnology, AI, and other critical industries. So all of their demographic changes are helping influence their economic choices.

Rush?

Dr. DOSHI. Thank you, Senator, for that question, and I think it's exactly the question that President Xi Jinping is worried about or General Secretary Xi Jinping is worried about in China.

First, they're trying to make it hard for companies to leave. They know that wages are rising in China and that is illuminating some of their advantage. So they're hoping to move toward automation, toward smart manufacturing with a massive \$1.4 trillion bioG grid, hoping to make sure that they use pressure sometimes to prevent companies from leaving, and therefore to make themselves at the center of those global supply chains. So that's, you know, the first thing they're trying to do is make sure, as General Secretary Xi has mentioned, that they have dominance in those supply chains.

The second area, on demographics, you're absolutely right. Their demographic challenge is enormous. They have some of the least favorable demographics of any great power in the world today and they know it and they're worried about it. They're worried they're going to get old before they get rich and that's exactly why they're stepping up their industrial policy approaches to target our high-tech industry because they're hoping they can grasp that vine before they let go of the last one, which was lower wage manufacturing.

So they have enormous challenges and this is a moment of transition and that is in many ways why we are seeing so much money being spent on Chinese industrial policy.

Senator BLUNT. What about the impact of what we've been doing so far? I heard the comment that we need to have more help coming. Certainly Australia and some of our friends have stepped up to resist the Chinese inability to be willing to work with others.

What about moving forward and where are the likely friends in this economic fight that we should be thinking come next? Are they the transpacific countries or tell me what you think happens there, and again both of you?

Mr. WESSEL. Well, Senator, it's a great question. You know, again as I had said, I think, you know, countries are now beginning

to appreciate better the China Challenge. For a long time, they looked to the U.S. to lead, whether it was at the WTO or elsewhere, and they would not always follow. So on overcapacity, where there were multilateral talks, we got little to no help from our allies.

I think the last two or three years and certainly what's happened with the pandemic has awoken many of our trading partners, many of our allies to the dangerous vulnerabilities, the lack of resiliency, the, you know, unacceptable dependence on Chinese supply chains, and I think we are entering an era where there is opportunity to have greater allied support, but we need to chart a course that they see themselves winning in, as well, and we need to have institutions which are able to enforce those measures. Those enforcement measures and institutions right now are limited in their impact.

Senator BLUNT. Mr. Doshi.

Dr. DOSHI. Thank you, Senator.

China believes that our allies are our single biggest advantage. They think our alliance structure is the most important thing that we have going for us and they're worried we're actually going to work with them, particularly in the economic and technological spaces.

Now, as Michael Wessel just mentioned, post-COVID, approval ratings for China are plummeting around the world, including in many of the countries that we have very close ties with, including in European countries and India, parts of the Asia Pacific, and so we have the opportunity now to work with those countries, to create coalitions at the forefront of technology.

People have talked about a D10, a coalition of democracies to work together on 5G, but there's no reason we couldn't expand that and work with other countries outside that coalition on a variety of issues, everything from biotechnology to medical supply chains to artificial intelligence.

So in many ways, the future of American power and competition and technology is going to be coalition and I think that that is the direction we're gradually beginning to move in, in large part accelerated by China's own poor diplomacy post-COVID-19.

Senator BLUNT. Thanks to both of you, and thank you, Mr. Chairman.

Senator SULLIVAN. Thank you, Senator Blunt.

Mr. Doshi, that's a very insightful comment on the allies. The D10 is something I had not heard of before.

Senator Rosen.

**STATEMENT OF HON. JACKY ROSEN,
U.S. SENATOR FROM NEVADA**

Senator ROSEN. Well, good morning, Mr. Chairman. Thank you for holding this important hearing today.

I want to thank both our witnesses not just for being here but your thoughtful testimony so far. A lot of your work is what we need to learn from it and the lessons we take away.

But I want to talk a little bit about the STEM workforce shortfall. You know, technology, of course, increasingly at the center of U.S.-China economic competition. So I think we can all agree that

to boost our competitiveness with China, we must invest in the STEM-capable workforce.

To continue being the most innovative country in the world, we need to maintain a workforce that can innovate, and the United States is expected to face a shortfall of nearly 3.4 million skilled and technical workers in just a few years, by 2022.

A recent study found that less than half of the K through 12 students are getting any cyber-related education. So to promote our STEM work force, I have introduced multiple bipartisan bills, ones that prepare Junior ROTC students for careers in STEM education.

Excuse me. I had something caught in my throat right before I started. I apologize. I'm going to go right to my question.

Mr. Wessel, in your testimony, you point out that the growing trade deficit with China has eliminated millions of American jobs in manufacturing and agricultural sectors, that these jobs have not migrated to other industries.

What kind of programs do you think we should be investing in to better prepare our students to enter the work force?

Mr. WESSEL. Thank you for that excellent question and you are spot on in terms of the question of the need to invest in our children, our young adults, and our workers in terms of not just STEM but, of course, lifelong learning. We need to make sure that our workers have the skills to compete in the world economy.

It also requires, though, that we fight more for some of those high-tech jobs, the new jobs of the future, whether they're in biotechnology or quantum computing or anything else, so that the investments that workers make in their own success, that families make in their students can achieve a good return, that they know that they have a bright future ahead of them.

But without the skills, we don't have the critical input we need to succeed and every industry now is an advanced industry, whether it's agriculture, which, as you know, I was on farms in Iowa for a portion of last summer, you know, every tractor is high-tech, you know.

When you look at any factory, there's computer-assisted support. You know, it's very different than the factories of a hundred years ago. We need to constantly upgrade our skills and STEM education is one of the key ingredients.

Senator ROSEN. I'm going to ask both of you. You know, China, of course, they prioritize STEM as a national security issue. They mandate its inclusion in primary school. They've launched an action plan, and the United States, in contrast, is mostly offering an approach that doesn't meaningfully include STEM. In a lot of ways, it doesn't include our nonprofits and it doesn't include our industry partnerships.

So for both of you, how can we best help our states, our school districts, and our schools? What can we again invest in, public-private partnerships, government here with legislation, grants, and help? What can we do to create an action plan of our own and really support our school districts? That's where the learning's going to happen.

Dr. Doshi, I guess we can start with you this time.

Dr. DOSHI. Thank you, Senator. I think that's exactly the right question and your diagnosis of China's advantages in STEM is exactly right.

My belief in part is formed by the fact that our research and development spending has historically supported STEM research and education both. In fact, of course, at our universities, the funds that come from our Federal grant-making institutions when it comes to science and technology support professors. They support graduate students, and they can support them more effectively if we have more funds.

But right now, of course, as many of us know, our research and development spending is .61 percent of GDP at the Federal level. That is, our Federal Government only spends .61 percent of GDP on science and technology research. That is far lower than at during any point during the Cold War.

It's also interestingly to me lower than what we spent for Sputnik and Sputnik was, of course, what catalyzed our science and technology sector. So we're actually below what we were before Sputnik.

There's a lot that we can do there, even a simple doubling which is a significant amount of money, but we only raise that amount to \$200 billion compared to the several hundred that China's putting in would make it possible for us to better educate our population and do both good research at the same time. The two goals, in my view, are complementary, Senator.

Senator ROSEN. Well, I believe my time's expired, but I like to think of this as an investment. It has a calculated return and we can project the economic return by investing in STEM early at all levels, K through 12, universities. If we don't do it, we're going to be left behind.

So I thank you both for being here today.

Senator SULLIVAN. Thank you, Senator Rosen.

Senator Capito.

**STATEMENT OF HON. SHELLEY MOORE CAPITO,
U.S. SENATOR FROM WEST VIRGINIA**

Senator CAPITO. Thank you, Chairman Sullivan and Ranking Member Markey, for having the hearing today.

As we know, this is a very complicated and ever-evolving relationship. Can you hear me OK there? I got a little feedback there.

Senator SULLIVAN. We're good now. Thanks.

Senator CAPITO. We're good. OK. Yes. It's complicated. In January, I was pleased that the Administration and Chinese officials raised the Phase 1 Trade Agreement.

Commissioner Wessel, as you know, trade discussions remain ongoing between the United States and the U.K. Concerns have been brought to my attention that a heavily subsidized U.K. steel company was recently acquired by a Chinese steel manufacturer.

China leads the globe in steel production and consumption and hurts our American products and continues to acquire and make direct investment in European countries, such as the one that I mentioned in the U.K.

Has the Commission conducted any research into the impacts that China direct investment in the U.K. would have on our own domestic steel industry?

Mr. WESSEL. Thank you for that question.

No, the Commission has not yet addressed that, but let me just point out quickly I also am the staff chair for the Labor Advisory Committee, which advises U.S. Department of Labor, and that issue has come up.

The question of whether a Chinese state-owned entity, which has acquired, as you point out, the largest steel company in Great Britain, how that's going to be dealt with in the U.S.-U.K. agreement, and our trade policies need to deal not only with what's happening in our own market, your state has been ground zero for much of this, but also what's happening with our partners, like the potential U.S.-U.K. agreement.

Senator CAPITO. So let me just ask you this in terms of let's say take ourselves out of U.K. If we're negotiating other trade agreements, say, with India, and other countries, are we digging down to the passive ownership issue that, although I don't think there is passive ownership in the steel company in the U.K., but, I mean, is that something of concern whether or not—they're not the primary owner but we hear that they're funneling materials and other things through other countries. How do you address that issue?

Mr. WESSEL. Well, it is a fundamental problem and you're right, and it is a problem, I think, that's going to be of increasing importance. So thank you for raising it.

How China invests around the globe, what they do to support those entities? So the U.K. or India, they may be providing either zero or no-cost financing. They may be providing inputs, like green pipe, which goes through only minor transformation in that country and then comes here and dramatically under-prices our own firms.

That has to be dealt with in these trade agreements. We cannot allow non-market activities that China seeks to export and create a platform in another country be used as a platform to undermine our interests.

Senator CAPITO. Yes. I have great concerns about that on a lot of different products.

I'm going to go to a different product that's applicable to West Virginia and that's our hardwood lumber and metallurgical coal industries.

They've been very hard hit by the Chinese retaliatory tariffs in response to the Section 301 Investigation, but when the Phase 1 negotiations provided us positive news on both of those, but they're still not living up to their purchase agreements.

Do you think that's tied to this overall economy or is this something that is consistent across all product lines, and what can I tell my hardwood and metallurgical coal folks to expect in the future whether they will live up to their purchase requirements?

Mr. WESSEL. Well, Senator, thank you for the question.

I have to say I have to do a bit more research on those particular products and others where I've looked, for example, soy. We saw that China was actually buying soy from Brazil rather than from the U.S.

Each product is different, but again, as I said earlier, and as the Chairman raised in terms of promise fatigue, we need to make sure that the promises made to the industries and workers in your state are kept. If not, that there is a swift and sure response.

Senator CAPITO. Well, I think that's absolutely critical as we move forward, and I think that that's something certainly it's going to impact all different products all across the state.

The last thing I would mention, and I don't know, this isn't part of trade, but it is something that we see popping up, recently in our state, two individuals who were tied to China were prosecuted for income tax fraud and other things, but they were heavily connected to Chinese universities and to China in general.

I think that's cascading across the country as we look at what's happening in our universities and colleges. Is this part of what you look at or is that—am I out of your wheelhouse here?

Mr. WESSEL. We do look at that on both a classified and unclassified reporting scenario every year.

Clearly, the FBI and other law enforcement as well as intelligence services have been diving much deeper over the last two or 3 years into the activities of individuals. We've seen it at various universities, as you point out, researchers, et cetera.

Senator CAPITO. Right.

Mr. WESSEL. We need to have a much clearer understanding of what's going on.

In my testimony, I talk about re-engaging between the FBI and our university systems so that they have a better understanding of what not only the rules are but what to look out for and we need to have a much more coherent strategy. Some of that's been done but much more remains to be done.

Senator CAPITO. Yes. I am very supportive of that and the realization, too, that a lot of these things have been embedded for not just a couple of years but maybe even as many as decades.

So thank you very much for your service, and thank you, Mr. Chairman, for the opportunity.

Senator SULLIVAN. Thank you, Senator Capito.

Gentlemen, I'm going to continue on. I think we have a few more Senators who are going to be attending this questioning of the first panel, but let me, in the meantime, ask a few follow up questions from this very interesting discussion.

You know, of course, there are challenges, but in any relationship, if it's going to be sustainable, there are opportunities, as well, with regard to the economic relationship between the United States and China.

We talked about the Trump Administration's Phase 1 approach with regard to trade and that was something that I was quite involved in trying to ensure that the President, the U.S. Trade Rep, the entire team was focused on many different sectors of the U.S. economy, including our fisheries sector, and that was something that I was very focused on.

You know, Alaska is the super power of seafood, as I like to call it. Over 60 percent of all seafood harvested in the United States comes from Alaska's waters and we export a lot.

So you may have seen when the President announced Phase 1, he did talk about the aspects of that agreement that include Chi-

na's commitment to dramatically increase its purchases of American seafood, dramatically increase that. However, I worry again that we might be into another promise fatigue moment with regard to Phase 1.

Can either of you talk about how we press as we're really in many ways re-evaluating the relationship but still look at opportunities for American workers, American fishermen, farmers to take advantage and benefit from the market? It's a balance, isn't that correct? I'll open that up to both witnesses.

Mr. WESSEL. Thank you for that question, and, Rush, I'll turn to you quickly.

Look, seafood and—

Senator SULLIVAN. I'm talking beyond seafood. I'm just talking about the market for American exports.

Mr. WESSEL. I understand. No, no, no. I understand, but, you know, I guess, you know, seafood has been under-appreciated and does deserve particular attention.

As Chinese incomes have risen, the desire or the demand for sources of protein rises with income and so there are new markets for U.S. seafood. You're aware of not only all the products from your state but Maine has lobster and many others.

You know, China has a critical problem in its fisheries area, primarily around seafood safety because of their factory farming techniques. As you're well aware, many of their shipments of seafood to the U.S. have been denied entry because of concerns about the safety and healthiness of their products.

But China needs to understand that if it doesn't open its market to our products, it's going to have an increasingly difficult time selling here to the U.S. and we need to work with our allies, as well, to make sure that they understand from your initial question that reciprocal market access has to be the approach that's taken with China when they so limit access to prefer their own companies. We need to take a responsive approach.

Senator SULLIVAN. Thank you, Mr. Wessel.

Mr. Doshi, you have a view on that? Just the opportunities that also exist exporting, balancing that with, of course, the many challenges?

Dr. DOSHI. Thank you, Senator, for that question.

I agree very much with Commissioner Wessel that there are a lot of opportunities, particularly in some quantities where China has dependence on the United States—well, not specifically the United States but partial dependence on the United States, and, you know, if you look at China's food security, it's a major concern for party leadership.

They'd like to be able to make sure they were more secure in every aspect of agriculture, which is why you see the party sometimes push to purchase overseas plots of land so they can sort of reimport that food back in and have stability.

This is all a very long way of saying there are places where there are opportunities for us to export to them and it's in their interests to import, and I think that we'll be able to make progress on those if we're able to kind of speak in a more clear-eyed way about our trade disagreements.

I would also argue, Senator, that, in addition to exports of commodities, there's also the question of, you know, more high-technology exports, finished industrial goods, et cetera.

In those cases, we have a much more direct competition with China that it would be a little bit harder to work out specific areas of agreement, but again we see that China repeatedly asks for some American high-technology which we, you know, rightfully sometimes are unwilling to provide.

So there are areas that we can make progress, but we'll have to be very careful about managing the risks and the rewards.

Senator SULLIVAN. Great. Thank you very much for that.
Senator Blackburn.

**STATEMENT OF HON. MARSHA BLACKBURN,
U.S. SENATOR FROM TENNESSEE**

Senator BLACKBURN. Thank you, Mr. Chairman, and I am so pleased that we are doing this hearing today, and I know that it is difficult many times for you all to join us virtually, but we do appreciate that you're doing that.

Let me—I want to ask you all and this is a question for the panel. So I would appreciate that a response from each one.

Looking at the budgets for R&D, as we talk about China, as we talk about great power competition, as we look at China and the fact that you never know where their commercial complex and their military complex begin and end, and China has traditionally brought about new products in their country not by innovation that is from them but what they do is to reverse engineer and to steal information and looking at what they've spent on R&D, 2000, they were not spending much on R&D at all.

They have gone through some explosive growth with their R&D budgets, and in 2017, I was looking at what the commitment was from the U.S. for R&D and it was \$549 billion and China spent \$496 billion on R&D.

So can each of you comment on the potential consequences that this will have as we look at the next century, as we look at great power competition, as we talk about their Digital Silk Road Initiative and their Belt and Road Initiative?

I would like—and also as we talk about Huawei and 5G, which is another bucket of issues that is worthy of our time to discuss, but let's look at those R&D numbers and then I would like to hear from you all of your take on the consequences of these expenditures.

Mr. WESSEL. Rush, would you like to go first?

Dr. DOSHI. Sure. Thank you.

I'll start, Senator, by saying that this is such an important question and it's one that I'm thinking about, as well.

When we have R&D, we have, you know, the Federal component of R&D spending and there's also a business component. When we add those together, the U.S. and China are actually almost even according to some estimates, even though China has a much smaller—well, not a much but a smaller economy, they're still pulling even with us on total R&D spending which is concerning.

When you look at simply the government component and in our system, the government component, of course, supports research

but also supports STEM education as well as labs that do a wide variety of different things, some commercial, some basic science.

Our Federal component has been, you know, essentially falling as a percentage of GDP for a long time and right now it's at the lowest level in almost 60 years, certainly one of the lowest levels, whereas China sees that and thinks the United States had a great R&D system during the Cold War, let's emulate that.

So in many ways, China looks at our successes and says we should do a little bit more of what the United States does. The United States forgets some of its successes and stops doing what it used to do so well.

So I'm very concerned about our R&D spending and I think it's an area where we could—or even relatively small sums of money increases could actually make an enormous difference.

Senator BLACKBURN. Let me ask you this just to add on to that.

Dr. DOSHI. Yes, Senator.

Senator BLACKBURN. If you would address where are they primarily focusing their R&D or do you know? Is it intel communications? Is it in super computing? Is it in artificial intelligence? What is gaining their attention?

Dr. DOSHI. Thank you, Senator.

There's a lot of opacity about specifically where all the R&D funds go. We have some big numbers, though, and some party documents suggest where the numbers can't give us the answer, the documents sometimes indicate that a lot of that investment or, rather, R&D spending is going to the technologies of the so-called Fourth Industrial Revolution. So that includes many, Senator, of the ones you mentioned.

Artificial intelligence is probably at the top of the list. Smart manufacturing is very high up there. Telecommunications is very high, \$1.4 trillion just allocated to build out a telecom 5G across all of China.

So it's many of these extraordinarily advanced sectors where R&D is going and there are many of them are identified in China's Made in China 2025 Plan which targets 10 specific sectors for R&D spending and for state support, but I can work with your staff and get you more specific answers after the hearing.

Senator BLACKBURN. We would appreciate that. We're very concerned about the national labs and the focus that is there with our national labs. Of course, in Tennessee, we have Oak Ridge. We have the world's fastest computer. We are looking at those applications to hypersonic 21st Century warfare, artificial intelligence, autonomous vehicles. So additional information would be appreciated.

I yield back.

Senator SULLIVAN. Senator Blumenthal.

**STATEMENT OF HON. RICHARD BLUMENTHAL,
U.S. SENATOR FROM CONNECTICUT**

Senator BLUMENTHAL. Thanks, Mr. Chairman, and thanks to both of the witnesses who are here today.

This morning, Senator Hawley and I are sending a letter to the Department of Justice requesting a national security investigation into Zoom and TikTok. As tens of millions of Americans turn to both Zoom and TikTok, few of them know that they are vulnerable

to surveillance, data harvesting, and censorship by the Chinese Government.

There are now a number of reports that Zoom and TikTok engaged in censorship on behalf of the Chinese Government. Those reports are reliable and they are truly alarming. For example, in early June several Chinese pro-democracy advocates, including a prime dissident based in the United States, were suspended by Zoom following a demand by the Chinese Communist Party.

What were their crimes? Holding a peaceful commemoration of the Tiananmen Square Demonstrations on Zoom.

Senator Hawley and I, along with other Members of Congress, have repeatedly sought answers from both companies about who has access to the personal data of American users and how decisions about content moderation are made? TikTok and Zoom have utterly failed to answer even the most basic questions about their business operations. In the case of the Tiananmen vigil, Zoom has still failed to answer the question of whether it turned over information to the Chinese Government about people who attended that meeting and that failure, among others, simply supports the request we've made for an investigation by the Department of Justice.

So my question to both of you is do you agree with me that reports about Zoom and TikTok censoring, collecting information, disclosing information to the Chinese Government, based on requests from that government, are alarming and merit investigation?

Mr. WESSEL. Thank you for that question, Senator, and thank you for your leadership along with Senator Hawley on this and others.

The fact is this is a critical issue. We have seen it not only with these two platforms but others, putting the very lives of citizens at risk, as well as our own economic and intelligence and security interests. So what you're doing is critical.

For me, I, quite frankly, don't trust the answers of those companies because Chinese basic law requires—their national security law requires that any Chinese firm hand over when requested the information that the government requests. We have seen over many years, you know, criticisms of the security and confidence we can have of Chinese-based platforms and equipment, Huawei, TikTok, and others, as you note, and time after time, we have seen both from law enforcement and the intelligence community but also the private sector continuing cyber intrusions, the lack of security, the espionage, the shipment of data through multiple hacks of U.S. citizens, that for the weegers, for those of the Falun Gong, for those in Hong Kong and many others, their very lives are put at risk.

Senator BLUMENTHAL. Thank you, Mr. Wessel.

Mr. Doshi.

Senator MARKEY. Thank you, Senator, for your leadership on this.

I just wanted to add, if I may, that the Chinese Communist Party, as a form of propaganda, has a form of discourse on how it feels about social media platforms and instruments like them, and it argues clearly that the party needs to control those platforms because if it doesn't, it's simply going to be an information content provider. It's not sufficient to simply put out propaganda. You need

to actually control platforms themselves to shape public opinion and so part of my concern with TikTok in particular isn't simply via information that might be stolen but also the possibility for electoral interference should TikTok even become more central to elections than before as it becomes a more popular social media platform.

Senator BLUMENTHAL. Thank you both for your comments.

I think there is really strong bipartisan agreement that the United States needs to protect our privacy and our liberties from this kind of invasive and potentially illegal action.

The Committee on Foreign Investment in the United States, CFIUS, is currently considering new conditions and how Bytedance operates TikTok, but so far this government has failed to act to protect Americans and that's why I believe that investigation by the Department of Justice and action is necessary, and I'm so glad that you are supporting it and I hope we can have action by this committee, as well.

Thanks, Mr. Chairman.

Senator SULLIVAN. Thank you, Senator Blumenthal, and thanks for your work on these important issues, as well.

I agree with you. The vast majority of this is bipartisan and I think we need to keep it that way because this issue is too important for the future of our own nation to have it turn into a partisan issue.

So I want to ask the witnesses, as we get ready for our second panel, I was asked to give a speech at the Heritage Foundation last year, last September, and I entitled the speech, "Winning the New Cold War with China and How the United States Should Respond."

I emphasized five areas of response that I thought could gain bipartisan support, but we've talked about a number today, but I'd like each of the witnesses to just comment on these and what you see as important elements of a strategy, and I'm sure we are missing things in a broad-based U.S. strategy. What would those be?

I'm going to also submit this speech for the record. Without objection.

[The information referred to was unavailable at time of printing.]

Senator SULLIVAN. But the focus that I had in my remarks last year were, as we talked about, demanding reciprocity, we've already talked about this next one, reinvigorating American competitiveness to outcompete China, rebuilding our military strength and capability, have not talked about that, deepening and expanding our global network of alliances, we have talked about that, and, importantly, and I think it was a critical element of winning the Cold War, employing our democratic values as a comparative advantage in countering China's global authoritarian influence.

I think all authoritarians at the end of the day fear their own people and just look at what's going on in Hong Kong and I think that this is an enormous comparative advantage we have. It's certainly benefited us during the long twilight struggle of the Cold War with the Soviet Union who also feared their own people.

Would you gentlemen care to comment on any of those key aspects of a strategy, and what do you think we're also missing?

Mr. WESSEL. Senator, thank you for the question. Thank you for the leadership on looking at this across the various platform sectors of policy that are critical.

I think you've hit all the major areas and appreciate that and they all need to be dealt with at the same time with an understanding or a public understanding of what a clear, comprehensive, and consistent policy is. The fact is that we failed on the last point to identify consistency to the Chinese at times, also to our business community and our people, so that they know what our plans are, what our red lines are, and what our objectives are.

So in each of the areas you identified, we need to be even clearer. We need to have more comprehensive identified plans of what the limits are, what our plans are as has been noted from your colleagues, everything from STEM education to dealing with the surveillance platforms, et cetera, so that China understands what we view as acceptable and unacceptable behavior, and again sees a quick and fairly automatic response when those lines are crossed.

Senator SULLIVAN. Thank you.

Mr. Doshi, you have any views on that?

Dr. DOSHI. Thank you, Senator. I do, and I thank you for your leadership and I remember your speech and I very much agree with those five areas of focus. I think it's extremely comprehensive.

I would only add to them a very small point, which is simply that this will be a long-term competition. It will continue for many years to come, as you mentioned, Senator, at the beginning, and I wanted to ask that, you know, or, rather, indicate that I think it's important for there to be public support for this approach going forward, as well, and that will take, of course, your leadership as well as there should be a consistent approach across Administrations and that will often, I think, be housed within Congress and I'm inspired by the fact that there has been so much bipartisan cooperation from FERMA to deal with Chinese predatory finance, from The BUILD Act to deal with Belt and Road, and the recent Acts on Hong Kong and review of human rights, and all of that to me indicates that there is a greater consensus which is going to be the bedrock for any sustainable grand strategy going forward.

So I'll just simply leave it there, that I think the most important thing will be having a consistent grand strategy over time that takes those five areas and make sure that we continue to make progress in each of them in a systematic way.

Senator SULLIVAN. Kind of like the strategy of containment which defined our relationship with the Soviet Union. It was very bipartisan, consistent over decades, and it ended up successfully winning the Cold War, correct?

Dr. DOSHI. Yes, absolutely, Senator. That's exactly what I'm thinking about, the kind of consistency of strategic purpose that we've sometimes marshaled in the past will need to be again marshaled in the present, and it will take multiple parts of society and will have to have business onboard, the public onboard, and, of course, consistent bipartisan leadership, which we in many ways already have.

Thank you.

Senator SULLIVAN. Great. Let me ask one final question before we turn to our next panel.

Both of you have testified about the importance of securing our supply chains. In the National Defense Authorization Act, I was proud to have a provision included—there was a very strong bipartisan vote just last week on that bill that passed the Senate—on critical minerals which we rely on way too much with regard to China and yet we have in our own nation, certainly have in my great state, the great state of Alaska, where we can mine and process and produce these in a much more environmentally responsible way than the Chinese do and yet we continue to rely on China's rare earth elements and other things.

Of course, the supply chains, there has been a big focus with regard to medicines, with PPE, given the pandemic. The Republican HEALS Act that we are debating now and hopefully we're going to have some compromises with our Democratic colleagues to get to some additional relief for the American people during this pandemic, again broad bipartisan support, I believe, in some of the issues that we're discussing today, but on making sure that we're not relying on China for medicines, for PPE, for semi-conductors, for critical minerals.

There's a lot of legislation. Like I said, my provision in the NDAA passed a bill that Senator Murkowski and I have co-sponsored is in the current version of the bill that we're debating and trying to move forward in the Senate now on critical minerals.

Can you two talk briefly about the importance and the long-term importance and benefit to America of securing our supply chains in a way where we're not so vulnerable to China, where enhanced manufacturing can help our workers? To me, it's a silver lining of this pandemic that we're already starting to see bipartisan legislation on and I think we need to continue it.

Mr. WESSEL. Thank you, Senator, for your leadership with NDAA and with other actions that you and the Committee have taken, as well.

The fact is that I think the American public has woken up because of the pandemic as to our dangerous dependence and reliance on China. China, as you well know, going to the rare earths, which your state and several others have deposits of, has shown its willingness to weaponized supply chains to achieve its goals. It did that with Japan with rare earths. It's done it otherwise and as we also saw with this pandemic, it used PPE as a diplomatic tool to try and gain access and concessions from many of our allies.

The fact is we do have the ability to reclaim many of these supply chains if we have a concerted plan in rare earths. We have the ability to have a fully mines-to-magnets strategy. We used to produce rare earths here not only at a facility in California, but we also had in Indiana, a magnet quench which did the smelting and the production of magnets.

In 1996, as you know, we sold that facility to the Chinese. I believe that was short-sighted and Chinese predatory practices put the California mine into bankruptcy.

We have to make clear what our long-term needs are, what the key to our economic success and our technological and military competitiveness, and we need to invest and ensure that we have the ability to meet our needs with allies at times but clearly meet

our needs where the interests of the American public are paramount.

Senator SULLIVAN. Thank you very much for that, Mr. Wessel. Excellent answer, and your service on these issues is very commendable.

Mr. Doshi, final question.

Dr. DOSHI. Thank you, Chairman.

I wanted to add to Mr. Wessel's excellent point just a few thoughts. It's clearly the case that China recognizes it has a nodal position and General Secretary Xi Jinping wants to keep that nodal position. So we're going to have to work against those efforts. It will be a long-term competition to sort of diversify the supply chains.

There are indications, of course, that Chinese media has suggested that we face repercussions for some of our political stances when it comes to PPE export, rare earth export time and again. That's been hinted at in official and unofficial levels. So we need a different approach and what concerns me the most would be that we're not always sure exactly where we're vulnerable to Beijing.

So we need some kind of entity that I think can more effectively audit the entirety of our supply chain, at times perhaps even stress test certain companies the same way we stress test financial institutions, and build institutionalized knowledge about the nature of those interconnections, and I think if we have that, we'll be in a better position to compete, not just know where things are going off the track but also think a little bit more effectively about how the whole global economy fits together around China and where we can put our efforts.

The last item I'll say here is, Senator, just that Taiwan has been very inspiring in this regard. They've been very successful with over \$30 billion in reshoring and I think we can learn a little from some of those approaches.

Senator SULLIVAN. Well, thank you for that very detailed and wise answer.

I want to thank our witnesses again. I think this is exactly what we need not only in the Senate but with regard to, as you mentioned, the American public. There is growing bipartisan support, you saw it in the strong participation of numerous Senators on both sides of the aisle, in this first panel, and expertise, and I want to thank both of the witnesses who showed very strong expertise and insights on what I believe is going to be an issue that is really at the forefront of American domestic and foreign policy for the next 50 to a hundred years, and we need to wake up to it, we have, and we need to address it and execute it in a bipartisan way and I think we are and that's an important beginning, but again to our first panel of witnesses, thank you again.

I'm sure there are going to be additional questions for the record and you are now excused.

[Panel Excused.]

Senator SULLIVAN. We are going to turn to the second part of our hearing today, and I'm very pleased to actually have in the Hearing Room two senior Administration officials who can talk more specifically with regard to the policies that the Trump Administration is not only formulating but beginning to implement and that

is Mr. Keith Krach, who is the Under Secretary of State for Economic Growth, Energy, and the Environment, and has been given a very important role in the Executive Branch on the development and implementation of America's U.S.-China strategy, particularly as it relates to the Economic and Geostrategic Realm, and the Assistant Secretary for Industry and Analysis from the U.S. Department of Commerce, Ms. Nazak Nikakhtar, and she is also an expert in this area.

So I want to welcome them physically here to the Committee and, Secretary Krach, the floor is yours. You will have a 5-minute opening statement and your longer written statement will be submitted for the record, if you so desire.

Mr. Secretary, welcome.

STATEMENT OF HON. KEITH KRACH, U.S. UNDER SECRETARY OF STATE FOR ECONOMIC GROWTH, ENERGY, AND THE ENVIRONMENT, U.S. DEPARTMENT OF STATE

Mr. KRACH. Great. Well, thank you, Chairman Sullivan and Ranking Member—

Senator SULLIVAN. You need to turn your mic on.

Mr. KRACH. Thank you, Chairman Sullivan and Ranking Member Markey and Members of the Subcommittee on Security. I appreciate the opportunity to discuss the China Challenge because it's at the epicenter of the economic security threat landscape.

Last week in his landmark speech, Secretary Pompeo said, "Today, we are sitting wearing our masks and watching the pandemic's body count rise, reading new headlines every day of repression in Hong Kong and Xinjiang, seeing staggering statistics of Chinese trade abuses, watching the Chinese military grow stronger on the back of stolen American clean innovation."

I've experienced the CCP's economic warfare firsthand. I grew up in small town Ohio where my father ran a five-person machine shop and I saw China wield its weapons of mass production gutting my father's shop. His pain was not lost on me.

I went on to be a Vice President of General Motors where I learned when you build a plant in China, you get access to their market. You don't just give them the blueprints, you give them the process engineering and train their labor force.

I spent the rest of my career in Silicon Valley where I had my intellectual property ripped off and I saw firsthand China's strategy of seducing with money while reinforcing with intimidation and retaliation.

I started the world's first B2B commerce company called Ariba. It's now the largest. Seven trillion of commerce was conducted over the Ariba network last year, and I remember in the late 1990s we welcomed Chinese visitors to our headquarters only to have them clone one of our concepts. That company was Ali Baba.

A couple of years ago, while running DocuSign, I spent two weeks in China exploring what I thought might be market opportunities. I've been going there since 1981, but this time it was different. I met with Politburo members who spoke so passionately about their grand strategy for global domination and I saw how cleverly they deposed the United States.

Then I got an in-depth look at their technology. That's when it hit me. As soon as I got back, I went to Washington and spoke to anyone who would listen and asked, "do you understand the country with the best technology usually wins?" And that's when I was asked to serve and that's why I'm here today because of the China Challenge.

My first week on the job, Secretary Pompeo gave me the charge to develop and operationalize a global strategic plan that maximized national security, combats Chinese economic aggression.

The strategy we've developed consists of three pillars. The first is to turbo-charge economic impediments by driving productivity and prioritizing 10 emerging technology key areas that are critical to economic growth and security, such as 5G and semi-conductors.

China is also gunning for the lead in each of these as we speak. I can tell you the Communist Party's biggest fear is the United States would have a Sputnik moment.

The second pillar of the strategy is safeguarding America's assets, including our intellectual property, financial system, and core freedoms. Securing these will require the U.S. and partners to demand reciprocity, transparency, and enforcement of laws.

We must also understand they've used our assets against us, including our openness and our values. We must view every Chinese action with skepticism. As Secretary Pompeo recently said, "Distrust and verify."

The next part of the plan turns the table on the CCP by reclaiming our core freedoms as our strength. We will answer Secretary Pompeo's call to build a new alliance of democracies to oppose China.

We would envision this to be comprised of like-minded countries, companies, and civil society that operate under a set of trust principles for all areas of economic collaboration and those trust principles are American values, things like integrity, accountability, transparency, reciprocity, respect for Rule of Law, respect for property of all kinds, respect for sovereignty of nations, respect for the planet, respect for human rights.

When I talk to my counterparts from other countries about this concept, their reaction is it's about time. We've been waiting for an alternative, as one of the Southeast Asian nations said, to China's One Belt One-Way Toll Road to Beijing.

The new alliance of democracies represents a unifying and equitable clean alternative.

Speaking of the clean, let me update you on the State Department's Clean Campaign which is unlocking a global movement.

Secretary Pompeo also said last week, "We've urged countries to become clean countries so that their citizens' private information doesn't end up in the hands of the Chinese Communist Party," and it starts with the 5G Clean Network.

For years, the CCP has strong-armed nations to purchase Huawei's 5G infrastructure. Huawei is the backbone of CCP's surveillance state and extends the great one-way China firewall where data comes in but not out and reciprocally propaganda goes out but the truth does not come in.

The State Department is leading by example through our 5G Clean Path Initiative which requires all data entering or exiting U.S. diplomatic facilities to transit only across trusted equipment.

We're making a difference and encouraging our partners to join the 5G Clean Path and turning the tide against Huawei and toward clean vendors.

As a result, Huawei's deals are evaporating. You saw it earlier this month with the U.K. and last week with France. There are now about 35G clean countries and many of the most largest telco companies have become clean telcos, also recently, Telco Italia, Telefonica, the top three telcos in Singapore, and the top three telcos in Canada.

So the Clean Campaign's been so successful that we're preparing to expand it beyond just clean networks and to clean systems, including clean apps, clean store, clean cloud, clean cable, and even clean currency.

It's also important to have clean supply chains with clean labor. Recently, the State Department joined other agencies to issue a business advisory regarding supply chain exposure to entities engaged in forced labor and other human rights abuses in Zhing Zhang.

As I said in a follow up letter to all U.S. CEOs and their boards, I said, "Your institutions have a moral responsibility, perhaps a fiduciary duty, to establish clean governance principles and divest from companies that contribute to human rights abuses." They should at a minimum disclose the Chinese companies they invest in.

Soon, President Trump's Working Group on Financial Markets will make recommendations to the President on the transparency of Chinese public companies to enhance investor protections and ensure American exchanges remain the gold standard for the world.

So, Senators, in conclusion, tackling the many facets of the Chinese Challenge require all three branches of the government, our powerful private sector, and as Secretary Pompeo said, "A new alliance of democracies." America's moment is now to choose a path, a clean path to the future for the sake of our children and our grandchildren.

Thank you very much, and I look forward to your questions.

[The prepared statement of Mr. Krach follows:]

PREPARED STATEMENT OF HON. KEITH KRACH, U.S. UNDER SECRETARY OF STATE FOR ECONOMIC GROWTH, ENERGY, AND THE ENVIRONMENT, U.S. DEPARTMENT OF STATE

Introduction

Good afternoon Chairman Sullivan, Ranking Member Markey, and other esteemed Members of the Subcommittee on Security. It is a pleasure to be here with you today and I very much appreciate the opportunity to discuss the State Department's role in addressing economic security. Now more than ever, as we live through this time of incredible uncertainty, the economic security challenges facing our Nation are acute and worthy of a robust, whole-of-government response. The China challenge sits at the epicenter of the economic security threat landscape.

On July 23, in a landmark speech at the Nixon Library, Secretary Pompeo delivered a summary indictment of the Chinese Communist Party (CCP). As he said, "Today we sit wearing masks and watching the pandemic's body count rise, reading new headlines every day of repression in Hong Kong and Xinjiang, seeing staggering

statistics of Chinese trade abuses, watching the Chinese military grow stronger on the back of stolen American innovation.”

I have experienced the long reach of Beijing firsthand, starting when I was growing up in small-town Ohio, where my father ran a machine shop. My dad’s customers were suppliers to the big three car companies in Detroit, and his fortunes were tied to theirs. As China offered cheap and subsidized labor—its “weapons of mass production”—manufacturing was shipped overseas, and many of my dad’s orders dried up. I saw him go through the agonizing process of laying off trusted employees. His pain was not lost on me.

I went on to be a vice president of General Motors, where I saw the same story play out from a different angle. I saw the lust over China’s cheap manufacturing capabilities. And I saw the fallout: When you build a plant in China, you don’t just give them your blueprints, you give them the process and engineering skills they need to steal your design and create it for themselves.

I spent the rest of my career in Silicon Valley, where I went on to start the world’s first business-to-business e-commerce company called Ariba in 1996. We took it public and \$7 trillion of commerce was conducted over the Ariba network last year. In 2009, I became CEO and Chairman at a 50-person company called DocuSign that had a simple dream of automating the signature process. After recently completing 10 years there, it is now a \$40 billion public company and recognized worldwide for its transformative impact on the way business is done.

But in Silicon Valley, the CCP’s economic weapons were aimed right at us: including widespread theft of intellectual property and predatory joint ventures. Two years ago, I traveled to China to explore market opportunities. I heard five of the top seven Politburo members speak about China’s plans for the future, and I saw their technology. As soon as I came back stateside, I went to Washington and spoke to anyone who would listen. I said, “Do you understand that the country that has the best technology usually wins?” And that’s when I was asked to serve. It has been the privilege of my life.

During my confirmation hearing, I stated that “I fully appreciate the enormity and gravity of this role, especially in a time where the reality we face as a nation is one of ever-increasing cyber warfare and seemingly ceaseless variations of intense, perhaps even weaponized, economic competition.”

I also said, “It is comforting to know that both sides of the aisle understand that China is playing the long game, and they are playing for keeps—a four-dimensional game of economic, military, diplomatic, and cultural chess with little respect for human rights, intellectual property, rule of law, transparency, the environment, or the sovereignty of other nations.”

During the hearing, when asked how I would accomplish my objectives, I said “my focus would be on embracing this opportunity and harnessing three powerful areas of competitive advantage: strengthening our partnerships with friends and allies, leveraging the innovation and resources of the private sector, and amplifying the moral high ground of our American values and enduring optimism to advance peace and prosperity for our country and for the world.”

My life’s work has been focused on creating innovative companies and transformative social causes by building high-performance teams that challenge the status quo. I believe the team with the best people wins and that diversity of thought on any team is the catalyst for genius.

Framing Global Economic Security

My charge at the State Department, which Secretary Pompeo gave me in my first week, is to develop and operationalize a framework for global economic security combats the PRC’s economic aggression, drives economic growth, maximizes national security, and advances peace and prosperity. It’s been my honor to work with many in Congress to shape this strategy.

As the President has often stated, economic security is national security. We live in a world of determined competitors, asymmetric threats, and networked technology. I have heard the same sentiment from Congress and leaders in the private sector. Most importantly, I hear it from my international counterparts.

Last year, Congress passed the bipartisan Championing American Business Through Diplomacy Act, which bolsters U.S. business competitiveness abroad. It does so by empowering the Department of State to now work alongside the Department of Commerce to coordinate interagency efforts to leverage our diplomatic missions to promote U.S. economic and business around the world. The bill is aimed at countering China’s economic aggression by promoting U.S. business values that reflect high quality standards, transparency, and agility in adapting to the unique demands of individual foreign markets.

Adversaries and strategic competitors, such as China, are targeting our national assets with a range of malign practices including theft, deception, unfair trade practices, intimidation, financial seduction, frivolous litigation, cyberattack, forced technology transfer, propaganda, corruption, coercion, and retaliation. Securing America's assets requires the U.S. private and public sectors to continue to work with like-minded nations and demand reciprocity, transparency, and solidarity.

We must continue to work with allies and friends to halt China's aggression. It's about viewing every PRC action, whether an investment in an American firm or the opening of a new Confucius Center at an American university, with appropriate skepticism. As Secretary Pompeo noted in July, President Reagan's Cold War mantra of "trust but verify" doesn't apply here. When it comes to the CCP, we must "distrust and verify."

Our strategy for advancing global economic security and combating China's economic aggression has yielded results. To give you a sampling of the breadth and the depth of our efforts, I am highlighting our work in the following six areas: 5G, semiconductors, supply chains, institutions of higher learning, the One Belt One Road, and the environment.

5G Networks

5G and 6G will be cornerstones of our economies and societies in the future. Many aspects of our lives will flow over these networks, which is why it is critical to secure them—and why the design, development, and control of such technology, in the wrong hands, they can be incredibly dangerous.

The CCP is posturing to leverage 5G-enabled technology to create and export George Orwell's version of "1984" into the 21st century, with an all-encompassing web technologies that can be exploited for information gathering and surveillance. Huawei is the backbone of the CCP's surveillance state and extends the great one-way China firewall, where data comes in but not out and, reciprocally, propaganda goes out, but the truth doesn't come in.

For years, the CCP has strong-armed nations to purchase Huawei's 5G infrastructure and services. Untrusted, high-risk vendors like Huawei and ZTE provide the CCP's authoritarian government the capability to weaponize critical applications, information, and infrastructure, and to provide technological advances to China's military forces. Huawei is also on the Commerce Department's Entity List for engaging in activities contrary to the national security and foreign policy interests of the United States.

It should surprise no one that Huawei is under indictment in the United States for bank fraud, wire fraud, conspiracy, violating sanctions, racketeering, and misappropriating intellectual property from six U.S. tech companies. And we know that it deploys these same tactics in Europe and wherever else it can get a foothold.

To turn the tide, on April 29, 2020, Secretary Pompeo *announced* that, in response to requirements in Section 889 of the 2019 National Defense Authorization Act, the State Department will require a Clean Path for all standalone 5G network traffic entering and exiting U.S. diplomatic facilities at home and abroad. 5G Clean Path is an end-to-end communications path for our diplomatic facilities that does not use any transmission, control, computing, or storage equipment from untrusted vendors. The Department of State has asked other countries to join us in requiring a 5G clean path for their overseas diplomatic facilities.

Further, we are working to inform international partners and allies on the risk posed by untrusted information and communications technology and services (ICTS), and convince them to join our effort to address these risks through collaborative action. To that end, we are conducting international outreach, describing existing U.S. actions and efforts, and encouraging foreign partners to take similar actions to secure their ICTS ecosystem, while maintaining an open and fair market for products and services from U.S. and trustworthy international technology vendors.

Semiconductors

In the face of a newly aggressive and technologically empowered China, the United States urgently needs similar success in semiconductors. A recent onshoring win of TSMC was a good first step for us, but there's more work to be done.

Semiconductors enable thousands of products and functions—from cell phones to automobiles to 5G to artificial intelligence, along with a litany of activities crucial to our national security. American companies invented semiconductor technology and are leaders in its design and development and are still global leaders in this area, yet our output lags behind China, Taiwan, and South Korea, in semiconductor manufacturing. We now produce only 12 percent of the world's chips, half of our share of 24 percent in 2000. China now produces 19 percent of global output, up from only 2 percent in 2000.

China shows no signs of stopping its pursuit of this economic and national security imperative. China's intentions of technological supremacy are documented in its Made in China 2025 plan: It's using all of its tools of national power—including below-market lending and equity, direct grants, tax concessions, and industrial and scientific espionage—to dominate this critical global industry. It has already invested \$60 billion to develop an indigenous semiconductor industry, with plans to invest another \$100 billion over the next 10 years.

Chinese leaders understand that, as steam and steel were the guarantors of economic and military strength in the 19th century and the atom in the 20th, so will silicon be in the 21st. They understand that a country that can't produce its own semiconductors can't defend itself. And that is precisely the risk to the United States if our technological dominance is eclipsed by Communist China. Further, as we learned from recent shortages in the wake of COVID-19, there are risks to relying on supply chains for critical products that are largely manufactured in one country.

That's why we worked to secure a new commitment from the world's leading semiconductor manufacturing companies to open the most advanced chip factory in the United States. Taiwan Semiconductor Manufacturing Company (TSMC) which, along with Samsung, is one of only two companies capable of producing cutting-edge five-nanometer chips, has announced plans for a cutting-edge facility in Arizona.

This facility will boost American competitiveness by ensuring that the United States will have the capability to produce the chips powering everything from 5G base stations to smart phones to F-35 fighter jets. It will also create tens of thousands of new U.S. jobs, both in the semiconductor industry and throughout the high-tech supply chain.

The TSMC plant is a tremendous step to jumpstart a new era of U.S. high tech leadership, but we must keep moving with speed and purpose to create a level playing field for American tech leadership to thrive.

New Federal incentives should be made available to any company, domestic or foreign, that would undertake such a project anywhere in the United States.

These initiatives will enable the United States to build semiconductor manufacturing capacity, and in turn generate a domestic supply chain for materials, equipment, parts, components, and services. For example, when TSMC completes the construction of its planned facility in Arizona, eight major suppliers plan to open new operations here. If other companies replicate TSMC's decision, it will create the ecosystem we need to maintain and grow our U.S. leadership in this critical sector.

The U.S. commercial space industry has demonstrated that our Nation can overcome even the most daunting challenges. Success in semiconductors is measured in nanometers, not miles. By restoring America's rightful place in leading a semiconductor manufacturing capacity, we will create greater security and more jobs for our citizens. We will secure an American legacy of innovation that has made us the most prosperous nation in history.

Supply Chains

In a recent letter to U.S. business leaders, I asked corporate boards to keep their supply chains clean from any of the human rights abuses in Xinjiang, including forced labor. We are asking financial institutions, pension funds, index funds, and university endowments to keep their investments clean and free from Chinese companies that violate human rights, profit from forced labor, build advanced weaponry, or contribute to the erosion of Hong Kong's autonomy and freedoms.

Up to this point, the CCP has concealed the forced labor and other human rights abuses in Xinjiang and beyond that serve American companies all over China. What makes matters worse is that the average U.S. investor in companies that do business in China has been unknowingly supporting the CCP's authoritarian machine. And American technology has been transferred to, bought, or stolen by the CCP to create a dystopian surveillance state that history's most repressive dictators could have only dreamed of.

Addressing these critical challenges starts with the most fundamental business principle: transparency is visibility, and visibility is accountability.

To help shine the light of transparency, the State Department joined the Departments of the Treasury, Commerce, and Homeland Security on July 1 to issue a business advisory regarding potential supply chain exposure to entities engaged in forced labor and other human rights abuses in Xinjiang. This is a start, particularly when coupled with the addition to the Commerce Department's Entity List of 48 PRC institutions and financial sanctions on persons involved in human rights abuses.

As I said in my follow up letter to CEOs all across our country, the boards of their institutions have a moral responsibility and perhaps even a fiduciary duty to ensure

the institutions divest from companies that contribute to human rights abuses, and to establish governance principles that prevent these investments going forward. Pension funds, university endowments, mutual funds, insurance companies, venture capital firms, institutional investors, and particularly emerging index funds should, at a minimum, disclose to their constituents the Chinese companies they invest in.

However, the biggest “difference makers” in ending human rights and labor abuses like the ones in Xinjiang are every day citizens. At the end of the day, the American people are accountable, and they have more power than they think. As my 94-year-old mother says, “If it is to be, it is up to me.”

How? If they have a pension plan, if their brokers invest in an emerging index fund, if their universities have an endowment fund, if they invest in a mutual fund, ETF, private equity or venture fund, every day Americans can ask these entities to disclose their Chinese investments. If not, they can ask to get a list of the Chinese companies they invest in. If these entities can’t or won’t provide the information, then investors should consider whether they are comfortable with this lack of information.

One Belt One Road

As developing nations reel from the shock of the China-born pandemic, they are also coming to terms with another Chinese pandemic that can’t be cured by a vaccine and will ravage developing nations for years: a rising wave of unsustainable debt owed to the PRC.

For years, the PRC has couched its debt-financed One Belt One Road (OBOR) initiative in the language of cooperation, development, connectivity, and win-win. Nothing could be further from the truth. Follow the money, and you see that OBOR lending is part of the CCP’s covert, corrupt, and coercive toolkit for pursuing its geostrategic interests.

China has used this predatory OBOR lending in an attempt to dominate the Eurasian landmass in one massive supply network with China at its head, locking in global access to rare-earth minerals, critical materials, oil, natural gas, cotton, lumber, and other natural resources to feed their industrial-military machine.

Almost all Chinese overseas lending is extended by the Chinese government and various state-owned entities, not by private banks. This makes China by far the world’s largest official bilateral creditor, with outstanding claims in 2017 surpassing those of all 22 Paris Club governments combined.

China frequently requires its sovereign loans be backed by collateral. Ecuador’s billions in debt to China—comprising oil-backed and investment loans that the previous administration contracted in secret with PRC state-owned companies—are a classic example giving China the right to claim Ecuadorean state assets in the event of missed payments.

For developing economies to rebuild in the wake of the pandemic, the carnage of Chinese debt must end. Therefore, to help the poorest countries respond to pandemic-related shocks, the G20 and Paris Club are freezing 2020 government loan payments under the Debt Service Suspension Initiative, which was developed by the G7 under the Treasury Department’s leadership. While the Chinese government signed onto the initiative, it is excluding some claims of its largest government creditors, such as China EXIM and the China Development Bank, from the effort.

The United States is calling on all Chinese creditor agencies to fully and transparently implement the G20-Paris Club Debt Service Suspension Initiative, waive nondisclosure clauses, and refrain from using them in the future. Just as important, we must join in calling on all citizens, companies, and countries of the world to object to the CCP’s opaque predatory lending.

Protecting U.S. Higher Education

During this unprecedented period in modern history, American universities and colleges are on the frontlines of addressing many of the challenges presented by the pandemic. At the same time, these great institutions are at the forefront of an equally serious challenge brought on by the authoritarian influence of the CCP described in this *Letter* that has broad implications for ensuring academic freedom, honoring human dignity, protecting university endowments, and safeguarding intellectual property.

At the U.S. Department of State, one of our primary missions is to monitor and advocate for freedom, including academic freedom, around the world. American institutions of higher learning are the envy of the world and have always been an invaluable partner in that mission. That is especially true now as we join hands to work through myriad challenges brought on by the pandemic so that we can continue welcoming students from around the world to America’s shores. This includes

an orderly resumption of student visa issuances as the situation dictates at our embassies and consulates around the world.

As a former Chairman of the Board of Purdue University, I recognize that when addressing a long-term strategic issue of this magnitude, the responsibility sits squarely on the shoulders of each and every board member. Our concern is with the malign actions of the CCP and specific individuals, not with the Chinese people or the overwhelming majority of Chinese students in the United States. Our goal is to see an improved, open, and transparent environment in which U.S. and Chinese scholars can engage with greater trust. We seek your assistance in an effort to safeguard U.S. technology and institutions, and to ensure our national and economic security remain safe and free from foreign interference.

After spending many years leading public companies, I have learned that leadership in the face of challenges starts with that magical principle of transparency. Good leaders know that visibility is accountability. And this is where university and government leaders are partners once again.

A number of American universities and colleges are home to Confucius Institutes, partially funded and controlled by the PRC. As the American Association of University Professors noted in a 2014 report, “Confucius Institutes function as an arm of the Chinese state and are allowed to ignore academic freedom.”

While ostensibly intended to teach Americans about Chinese language and culture, they also exert malign influence on U.S. campuses and disseminate CCP propaganda. There is increasing evidence that Confucius Institutes spread PRC influence by providing institutions with financial incentives to abstain from criticizing PRC policies; putting pressure on faculty to self-censor; monitoring overseas students for loyalty to the party; and undermining freedom of expression by disrupting campus events deemed controversial to the CCP.

CCP propaganda has also spread into our K–12 schools through the Confucius Classrooms program. Designed to provide Chinese language and cultural education, Confucius Classrooms teach PRC-approved curriculum to thousands of students across the United States.

Our goal is to shine a light on Confucius Institutes programming, PRC citizen staffing, funding and operations. With this increased level of transparency, U.S. stakeholders, including universities and local school districts, can make more informed choices about the PRC influence exerted on their communities.

Studies have shown that the majority of the U.S. university endowment fund portfolios include PRC stocks listed on American exchanges either directly or indirectly through emerging markets index funds.

The U.S. academic community is in the crosshairs of not only foreign competitors contending for the best and brightest talent, but also our most valuable intellectual property. America built successful research universities on certain values: reciprocity, integrity, merit-based competition, and transparency. These values foster a free exchange of ideas, encourage the most rigorous research results to flourish, and ensure that researchers receive the benefit of their intellectual property. In turn, America attracts the best and brightest.

The PRC, however, seeks to exploit America’s openness by implementing a well-financed, whole-of-government campaign to recruit foreign experts through its more than 200 talent recruitment plans. As of 2017, China reportedly has recruited 7,000 researchers who focus on or have access to cutting-edge research and technology. For the CCP, international scientific collaboration is not about advancing science, it is about advancing the PRC national security interests.

Just as our fine institutions vet employees for scientific rigor or allegations of plagiarism, we also must vet for financial conflicts of interests and foreign sources of funding. If our researchers can assess potential collaborators’ experience and past publications, they should also assess any government affiliations and ulterior motivations. My experience in the business, education, and government sectors tells me that there is tremendous power in uniting those sectors as a force for good if we are all armed with the truth. The world is watching, and the integrity of our democracy and educational institutions is in our hands.

China’s Assault on the Environment

The CCP’s actions wreak havoc on the Earth’s air, water, and land—Beijing can and must change course, but only if the international community unifies in public pressure, rather than placating. The PRC claims to be a “torchbearer” on global environmental issues—but like so many of its claims, this is an outright lie. Beijing is the largest emitter of numerous pollutants and greenhouse gases and irresponsibly exploits natural resources for its own selfish and often pernicious ends.

The PRC has been the largest emitter of carbon dioxide since 2006. Armies of Chinese workers move in to perform the work and leave a trail of environmental destruction in their wake.

The PRC is also responsible for nearly 30 percent of the plastic pollution filling the world's oceans and harming marine life. Unfortunately, persistent PRC market barriers, including those related to protection of intellectual property, hamper trade in U.S. environmental technologies that could help China address this and other challenges.

The PRC is one of the world's biggest offenders when it comes to illegal, unreported, and unregulated (IUU) fishing and overfishing agreed-upon limits—endangering species and devastating local economies. At the same time, the PRC is also the world's top subsidizer of fishing activities. With its own fisheries already depleted from overfishing, massive subsidies create incentives for the PRC's distant water fleet to plumb the high seas and other nations' waters. Just ask our friends in beautiful Ecuador, where waste from Chinese vessels is washing up on the shores of the Galapagos Islands, a World Heritage site, and important fish stocks are threatened. Beijing can and must stop its irresponsible fishing practices.

The PRC manipulates Mekong River flows for its own profit at great cost to downstream nations. Through the Mekong Water Data Initiative, the United States is helping empower the people in the Mekong region to advance transparent river management, even as they suffer from PRC efforts to impede the water flow for the use of their people.

While the United States advocates for sustainable forestry practices and supports the Trillion Trees initiative, China is the world's largest consumer of illegal timber products. Perhaps most sadly, China is the biggest consumer of illegal wildlife products. Wildlife "wet markets" create extreme risks for diseases of animal origin like COVID-19 to transmit to the human population. I echo Secretary Pompeo's call for Beijing to shut down these markets immediately and permanently.

When exposed, Beijing knows how to change its tune. In 2008, U.S. diplomats installed air quality monitors on top of the U.S. Embassy in Beijing. We shared the data publicly and revealed what residents already knew: the air quality was dangerously worse than the CCP was willing to admit. That small act of transparency catalysed a revolution in air quality management, and Beijing made air quality a priority. From that experience, we know the CCP can change—especially if we shine a light on their hypocrisy and deceit. Countries, companies, and every day citizens can make it clear that it is up to the PRC to end these selfish, damaging practices, and protect the air, water, and land on which life itself depends.

Conclusion

Tackling the many facets of the China Challenge will require the whole government, our powerful private sector, I appreciate all the dedication, energy and leadership of this subcommittee in promoting security in our Nation's commerce and advancing America's economic security abroad.

This requires acknowledging the true aspirations of despotic regimes. It requires a bold vision for how we can win the international economic competition, protect American assets, catalyze a new era of prosperity and innovation, create enduring advantages for the American people, and spread the success of free enterprise around the world.

The United States is taking the difficult but necessary steps to begin to address the threat now. If we do not, we risk letting the opportunity pass and forever regretting that we did. I thank you for the opportunity to appear before you today and I look forward to working with each of you as we join together to confront a dangerously ascendant China and take the steps necessary to safeguard American economic security.

Senator SULLIVAN. Thank you, Mr. Secretary.
Secretary Nikakhtar.

**STATEMENT OF HON. NAZAK NIKAKHTAR, ASSISTANT
SECRETARY, INTERNATIONAL TRADE ADMINISTRATION,
INDUSTRY AND ANALYSIS, U.S. DEPARTMENT OF COMMERCE**

Ms. NIKAKHTAR. Thank you, Chairman Sullivan, Ranking Member Markey, and Members of the Subcommittee.

Good morning, and thank you for the opportunity to testify.

We are at a historic crossroads in the U.S.-China relationship and the steps we take now will chart the course of U.S. economic and technological leadership for decades to come.

In 2017, the U.S. began for the first time to confront head-on the challenges posed by China's predatory practices. Those practices had been ignored for decades and as a result the United States lost capabilities in sector after sector in manufacturing and technology that are so critical to this Nation's security.

In order to understand the PRC's predatory economic strategy, it's important to understand the specific tactics or tools that it deploys. Indeed, China's most effective tools by design are those that are governed by weak or non-existent international rules and disciplines.

Case in point, the PRC takes advantage of the absence of international rules over state-owned enterprises to funnel massive amounts of resources to SOEs with the intent of dominating strategic sectors worldwide.

The government also distorts prices and costs throughout its economy to distort land and property, energy, wages, and raw material prices in order to export under-valued goods and services worldwide.

The goal is to under-price competitors to force them out of the market. The goal is to hollow out our industries.

Next, the PRC Government takes advantage of the dearth of rules governing global overcapacity to flood world markets with goods at uncompetitive prices. This has been its strategy in steel, aluminum, chemicals, and optical fiber cables—the infrastructure for 5G.

I fear critical industries, like semi-conductors in many parts of the China 2025 Plans, will be targets next.

The PRC is further exploiting opportunities abroad to monopolize strategic assets. For example, the PRC's increasing control of the raw materials necessary for high-tech products by purchasing mines abroad, cobalt, graphite, lithium, nickel, and platinum, to name a few.

The impacted countries are the United States and our allies and because these critical materials are finite assets that cannot be replaced, China is able to exert influence over the rest of the world by withholding access to them.

Next, as we know the PRC regularly supports and directs the theft and misappropriation of U.S. intellectual property. This is well understood, but what's less discussed is this. Even when Chinese firms are perceived to collaborate in technological development, take, for example, Huawei's announcement that it's planning to build in the U.K. a \$1.2 billion optical fiber cable research facility, the gains are only one-sided.

Chinese companies will benefit from collaboration with international scientists abroad and then repatriate the technology to China to generate overcapacity to eliminate competition and obtain a monopoly position.

In sectors like 5G where optical cables provide the infrastructure, the national security implications are obvious.

China's engagement in international standards as a way to influence global technology market is also of great concern.

Finally, it's worth emphasizing that because China is a sovereign state, foreign laws can never be sufficient to fully address its conduct. It is not an actor that has shown a great interest in adhering to international laws at all.

Of course, the past policies of the U.S. have failed to prevent China's rise as a predatory economic actor. To build our seemingly efficient supply chains, we flocked to China as a low-cost producer and traded our most sensitive intellectual property in exchange for short-term market access and profits. As a result, we willingly transferred our debt and exported our manufacturing capabilities and jobs to a non-market economy where market principles and transparency do not exist.

By doing this, we created a global economy where distorted prices and non-market conditions are allowed to proliferate rather than market-based ones.

By understanding what has led to the erosion of our supply chains, then it stands to reason that a comprehensive reshoring strategy must remedy those causes.

At the outset, the United States must systematically identify all items that are critical to our national security to assess our dependency on imports. This Administration, my office in particular, on behalf of the White House, has begun to do this. We need to continue to do this on a permanent basis.

A second essential component is incentivizing inward investments in domestic R&D and manufacturing capabilities. We've begun doing this through tax cuts to boost innovation and economic growth. Let's do more.

Third, U.S. Government procurement authority. This is critical to providing capital to new American investments and to generate immediate demand for those new production operations. This will compel companies to take a leap of faith and reinvest in the United States.

And it is, of course, axiomatic that for U.S. investments to grow, we must have a strategy to fight back against predatory import competition, low-cost imports that aim to undercut U.S. production and growth.

These foregoing elements are essential to a comprehensive reshoring strategy. It will require a whole of government approach, but I can tell you as a trade lawyer and an economist, they will be effective in rebuilding supply chains that are robust and are resilient.

I'd like to conclude by emphasizing that the global economy of the 20th Century was developed by the United States and although China is aggressively seeking to shape the global economic order of the 21st Century, it is not too late to act.

Our supply chain vulnerabilities are too great to await yet another national security crisis that may expose this country to even more peril.

Thank you.

[The prepared statement of Ms. Nikakhtar follows:]

PREPARED STATEMENT OF HON. NAZAK NIKAKHTAR, ASSISTANT SECRETARY,
INTERNATIONAL TRADE ADMINISTRATION, INDUSTRY & ANALYSIS,
U.S. DEPARTMENT OF COMMERCE

Good morning, Chairman Sullivan, Ranking Member Markey, and Members of the Subcommittee, thank you for providing me the opportunity to testify today regarding the United States' economic relationship with the People's Republic of China (PRC). We are at historic cross-roads in the U.S.-China relationship, as the steps we take now will chart the course for U.S. economic and technological leadership, and will shape the landscape for the democratic world for decades, and possibly centuries to come.

The Department of Commerce's International Trade Administration is responsible for strengthening the competitiveness of U.S. industry in the United States and global marketplace, increasing investments in America, monitoring compliance with U.S. trade agreements, and enforcing U.S. trade laws. At Industry and Analysis (I&A), we are, in particular, responsible for working with businesses to develop international trade and investment strategies for a range of industries from the manufacturing sector to the financial services sector, including industries that are critical to the United States' national security interests. I&A also leads the Commerce Department's participation in the Committee on Foreign Investment in the United States (CFIUS), a committee that reviews certain specific foreign investments and real estate transactions in the United States for their impact on U.S. national security.

Today, I would like to speak about challenges to the United States' national security industries and set the stage for the successful commercial growth of our most critical sectors. In 2017, the U.S. Government began, for the first time, to confront head-on the challenges posed by China's predatory practices. Those challenges had been ignored for decades and, as a result, over the course of the past 40-plus years, the United States has continuously lost capabilities in sector after sector in manufacturing, technology, and services that are essential to our national security. In goods alone, the offshoring of manufacturing has created supply chain vulnerabilities across hundreds of critical products, ranging from semiconductor and electronics manufacturing to the development of active pharmaceutical ingredients. This has led to job losses of between 3.4 to 3.7 million between 2001 to 2018.¹ In key sectors such as communications equipment, electronics and computer technology, we ceded up to 40 percent of the domestic market share to Chinese imports, and globally China has captured 40 percent of market share in those sectors as well.

To underscore with examples of where that leaves us, the United States does not have the domestic supply chains required to manufacture many key electronic components for our telecommunications systems, or many active pharmaceutical ingredients for medicines to serve America's health needs. Nor does the United States process the rare earth elements that produce magnets that are essential for military and weapons uses, as processing is now dominated by China. Even the more mature steel and aluminum industries have been experiencing existential challenges, as global overcapacity continues to weaken American firms. Where the United States was once the undisputed leader in technological innovation and industrial advancements across the board, it is now struggling to remain competitive in many key industries.

There are two classes of state actors in the global economy. The first class is comprised of nations that generally adhere to their obligations under the rules and principles of the global economic and trading system, as enshrined in international organizations such as the United Nations, International Monetary Fund, Organization for Economic Cooperation and Development, and the World Trade Organization (WTO). The second class is comprised of nations that either do not adhere (or selectively adhere) to these rules and norms, or actively circumvent them. While both classes of nations can introduce distortions into the global economic order—for example, through corporate subsidies and discriminatory nontariff barriers—the distortions can be managed when dealing with rules-based state actors and market-oriented economies. Here, international agreements may provide viable legal mechanisms to address non-competitive, market-distorting behavior, and states have historically adhered to their binding commitments or improved their practices when compliance fell short.

¹ Scott, Robert; Mokhiber, Zane, Economic Policy Institute, "Growing China Trade Deficit Cost 3.7 Million American Jobs Between 2001 and 2018," (Jan. 30, 2020) <https://www.epi.org/publication/growing-china-trade-deficits-costs-us-jobs/>; also Census Data and Department of Commerce calculations.

The Chinese Communist Party (CCP), on the other hand, does not just fall within this second class of state actors. It is also, by far, the most distortive economic actor that the global trading system has ever encountered. Not only are the current rules of international trade and monetary policy largely ineffective when dealing with China but, as a non-market economy under the tight control of the CCP, the government of the People's Republic of China flagrantly flouts those rules when it believes it is in its interest to do so, and shows no intention of reforming to a market-based system or adhering to its international obligations when those rules frustrate its national industrial goals. And because of China's size and scale, it has been able to weaken international supply chains and disrupt the global economy significantly. In this respect, the threat from China is formidable, and it is the largest threat the United States has encountered to date.

But we need to remember that this threat is nothing new, it has its roots in the Cold War. Khrushchev famously said "We," meaning the Sino-Soviet bloc, "declare war upon you," the United States, "in the peaceful world of trade. We will declare a war; we will win over the United States." Again, quoting from the Prime Minister of the Soviet Union, "We," again referring to the Communist states, "value trade less for economic reasons and most for political reasons." The hearing transcript for the Trade Act of 1962 includes these powerful statements. Perhaps in response to this threat, in the "Statement and Purpose" subsection of the Trade Act of 1962, 19 U.S.C. 1801, Congress explicitly enacted into law the goal of Chapter 19; it is *inter alia*, "through trade agreements affording mutual trade benefits" to "prevent Communist economic penetration." This provision is still valid today precisely because the threats continue today. And after 1979, when the United States formally normalized trade relations with China, the PRC government accelerated its plan to augment global economic and military strength in a quest that it concedes will ultimately lead to a great power struggle against the United States.

The PRC government's weapon of choice is predatory economic tactics, and it has successfully used such tactics to disrupt global supply chains and weaken the technological advancements of the United States and its Western allies. China has transformed itself into the epicenter of global commerce, has centralized manufacturing and research and development (R&D) hubs within its own borders and, with this, it has accumulated the power to influence all economies that are dependent on it.

CHINA'S USE OF PREDATORY ECONOMIC TACTICS TO CAPTURE CRITICAL SUPPLY CHAINS AND TECHNOLOGY

In order to understand the PRC government's predatory economic strategy, it is important to understand the specific trade tools that it deploys. Indeed, China's most effective tools, by design, are those that are governed by weak or non-existent international rules and disciplines. To understand a "strategic competitor" or an "adversary," one has to understand their tactics. To counter those tactics, we need to consider how our laws need to be strengthened.

Case in point: China's economy has grown in large part because of the massive subsidies it provides to industries, and the lack of transparency on the subsidies it provides results from its failure to notify them completely to the WTO, as well as the absence of effective WTO rules governing the types of market-distorting industrial subsidies used in China.² It is difficult to legally challenge what we do not know about or what the rules do not cover. Moreover, China leverages its self-designated developing country status to avoid complying with existing WTO rules and obligations, and WTO rules are generally silent on how a member state can challenge another country's self-designated status.

Next, the PRC government takes advantage of the absence of applicable international rules over state-owned enterprises (SOEs) to funnel massive amounts of capital and other resources to SOEs with the well-publicized intent of dominating strategic sectors worldwide. The PRC government also distorts prices and costs throughout its economy (*e.g.*, land and property, energy, wages, and raw materials) through direct price controls and to export undervalued goods and services worldwide, thereby weakening the competitive positions of market-based firms. Dangling possible access to China's large consumer market and making available cheap labor, goods and services are also how China lures foreign manufacturing capacity and technological know-how into its own borders. And as the CCP controls the govern-

² Examples include Chinese government subsidies that constitute unlimited guarantees to corporations, subsidies to insolvent or ailing enterprises lacking credible restructuring plans (also known as "zombie" companies), subsidies that encourage global overcapacity, subsidies to firms unable to obtain long-term financing from independent commercial sources that are operating in sectors or industries in overcapacity, and direct debt forgiveness.

ment of a sovereign state, it knows full well that its non-market economic system is unaffected by legal challenges or the prospect thereof by the rest of the world; even possible losses of legal challenges at the WTO may not be incentive enough to compel China to reform a system that has served it so well and eroded the competitive positions of its adversaries so quickly.

Just as alarming, the PRC government takes advantage of the dearth of rules governing global overcapacity to flood world markets with distortedly low-priced goods. In 2019, China's overcapacity significantly depressed global prices in the fiber optical cable market. Its strategy is to eliminate competitors and obtain absolute control over this critical 5G infrastructure asset. The PRC government has previously deployed the same strategy in the steel and aluminum sectors, among many others, and the same strategy will create excess capacity in new sectors in the future. And notwithstanding the fact that the 2020 coronavirus pandemic has dramatically reduced demand for steel and aluminum products worldwide, China has once again ramped up steel and aluminum production and dramatically increased inventories, contributing to drastic global price depression. This illustrates the national security threat to our steel and aluminum industries and why the President imposed Section 232 tariffs to address the impact of overcapacity and the threat posed by steel and aluminum imports. Outside the United States, however, the global surge continues and China's actions are still destabilizing the global steel and aluminum industries.

The PRC government is further exploiting opportunities abroad to monopolize strategic ports and mines (among other assets). State-backed Chinese investors own 10 percent or more of equity in ports in Europe, and it has major deals in Greece, Italy, Spain, France, the Netherlands, and Belgium. This is in addition to a growing number of investments in more than 40 ports in North America, South America, Eastern Europe, the Middle East, Africa, Central Asia, South and Southeast Asia, Australia, and the Pacific. The PRC government is similarly increasing control of the raw materials necessary for manufacturing high-technology products (*e.g.*, phones, vehicles, advanced energy storage systems, and magnets) that are sourced from a small number of countries, and for which substitutes are unavailable. Operating in niche markets with limited transparency, often in politically unstable countries, Chinese firms continue to capture supplies of cobalt, graphite, lithium, nickel, niobium, and platinum, to name just a few. Because these minerals and metals are finite assets that cannot be replaced, China is able to exert influence over the rest of the world by withholding access to these assets to compel nations to bend to its will.

Additionally, in its never-ending quest for technological superiority and control over key positions in the industrial value chain, the PRC government regularly has supported or directed the theft and misappropriation of U.S. technology and intellectual property (IP). Monetary damages accrued to the United States are estimated to range from \$50 billion to as high as \$600 billion annually. Moreover, by making short-lived market access promises to cutting-edge technology companies, the PRC government pressures the most technologically-advanced firms to transfer IP and sensitive data to it. The PRC government ultimately uses the IP it extracts from companies to displace them from the market. China's increased dominance in key segments of the industrial value chain further cements its technology transfer approach. Even where Chinese firms are perceived to "collaborate" in technology development, take for example Huawei's announcement that it plans to build a \$1.2 billion optical fiber research facility in the United Kingdom, the gains are only one-sided.³ Chinese companies will, as directed by the PRC government, benefit from scientific research and collaboration with international scientists abroad, resulting in some cases in the repatriation of technology to generate overcapacity to eliminate competition and obtain a monopoly position. In sectors like 5G, where optical fiber cables provide the infrastructure for an impending technology revolution, the national security implications are obvious.

It is also reported that the Chinese government, this year, is implementing a nationwide credit rating system for all corporations—foreign-owned or Chinese-owned—operating within China. Companies handling sensitive personal data and proprietary technical information will be required to transfer that data to the Chinese government. The European Chamber reports this credit rating system as amounting to "life or death" for companies.⁴

³ Gold, Hadas, CNN, "Huawei to Build \$1.2 Billion Cambridge Facility as It Faces Uncertain UK Future," (June 25, 2020) <https://www.cnn.com/2020/06/25/tech/huawei-cambridge-uk/index.html>.

⁴ European Chamber of Commerce, "European Chamber Report on China's Corporate Social Credit System, A Wake Up Call for European Businesses in China," (Aug. 28, 2019), <https://>

China's engagement in international standards as a way to influence the global technology market also is of great concern, but it is often not fully understood. To illustrate this attempted influence, take for instance the fact that, from 2011 to 2019, the number of Chinese-led technical committees in the International Organization for Standardization, one of the largest international standards setting organizations, increased by 75 percent.⁵ Further, China has strategically increased its participation in the International Telecommunication Union (ITU), an agency of the United Nations responsible for coordinating telecommunications operations and services, with the hopes of expanding its influence around the globe. In fact, in key technology working groups of the ITU, China alone comprises 40 percent of participants.⁶ Moreover, China's press into international standardization ranges from introducing weak proposals into the standards development process, flooding the organizations with low-quality proposals that detract from and take resources away from sound proposals, to making financial contributions as a way to wield power over those organizations and to punish member companies and countries that do not side with its agenda. Indeed, China's participation in international organizations has become a vehicle to advance its One Belt One Road Initiative, and the more influence China has over standards development, the more likely this initiative will succeed.

Additionally, China uses other international organizations to advance its global ambition, including the Belt and Road Initiative. To illustrate, it has been reported that the head of the UN Department of Economic and Social Affairs used his position to discriminate against people and organizations who were drawing attention to the CCP's repression of the Uighur ethnic group. The World Health Organization's capture by the Chinese government, by failing to alert countries to the rapid transmission of the coronavirus, is yet another recent example. Even more to the point, if the Chinese government is currently threatening to retaliate against Nokia and Ericsson for the EU's possible move to ban Huawei from their 5G systems,⁷ imagine the types of influence that China could wield if it is able to dominate global standards organizations and the standards themselves.

Finally, it is worth emphasizing that because China is a sovereign state, foreign laws can never be sufficient to fully address its conduct. In fact, the PRC government takes advantage of the United States' lack of an extradition treaty with it to advance cyberattacks on sensitive U.S. assets. The attacks not only obtain proprietary trade secrets from companies and sensitive personal information about American citizens from servers, but these attacks also target crucial weapons systems and sensitive military technology (well-documented examples include attacks that extracted sensitive information about U.S. submarines, cryptographic systems, the F-35 Joint Strike Fighter, and anti-ship missiles that are crucial for deterrence and developing countermeasures). China's medium of cybertheft also includes stealing computer software source codes, design technology, and technical product specifications. And the PRC government continues to violate its 2015 bilateral commitment to the United States in which it had vowed to refrain from stealing and misappropriating U.S. IP.

The tactics used by the PRC government over the course of the past 40 plus years have enabled the country to move its economy from the 12th largest in the world (\$191 billion gross domestic product, GDP (current prices), in 1980) to the second largest (\$14 trillion GDP (current prices) in 2019); become the second largest foreign holder of U.S. debt at \$1.09 trillion in 2019 (the first largest being Japan holding \$1.27 trillion), and grow as the world's largest exporter of goods. Indeed, the United States' largest bilateral trade deficit is with China (\$345.6 billion in deficit in goods in 2019). In addition, China today holds uniquely powerful positions in the most critical supply chains in the world including rare earths elements, medical equipment and supplies, pharmaceuticals, and electronics.

The past policies of the United States did not effectively impede or curtail China's rise as a predatory economic actor. To build our seemingly efficient supply chains, we flocked to China as the low-cost producer of virtually every link in the chain, allowed the PRC government to build reserves of U.S. dollars which it used to de-

www.europeanchamber.com.cn/en/press-releases/3045/european_chamber_report_on_china_s_corporate_social_credit_system_a_wake_up_call_for_european_business_in_china.

⁵ Kamensky, Jack, China Business Review, "China's Participation in International Standards Setting: Benefits and Concerns for U.S. Industry," (Feb. 7, 2020) <https://www.chinabusinessreview.com/chinas-participation-in-international-standards-setting-benefits-and-concerns-for-us-industry/>.

⁶ Department of Commerce calculations.

⁷ Lin, Liza; Woo, Stu; Wei, Lingling, "China May Retaliate Against Nokia and Ericsson If EU Countries Move to Ban Huawei," Wall Street Journal (July 20, 2020), <https://www.wsj.com/articles/china-may-retaliate-against-nokia-and-ericsson-if-eu-countries-move-to-ban-huawei-11595250557>.

value its currency, traded our most sensitive intellectual property in exchange for short-term market access and profits, and did not adequately use legal enforcement tools to protect our industries. Our motives were short-sighted, and we failed to sufficiently anticipate the vulnerabilities that this trading relationship would create.

As a result, we willingly transferred our debt and exported our manufacturing capabilities (and jobs) to a non-market economy where market principles, transparency, and predictability do not exist. By doing this, we created a global economy where distorted prices and non-market conditions are allowed to proliferate. We also put China in control of our revenue stream. This vulnerability is often not discussed among policymakers, but it is important to emphasize: within our highest-technology sectors, substantial revenue comes from U.S. exports to China. This means that China, by controlling America's revenue stream, also controls America's ability to earn income and fund R&D. This is an extraordinary vulnerability that, if unaddressed, will be used by the PRC government to further halt America's technological progress.

RESHORING CRITICAL SUPPLY CHAINS

Traditionally, economists have viewed calls for countries to pursue policies aimed at protecting national security production capacity skeptically. They argued that a nation could, in a globalized world, always turn to other countries if the domestic supply chains eroded at home. However, what we have learned from the coronavirus crisis is that borders do matter because any state has the sovereign right, and ability to, restrict exports to the rest of the world. Indeed, the PRC government strategically withholds exports: (1) as a bargaining chip to extract concessions from trading partners; or (2) to punish trading partners that do not bend to its will. Even our allies introduced earlier this year—at the height of the pandemic—emergency export restrictions over much needed medical equipment in order to provide for their own citizens to the detriment of neighbors in need.

These facts should serve as an important reminder to the United States that the security of domestic supply chains is essential, and it must be regained because the basic political and economic unit should *always* remain the nation-state. Indeed, the protection of American citizens requires that the United States' vulnerable supply chains be strengthened, and a major component of supply chain resiliency must be reshoring. But how can the United States reverse the excessive offshoring that has occurred over the course of the past 40 years?

The problem is complex, but it can be solved through a whole-of-Government approach. That is, if we collectively are prepared to tackle difficult policy questions, even those that may run counter to long-held economic biases. To the extent that those biases once formed policies that incentivized critical industries to offshore, then logically they need to be revised or reversed.

Understanding what has led to the degradation of our supply chains, then it stands to reason that a comprehensive reshoring strategy must remedy those causes. At the outset, the United States must systematically and routinely identify all products, goods, and technologies that are critical to national security to address the country's dependency on imports from strategic competitors, whether in a time of war, cyber-attack, pandemic or other national emergency. This Administration—my office in particular on behalf of the White House—has begun doing this. We need to continue this on a permanent basis. An additional component here is measuring the flow of technology if it is now as equally as important, and in many instances more important, than the traditional “national security good.”

A second essential component of a reshoring strategy is incentivizing inward investments in domestic manufacturing and R&D activities. We have begun doing this to boost innovation and economic growth through tax cuts. A whole-of-Government approach, in partnership with Congress, will continue to make this effort successful.

Third, we have in our arsenal of tools powerful U.S. Government procurement authority, including the Defense Production Act authority, to provide capital to new American investments and also as a tool to generate demand, through U.S. Government purchases, for national security-related items that are produced within the United States. Reliance on Government procurement authority is what will compel many companies to take a leap of faith and re-invest in the United States. This is an important tool that we are using and should be empowered to use even more.

Fourth, it is, of course, axiomatic that U.S. investments must be encouraged to grow to commercial scale in order to compete against more mature foreign competitors. Further, an industry's commercial viability will generate robust upstream and downstream supply chains, draw in new market entrants to enhance production efficiency and moderate prices, attract greater private sector investments, and encourage competition to accelerate R&D. These are the fundamental building blocks of a resilient domestic supply chain.

Finally, we have the ability to increase exports of all U.S. firms—including those that re-shore to the United States—through trade agreements. We have begun to increase exports through the U.S.-Mexico-Canada Trade Agreement and the U.S.-Japan Trade Agreement, and we should continue to encourage greater exports through new trade deals.

With the support of Congress, we can build the strongest supply chain in the world, enhance our comparative advantage with allies, and create an ecosystem where market-based principles prevail and market distortions are eliminated. We have begun doing this; we can do more together, which is why this hearing is so important.

CONCLUSION

Historically, through times of adversity, the United States has led the world out of war and economic turbulence into recovery. And now too, the world will look to the United States to lead the way in solving today's supply chain challenges. It should not be forgotten that the global economy of the 20th century was developed by the United States and, although China is aggressively seeking to shape the global economic order of the 21st century, it is not too late to act. While the United States remains the largest economic power in the world (a status that is not guaranteed as China's exponential growth continues), it has the ability and leverage to act in coordination with allies. Time is of the essence, and our supply chain vulnerabilities are too great to await another national security crisis that may expose this country to even more devastation and destruction.

Senator SULLIVAN. Thank you, Secretary Nikakhtar and Mr. Secretary, thank you.

I want to begin with you on really, I think, kind of the critical question here and that is this issue of alliances. Some of my colleagues have been critical of the Trump Administration's approach. I believe that certainly our previous panel mentioned something that I believe we are an ally rich nation, China is an ally poor nation, maybe North Korea is their only true ally, and a strategy of deepening and expanding our alliances is one that I think is very important.

I actually think that this Administration has been working hard on that in areas, such as Vietnam, India, but your statement about a new coalition, the previous panel actually talked about the idea of a D10 democracy coalition.

Can you talk about that in more detail and what you and Secretary Pompeo are starting to do in that regard and the success you're seeing and how we in the Senate, and I think there's strong bipartisan support to help you with this, how we can support that?

Just one of many anecdotes. Of course, we see a number of world leaders and senior officials from all over the world that come through the Senate. A number of them have been saying it has to be the United States to lead on this coalition against China. We want it to happen, but if we step out, a smaller country, we feel that we'll get really creamed by the Chinese. If the United States leads, we will support that under U.S. leadership.

So can you give us a little bit more detail on what you talked about in your opening testimony which I think is very promising and will have strong support in the Senate?

Mr. KRACH. So you're absolutely right, Senator.

Senator SULLIVAN. Mike.

Mr. KRACH. You're absolutely right. The biggest elephant in the room is China's retaliation. It terrifies countries and it terrifies companies and this is the whole reason for an alliance of democracies which would also include the private sector because there is

strength and power and unity and solidarity and if you look at China's tactics, they're a bully, and we've all—

Senator SULLIVAN. Do you believe like the panelists that testified before that China recognizes that this is our ultimate strength right now, our long-term deep global network of alliances that we have and that they pretty much don't have at all?

Mr. KRACH. Yes. So if you—by the way, if you look at what our strategy's comprised of, it's taking our comparative advantages and amplifying those and actually create component advantages and a big one is our like-minded partners and our friends and so it's time to turn the table on them and use that against actually China because they've been using it against us.

I think the biggest delta in terms of opportunity of strategy is—and I said this when I got confirmed—is for the strengthening of our relationship with our allies and friends, leveraging the innovation and resources of private sector and amplifying the moral high ground of American values.

So to be able to combine that all into one is huge and, you know, bullies back down when they're confronted. We've all experienced them at some point and they really back down if you have your friends by your side and that's why, for example, when Boris Johnson said, hey, we're going to reconsider that Huawei decision. That was a few months ago. You could see immediately the retaliation by the CCP.

Beijing threatened the HSBC Bank and the Chinese U.K. Ambassador threatened to take away their \$100 billion infrastructure investment in the U.K.

Secretary Pompeo stood right up and he said, look, we stand with our allies. We stand with the U.K. against this China bully. We'll stand up for anybody, whatever we need to do and that is the most powerful concept because what China's done is they've fragmented. They go after the weakest gazelle of the herd and—

Senator SULLIVAN. So we're starting to see success in that realm in terms of building a coalition of democracies in other countries?

Mr. KRACH. Sure. So what we see is in this coalition is to build a network of trusted partners and the fastest way to build a network is to build that network of networks.

So here are some of the things that have been going on. The Blue Dot Network, which is a network for infrastructure, for high-quality private sector-led infrastructure around the world, particularly in developing nations.

Another one is the 5G Clean Initiative. That in essence is a network, as well. There's another one in rare earth minerals that we announced and Secretary Pompeo signed off at UNGA last year. Nine initial nations and we're growing that.

We envision an energy security network, as well, and also a health care and prosperity network and really if you think of it, the pandemic's really kicked that into big gear.

So if you look at these different networks, it's all areas of collaboration. So it is investment, it's trade, it's commerce, it's energy, digital, infrastructure, research, education, and those are the things that we're going to take advantage of that momentum, and it's going to be based on those trusted principles, and as Nazak said, they're trying to take over international standards.

The way to counter that is to have an overriding set of principles that all these standards have to comply with and you can't participate unless you do. So if you have a national intelligence act that requires any Chinese company, state-owned or otherwise, any citizen, to turn over any proprietary technology, intellectual property or data upon request or suffer the consequences, then need not apply.

Senator SULLIVAN. Well, Mr. Secretary, I think focusing on our allies and what you're talking about, networks is something that will have strong support here, bipartisan support here. Your focus on critical minerals, energy, that's certainly important in my state, the great state of Alaska, but it's important to America.

These are really important comparative advantages. So we want to help you with that.

Senator Young.

Mr. KRACH. Thank you.

**STATEMENT OF HON. TODD YOUNG,
U.S. SENATOR FROM INDIANA**

Senator YOUNG. Thank you, Mr. Chairman, and welcome, Mr. Under Secretary, grateful for the incredible service you're doing over at E.

We know that a new power competition is unfolding before the eyes of the world. America's predominant challenger, China, is an unscrupulous authoritarian regime that doesn't share our values. In fact, their values are the inverse of our own and to meet these challenges, we have to once again show America has the resiliency and dynamism that it has shown over the last century.

We can harness our economy. We can renew the American project itself if we make the right moves during this moment in history.

The Endless Frontier Act is a piece of legislation I co-authored with Senator Schumer and we believe that it will provide the rocket fuel for America's innovators and entrepreneurs moving forward.

In this bill, we propose bolstering U.S. leadership in science and tech innovation and boldly increasing premarket investment in emerging tech. We propose providing in this Endless Frontier Act \$100 billion of strategic investment in the National Science Foundation to bolster science and tech research and to deliver \$10 billion to establish regional tech hubs around various areas of the country where there are existing pockets of expertise in particular sectors and technologies. That will lead to the launching of innovative companies, reviving American manufacturing and the creation of new jobs across the country.

In coming years, it will strengthen American power. It will increase our prosperity and it will carry on America's never-ending quest to continuously improve the world through innovation. We've done this before. See the 20th Century.

Under Secretary Krach, do you believe the U.S. Government should ramp up investment in large-scale domestic innovation efforts to ensure American leadership in key technologies?

Mr. KRACH. Absolutely. And by the way, I want to thank you, Senator Young, as well as Senator Schumer, for the Endless Frontiers Act because that will tremendously move the needle in these

10 critical national security sectors and will be a great catalyst for kicking off that Sputnik moment that I talk about.

One thing that I've learned out in Silicon Valley is that American innovation entrepreneurs are the best in the world, but you also got to give them time and time equals money and so talking about a \$100 billion is huge and as we've discussed before, we believe we could get some serious match from the private sector. We believe if we choose, we could get it from our allies, too.

Senator YOUNG. Well, let's explore that a little further. How could we utilize our relationships? Arguably, our greatest geopolitical resources, a country, which are those alliances that we've developed, how can we leverage those relationships with close partners and allies to speed up development and broaden the base of innovation?

Mr. KRACH. Yes. So an example, and I think Chairman Sullivan alluded to a similar concept, we call it the TD10, Techno-Democracy 10. It would start off with 10 of our closest technological allies and it would really be with two main objectives.

One is protect the strategic assets for these allies, but the other would be from an offensive position in terms of joint collaboration, joint research, all of that, as well as collaboration in terms of export controls and investment screening.

There's no doubt about it that in the China Competition, the battlefield is high-tech. Their soft underbelly is they need hard currency and to be able to put this amount of funds and to get it coupled with the private sector is going to dramatically move the needle.

Senator YOUNG. So as we think about competition with China, what I hear you saying is we shouldn't only play defense,——

Mr. KRACH. Absolutely.

Senator YOUNG.—to use a sports analogy, right? Not only apply tariffs, although tariffs have a role, not only encourage our partners and allies to forswear Huawei technologies, if there's a fear of a back door, not only ensure that our partners and allies are aware of the implications of accepting foreign aid through the Belt and Road Initiative, but also invest in ourselves, outgrow, outcompete, out-innovate the Chinese, which is arguably the most important thing we did to take down the Soviet Union.

Mr. KRACH. By the way, that is by far the Number 1 thing. If there's anything I've learned about economic state graft, because that's what we practice out in Silicon Valley, is the best defense is a strong offense. So this puts us on the offensive and gets us out of a reactionary posture and this is the Communist Party's biggest fear is that we really turn up the heat on developing these new technologies and put a serious amount of money behind it.

Senator YOUNG. So let me change my line of inquiry momentarily and you've been very thoughtful. We've met privately on this matter before, but do you envision, Mr. Under Secretary, a future where countries around the world have to choose between either the United States or China? Can we avoid this, some call it, decoupling, this economic decoupling between China and the United States?

Mr. KRACH. You know, when we envision with, for example, the alliance of democracies is we're not asking them to choose between

the United States and China. We're giving them an opportunity to participate because when you talk to them,—by the way, I've probably had 80 bilateral meetings with my foreign counterparts, you know, ministers of finance or economics, and I'll say how's your relationship going with China? What's it like? They'll go one of importance, you know. They're a big trading partner, and then they'll lean in. They'll look both ways. This will be a bilateral meeting. They go but we don't trust them.

You know, if you look at those values that we talk about, those American values, those trust principles, they form the basis of trust, and you do business with people that you trust. So think about it.

Senator YOUNG. I referred to arguably our greatest geopolitical resource is that alliance system. I challenge people. Name one ally the Chinese Communist Party, the People's Republic of China has. They have none.

Mr. KRACH. North Korea.

Senator YOUNG. They have vassal states. They have vassal states, Mr. Chairman, like North Korea. They don't have genuine alliances.

Mr. KRACH. By the way, I did write an op-ed last week in the *Wall Street Journal* about the tyrannical twins that deal between China and Iran and, I mean, here's two countries that they haven't honored an agreement. It's like the Hitler-Stalin pact.

Senator YOUNG. By the way, you're absolutely right. Your point is they would carve up Poland.

Mr. KRACH. Yes.

Senator YOUNG. That's not an alliance.

Mr. KRACH. That's right.

Senator YOUNG. That's a marriage of convenience subject to divorce at any time.

Mr. KRACH. That's right, and that's why you hear these developing nations describe the One Belt One Road as the One Belt One Way Toll Road to Beijing because they're getting the resources sucked up. They're getting their hard currency sucked up. There's a lot of things that are going on.

Senator YOUNG. Thank you for your support and encouragement as it pertains to the Endless Frontier Act. I'm grateful for the service of you and your team over there at E. You have clearly elevated that department. I know Colonel Sullivan served there before and I didn't think it could be elevated any further, but, no, I mean, it's an especially important period of time to ensure that our economic state craft is properly scoped and I'm grateful for your presence here today.

I yield back.

Senator SULLIVAN. Thank you, Senator Young, for your leadership on all these issues—

Mr. KRACH. Thank you.

Senator SULLIVAN.—and it's important that you're highlighting how important the E Section of the U.S. State Department is that the Under Secretary leads.

Senator Blumenthal.

Senator BLUMENTHAL. Thank you, Mr. Chairman, and thank you both for being here today, both witnesses. Thank you for your service to our country.

I don't know whether you were here for the last panel to hear my questions to Mr. Wessel and Mr. Doshi, but let me repeat them for you.

This morning, Senator Hawley and I wrote to the Assistant Attorney General of the United States Department of Justice, John Demers, asking for an investigation of Zoom and TikTok because of their reported, reliably reported and repeated surveillance of United States citizens, possible censorship of participants on their platforms, and essentially suppression of rights and liberties by people in this country, and those reports of censorships and other abuses led us to ask for an Investigation by the Justice Department.

Senator Hawley and I, along with other Members of Congress, have written repeatedly to Zoom and TikTok asking them about their practices of collecting information about Americans and about providing it to China, the Government of China, and they both failed to answer these basic questions.

So we have turned to the U.S. Government to protect United States citizens.

Is the Administration aware of the cooperation between Zoom and TikTok and the company that apparently owns it, Bytedance, with the People's Republic of China, and what do you plan to do about it?

Mr. KRACH. Well, I think that picks up right where I was talking about, the 5G Clean Program and Huawei.

So if you look at apps like TikTok, WeChat, if you look at the cloud providers, if you look at drones, if you look at underwater cable, it's all part of that nervous system of China's surveillance state and that's why we're preparing plans now, not just the clean network side, the 5G side, but the entire system, and I couldn't agree with you more because what these are is they're appendages to that surveillance state.

So, you know, I think what you're going to see is you're going to see a similar campaign to what we did with 5G and I just couldn't agree with you more, Senator.

Senator BLUMENTHAL. Well, I appreciate that. I think that support is very meaningful, and I hope you will take that view to the Department of Justice because if the Administration is really going to put its money where its mouth is,—

Mr. KRACH. Yes.

Senator BLUMENTHAL.—so to speak, an Investigation by the Department of Justice has to begin right away. It has to be swift and sure and fair, but this kind of surveillance and censorship and the tracking of Americans, the providing of data to the Government of China is a direct intrusion on our civil liberties, and I hope that you will be in touch with the Department of Justice. Will you do so?

Mr. KRACH. And they've been great allies. They're actually working arm-in-arm with us in defining the clean apps, clean cloud, clean store, and all these different areas. They've been great. They really have. So they've been great partners.

Senator BLUMENTHAL. I'm glad they've been great. I hope they will send a message and respond to Senator Hawley and myself and respond favorably, but I'm glad that you will support it and I appreciate your public endorsement of it.

Let me ask you. Are there measures, such as a CFIUS review, that could impose on Chinese firms collecting information about Americans real assurances that the data will not wind up in the hands of the Chinese Government?

Mr. KRACH. So can you state your question again, Mr. Senator? I didn't quite catch it.

Senator BLUMENTHAL. Are there measures, like a review by the Committee on Foreign Investment in the United States, known as CFIUS, that would impose on Chinese firms collecting information about Americans a barrier or prohibition against sharing that information with the Chinese?

Mr. KRACH. Yes. By the way, I think there are a number of tools in the U.S. Government. Obviously CFIUS is a good one and, by the way, on that dimension, it's an ever-changing landscape. Even since I've been in office, I've seen it change and there are all kinds of ways to get around mitigation and those kind of things.

The other is the Executive Order with regard to the ICT industry, in particular focused on China. I think that is a great tool. I don't want to get out ahead of the President on that one, but that pretty much gives us all the tools we really need to do what you're talking about.

Senator BLUMENTHAL. You mentioned drones. Tell us why we should be concerned about drones?

Mr. KRACH. Well,—

Senator BLUMENTHAL. Eighty percent of the world's drones are made by the Chinese. They're sold in the United States. They can collect information and send it right back to the Chinese, correct?

Mr. KRACH.—they do. So if you look at a company called DGI, they probably have about 90 percent market share. So imagine you're like a drone hobbyist or you're doing something with your son or something like that. You know, you want to kind of take the video from up there. Well, those feeds go directly back to China, unless, you know, you're pretty tech savvy and you go through about seven different menu picks and you can have it then just download right to your iPhone, but otherwise it's going there.

Obviously drone technology is some of the scariest military technology and, by the way, that was one of the things that I saw on my last trip to China and why I came out to Washington as I saw their swarm drone technology and, by the way, I don't know how you defend against it. Hopefully, I know we're working on it.

So, by the way, that's one of the other ones that we're working on is clean drones because those are dangerous. It's one more appendage.

Senator BLUMENTHAL. Well, you say you don't know how we defend against it.

Mr. KRACH. Well, from a military aspect, I don't want to get into that with their swarm drone technology.

Senator BLUMENTHAL. I'm on the Armed Services Committee as is Senator Sullivan, but I'm talking about ordinary civilian uses.

Mr. KRACH. By the way,—

Senator BLUMENTHAL. I need percent of the market and the—
 Mr. KRACH. I am, too, for the drone hobbyist. Because it's doing the same thing TikTok is, sending your video feeds back. So they're collecting information on our children. I've got five children. I don't want the Chinese spying on my children.

Senator BLUMENTHAL. So should we just ban Chinese drones?

Mr. KRACH. By the way, I think that's a very important thing to heavily consider. Once again, I don't want to get out in front of it, but it is on the table.

Senator SULLIVAN. We need to be able to manufacture our own.
 Senator BLUMENTHAL. Exactly.

Mr. KRACH. By the way, that gets back to Senator Young, is the best defense is a good offense. We have to invest in our drone business because they have—I mean, last I checked and Nazak may know better than me, but I think they have about 90 percent market share.

Senator SULLIVAN. We held a hearing on that topic in this subcommittee.

Mr. KRACH. Yes.

Senator BLUMENTHAL. And I might just say that Senator Sullivan is absolutely right that in order to ban the product, we have to be able to manufacture it in this country and I would submit as a matter of national security that we do it in this country because that's the only way to in fact defend or protect our rights and liberties but that's easier said than done.

As you well know, a company with 90 percent of the market share can undersell or outcompete, in fact engage in predatory pricing to squelch competition.

Mr. KRACH. Yep.

Senator BLUMENTHAL. So I'd like to know from you in the future, you know, when you say it's on the table, I'm hoping that you will report back to us. I'd ask you for a report back on what is planned.

Mr. KRACH. By the way, you got it,——

Senator BLUMENTHAL. Thank you.

Mr. KRACH.—Senator, because you're absolutely right. We have the technologists. We have the entrepreneurs to build market drone companies and, you know, the problem is, as you pointed out, the Chinese subsidize it. It takes capital. It takes money and, you know, the way China ink works, it all comes out of the same pot and I know and I deeply appreciate what the Congress is doing to make sure we get those funds.

Another great example is the semi-conductor business. It was our God-given right to have the semi-conductor fabrication business in the United States. We started it. We invented it. What happened is Asian countries came over and they bought it from us and they subsidized the semi-conductor business between 30 and 50 percent. We were able to get Taiwan semi-conductor to kind of bet a little bit on the come, so to speak, and you passed the CHIPS Act 96 to 4 last week and a hundred percent in the House and that money goes for the entire semi-conductor industry to help bring it back on to United States shores because only 12 percent of semi-conductor fabrication is done in the United States and that is the key for our semi-conductor equipment manufacturers.

So these things make a difference and it's a tipping point, so, and it boils down to money.

Senator SULLIVAN. Let me turn to Senator Cruz here, Mr. Secretary.

Senator Cruz.

Thank you, Senator Blumenthal.

Senator Cruz.

**STATEMENT OF HON. TED CRUZ,
U.S. SENATOR FROM TEXAS**

Senator CRUZ. Thank you, Mr. Chairman. Thank you to both of the witnesses for your service. Thank you for your testimony today.

I want to start with something that was discussed in the first panel, as well, which is supply chain issues. I am deeply concerned about China's control of our supply chain, particularly insofar as it affects critical infrastructure, and one area that poses a serious national security threat to the United States concerns rare earth and critical minerals supplies.

I've introduced legislation, The Onshoring Rare Earths Act, the ORE Act, to bring rare earth mining back to the United States.

How does the Administration view the threat of Chinese control of rare earth minerals and what should we be doing to fix the problem?

Mr. KRACH. Absolutely. Because we collaborate on this one, Nazak?

Ms. NIKAKHTAR. OK. Thank you for the question. So rare earth—

Senator SULLIVAN. Please turn on your mike.

Ms. NIKAKHTAR. I'm sorry. Thank you.

Rare earth has been one of sort of a comprehensive reshoring strategy, the comprehensive reshoring strategy that is being led by the White House, my office is taking the lead on. Rare earth is very much a part of it, cannot underscore the importance of it.

My office did the Critical Minerals Report of 2018 and really when you look at rare earths and critical minerals, one after another, our supply chain vulnerabilities are great.

China threatens to withhold access to rare earths, as we know, to basically have countries bend to its will. We can't stand for that.

So the solution which is what we're discussing in the Administration is going to have certain pillars, right. One of the first pillars is really providing financial incentives for processing in the United States. That is what gives companies the leap of faith to invest in the United States.

The next part of it is technology sharing with our allies. One of the things that I'm personally trying to stress is that if our supply chains are located far away and if China decides—or if we decide with any adversary that tensions are going to escalate, we're not going to have enough ships to basically fight a war and ship rare earths back and forth to one another.

So we need to enhance the processing and the technologies associated with clean processing for both ourselves and our allies. Till we get there, collaborate on all fronts but every country or the U.S. and our allies, we have to basically be able to be self-reliant in this respect.

Finally, so we have the investments for R&D in terms of incentivizing investments and processing, but at the end of the day, what company is actually going to invest in the United States if they know that the cheap rare earths from China are ultimately going to displace them, right, and so then we need to look at how do we—what is the delta and the cost and what measures are we going to seriously think about?

I know this is taboo. I know nobody likes to talk about restricting imports, quotas, tariffs, or whatever, but what is the other alternative, and I'm speaking as an economist, what is the other alternative when China's predatory low prices, which is its key strategy, displaces.

So we need to have a serious conversation about that, and then certainly we need to look at the downstream impacts, right. Rare earths are more expensive and what are the downstream impacts and think about financial incentives to bolster those companies that rely on rare earths in the defense sector in particular, and what are some of the measures we can put in place to again prevent the predatorily priced imports from coming in and eroding our defense base.

So I appreciate what you're doing. We've studied this through the economic and legal lens a lot and I think these are the steps that are going to give us a resilient supply chain.

Senator CRUZ. Well, I think you made a very important point, that China's strategy here in terms of slashing prices. Their objective is not profit maximization and the way the Chinese Communist Government has approached the United States is I believe they are engaged in a battle for global domination and they have deliberately identified key vulnerabilities of America and they have determined to dominate and so when they're pricing it, it's not even simply predatory pricing in, say, the antitrust context.

It is in fact these are not money-making endeavors. Their objective is not to earn a profit. These are military dominance efforts and so their efforts are to attack America.

Let me ask for someone watching at home, as a practical matter, why do rare earth and critical minerals matter? Why should we care that China has a stranglehold on them?

Ms. NIKAKHTAR. Well, because, I mean, they're essential. They're essential to our micro-electronics. They're essential to our defense systems, really everything that is today critical to national security, they underpin.

I want to raise an interesting quote which I think you're going to very much appreciate. We almost treat sort of the China hollowing out our industries as a new thing, and I have this in my written statement. It actually has its root in the Cold War.

Khrushchev famously said, "We, meaning the Sino-Soviet Bloc, declare war upon you, the United States. In the peaceful world of trade, we will declare a war. We will win over the United States." Again quoting from Khrushchev, "We, again referring to the Communist States, value trade the least for economic reasons and most for political reasons." This is from the hearing transcript of the 1962 Trade Act.

Interestingly, the Trade Act 19 USC 1801 in the Statements on Purpose, one of the purposes is "through trade agreements afford-

ing mutual trade benefits to prevent the Communist Economic Penetration." This is the problem that was back in the 1950s, and in the 1962 Trade Act it was discussed. It is the same problem we're dealing with today and guess how much progress we've made on it. Zero.

The Administration, I think, for the first time and rightfully so is tackling all of these problems almost simultaneously. We're looking very hard at it. We're looking closely at it. We welcome, we welcome congressional support because these are complex problems that have been decades in the making and we're trying to solve them now and guess what. Time isn't on our side. We need to do it now.

Senator CRUZ. Thank you very much.

Senator SULLIVAN. Thank you, Senator Cruz.

I just want to comment on the rare earths and other critical minerals. We have them in America. We certainly have them in my state and, by the way, our record on mining them and producing them is much higher in terms of the environmental standards than the Chinese by far.

So if we have them and it's good jobs and it's important for national security and we have a strong record on environmental protection on mining them, then we should utilize that.

Mr. KRACH. And I would say you're absolutely right. In the United States, rare earth minerals aren't that rare, but—

Senator SULLIVAN. Well,—

Mr. KRACH.—what the Chinese have done is they put our processing plants out of business by subsidizing pricing. I mean because, you know, I agree with you, Senator Cruz. Their aim is not just to compete. Their aim is to drive you out of business. Then they can do two things. They can jack up prices and feed that giant kitty where they're going off and doing it to the next sector and they're very good at this. It's a strategic pinch point underlying everything and they've studied it.

The one thing I must say, it has been great to see in this Administration coming in, is that when you look at what the work Nasaki is done at Commerce, what we're doing at State, the NSC, in terms of really analyzing strategic pinch points in the supply chain. I don't know if it was ever done before.

Then you have to get to a level of specificity where it's like what's the plan, what's the company, what's the product, and how do we get the over here or how do we, you know, get them in our allies' hands. Ideally, it's in the United States and you really have to really, really dig in.

Senator SULLIVAN. Well, I want to thank Senator Cruz again for his leadership on rare earths and critical minerals and we're making progress on that in an important way.

Let me turn to one final question, Mr. Secretary, Madam Secretary, both of you. I'd like your comment on this very challenging issue that we've seen really over decades and that's the temptation, I would call it, by U.S. companies that want to access the Chinese market and then what ends up happening is that the U.S. companies are either forced to transfer their technology beyond probably what they want to do or they in some ways kowtow to Chinese interests, think the NBA, on broader kind of statements that China

finds objectionable and we have American companies or organizations that start to tow the China line.

So it's a dilemma because a lot of this has taken place in decades in the private sector. CEOs making these calls may be for short-term profit to access the China market but longer-term in terms of U.S. strategy, it might be undermining our broader strategic goals as a nation if some of our best companies are selling out their own IPR to gain access to the Chinese market.

So what should we as a government, this is beyond just State or Commerce, do about this very important issue where our private sector is leveraged to get access to the market of China but then has to give up things or tow the line on broader issues relating to Taiwan or other things where they're almost forced to make statements that are in line with Chinese Communist Party objectives? I'd like to hear from both of you.

Go ahead.

Ms. NIKAKHTAR. Yes. I'll start just to kind of give the economist perspective, right. When you're a company and you have no choice but to deal with the Chinese under-valued export, your only way of survival is actually to go into the Chinese market and benefit from the same distorted cost structures.

So what ends up happening? I mean, you not only have to transfer your technology but also now you're even flooding the global market more with distorted prices, right.

So in many ways, the companies, in terms of market access, as you said, or just, you know, in order to compete with their own Chinese competitors have to flock to that market.

What's really interesting that I've noticed happening is a few things. China has announced the implementation this year of a corporate credit rating system, kind of like the social credit rating system, where any time it can ask companies operating in China to hand over their data, most sensitive technology, and their IP.

The European Chamber of Commerce has deemed this to be essentially life or death for companies because if you don't, you will be sanctioned by the Chinese Government. I think companies are starting to get spooked.

Two, with respect to Huawei, Huawei made some pretty significant threats against Nokia and Erickson, European companies, but they basically said if Europe is going to ban Huawei from—the EU is going to ban Huawei from its 5G networks, then it's going to put restrictions on the exports of Nokia and Erickson from China.

So now it's causing Nokia and Erickson to rethink their operations—

Senator SULLIVAN. If I may, what should we be doing in terms of government policy? This is mostly taking place in the sphere of the private sector. What should we be doing? I mean, there's one view that we should punish our own companies for doing this. I think that might backfire.

What is the Government of the United States, the executive branch, view that we should be doing to really in some ways give these CEOs backbone not to comply with these demands that we certainly don't do this to Chinese companies, but as government policy, what should we be doing? I need a succinct answer.

Ms. NIKAKHTAR. Yes. This is exactly what I was getting at. So if it's cheaper to operate in China, right, to compete with China, then we've got to figure out how to give these companies a financial boost so they cannot compete offshore to another country.

Two, we have to amplify as the U.S. Government the risks of doing business with China now. Given everything I said with the Chinese threats to companies, the European companies and U.S. companies, amplify the risks and give them a way to be cost competitive if they leave China.

Thank you.

Senator SULLIVAN. Mr. Secretary, do you have a view on that? It's a very—

Mr. KRACH. Yes.

Senator SULLIVAN.—important topic. I'm sure you've seen it both in your government position but also in the private sector.

Mr. KRACH. Yes. I would make three points. You've hit on the really, really important issue and so when I hosted Secretary Pompeo out at Silicon Valley for 4 days at the beginning of the year, one of the things we did at dinner at my home in San Francisco, I had like 36 of the top CEOs, said, guys, you know, we say corporate responsibility, social responsibility. It's also national security because this is a real and urgent threat to democracy but it's a real and urgent threat to your companies because they want to put you out of business.

Now the elephant in the room is the retaliation and so it's all about standing up to that bully with your friends behind you and so if you think of the laws that we put in place in terms of anticorruption, U.S. company, it's illegal to give a bribe. By the way, we might think of some of the things that we—where the U.S. companies need to be able to say to China I can't do that. It's against our law because they will obey the laws.

Senator SULLIVAN. So doing that and getting our allies to do that would give us leverage globally over Chinese practices that we certainly don't want to help promote but we want to prohibit but if we do it with our allies, you think that's a leverage point that could start to help on that?

Mr. KRACH. It's huge, and this is also one where I might recommend in terms of developing laws like this collaboration with the private sector because they'll tell you because it's got to be—you know, that's got to be crafted just right because it is a big point.

The other thing we do have to do is we have to shine the light on China, yes, but sometimes we have to shine the light on ourselves.

Senator SULLIVAN. Yep.

Mr. KRACH. And, I mean, if you look at what Chinese companies on our American Stock Exchanges, these are the only companies that don't obey Sarbanes-Oxley and can't get audited. Honest to God, I was taking three companies public, it kind of makes me mad, but that's not the point.

The point is it puts our American investors at risk and, by the way, it also creates an unlevel playing field for our companies because anybody, you know, in the business world understands that financial strategy is a key part of your competitive strategy and

this allows them to misstate their earnings, hide subsidized revenue, count things as perpetual revenue versus not. Lucky Coffee is a great example. American investors lost \$300 million. So it gives the Chinese company a competitive advantage.

The third thing is, is that it sacrifices the gold standard of our American exchanges, and then the other thing, too, is that the average American bond holder has financed the One Belt One Way Road and, you know, the emerging index funds. It's all buried in there and, by the way, that's why one of the things that I wrote in an op-ed is that it is incumbent on U.S. companies to disclose who are the financial institutions or who are the Chinese companies they invest into, particularly state pension funds, university endowments, mutual funds, and I think shining that light in terms of disclosure is a great tool, just like reciprocity is a great tool, just like enforcement is a great tool.

So we should really use that to the full extent we can because those concepts are just simple, right on, and easy to understand.

Senator SULLIVAN. Well, listen, I want to thank you. I know that there are a number of other Senators who will be submitting questions for the record here, but I want to thank both the witnesses. I think that, as I mentioned, this is the important beginning of not only laying out the strategy but the implementation and execution.

I believe it's very bipartisan if you saw from the number of Senators, both sides of the aisle, focusing on many of the same concepts, and to both of you, we're hoping that this really starts to begin to establish a policy that can be utilized and implemented for decades like the containment policy against the Soviet Union that was well-regarded, well-accepted, and continued throughout Administrations.

I think we're at the beginning of that moment in our country's history, and I think this hearing is a helpful beginning.

So with that, the record will remain open for two weeks for this hearing. During this time, Senators may submit questions for the record. Upon receipt, we respectfully ask witnesses to submit their written answers as soon as they can back to this committee but by no later than Friday, August 14.

I want to thank both of our witnesses again for appearing here, for the good work you're doing, for educating the broader American public on these challenges.

We have a lot of work to do, but I think we're finally realizing the challenge and we're off to a good start.

With that, this hearing is adjourned.

[Whereupon, at 12:34 p.m., the hearing was adjourned.]

A P P E N D I X



Keith J. Krach

UNDER SECRETARY of STATE
for ECONOMIC GROWTH, ENERGY, and the ENVIRONMENT

July 1, 2020

Dear business colleagues,

I write to bring your attention to an important advisory from the U.S. government. On July 1, the Departments of State, Treasury, Commerce, and Homeland Security together published the **"Xinjiang Supply Chain Business Advisory,"** a clear statement of concern for the attention of U.S. companies, investors, and their business partners around the world. As Secretary of State Pompeo stated when he announced this advisory, U.S. businesses with potential supply chain and investment exposure to the Xinjiang Uyghur Autonomous Region (Xinjiang) or to facilities outside Xinjiang that use labor or goods from Xinjiang should consider the reputational, economic, and legal risks of involvement with entities that engage in human rights abuses, including forced labor in the manufacture of goods intended for domestic and international distribution.

The People's Republic of China (PRC) government is perpetrating in Xinjiang some of the most serious acts involving mass human rights abuses since the Second World War. Since at least April 2017, the PRC government has detained for long periods over one million Uyghurs, ethnic Kazakhs, ethnic Kyrgyz, and members of other Muslim minority groups in internment camps. The aim of the internment has been to force members of these minority groups to renounce their ethnic identity and religion, and to embrace the ideology of the Chinese Communist Party. There are many other egregious human rights abuses also reported to be occurring in Xinjiang, including torture, forced sterilization, and sexual abuse.

It is critical that U.S. companies and individuals be aware of the large-scale human rights abuses perpetrated by the PRC government in Xinjiang. Businesses should evaluate their exposure to the risks that result from partnering with, investing in, and otherwise providing support to companies that operate in or are linked to Xinjiang. Four primary types of exposure involve (1) assistance in the development of surveillance tools for the PRC government in Xinjiang, (2) reliance on labor or goods sourced in Xinjiang, or from companies located elsewhere in China that may be implicated in forced labor in their supply chains, and (3) aid in the construction of internment facilities used for the detention of Uyghurs and members of other minority groups, and/or in the construction of manufacturing facilities near forced labor camps, (4) provide financing, directly or indirectly, to any entities that enable the above. U.S. businesses with supply chains linked to the behaviors outlined above may be vulnerable to applicable U.S. enforcement actions or other legal actions.

Now, let me write to you as a former businessman. In Silicon Valley, we say, "Corporate responsibility is social responsibility." Today, this means refusing to participate in human rights violations and deals that, in the words of Secretary of State Mike Pompeo, "tighten a regime's grip of repression." This is particularly true when it comes to doing business with the People's Republic of China (PRC) given the rapid and insidious expansion of its authoritarian surveillance state and egregious human rights abuses.

Citizens around the world are waking up to the truth about the Chinese Communist Party's (CCP) three-prong strategy of concealment, co-option, and coercion. They now understand that the pandemic is a result of the concealment of the virus, the crackdown in Hong Kong is a co-option of a free and autonomous region, and access to the Chinese market is a form of seduction and coercion for U.S. companies that results in technology transfer to Chinese companies. This is why I now tell my fellow CEO's, "Corporate responsibility is also national security."

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What I have come to learn through running economic diplomacy for the State Department is that nowhere is the CCP doctrine more pronounced than the mass internment camps of Xinjiang, which started out as the proving grounds for the CCP's big brother surveillance state strategy on two million Uyghurs and other Muslim minority groups.

These facilities have turned into expressions of concealment and deception for the PRC's efforts to eradicate ethnic identity and religious beliefs of Uyghurs and other Muslims. These overcrowded Gulag-like camps have gone beyond the CCP's traditional coercive tactics and have morphed into human rights abuses of epic proportions.

Up to this point, the CCP has succeeded in co-opting U.S. companies by entangling them in Xinjiang supply chains and concealing the forced labor and other human rights violations that serve these American companies all over China. What makes matters worse is that the average U.S. investor in companies that do business with China has been unknowingly funding the CCP's authoritarian machine. And American technology has been transferred, bought, or stolen by the CCP to create a dystopian surveillance state that history's most repressive dictators could have only dreamed of.

It may seem hopeless, but it is not. It's true that civil rights lawyers can't help in a country that has no respect for the rule of law. Who then? U.S. companies, financial institutions, and citizens can make a difference with help from the government. How? Transparency. It starts with the most fundamental business principle: transparency is visibility, and visibility is accountability. Any leader knows that is magical.

To help shine the light of transparency, the United States Department of State has issued this business advisory for investment supply chain exposure to entities engaged in forced labor and other human rights abuses in Xinjiang. This is a start when coupled with the recent identification of 33 Chinese firms and institutions put on the entity list with sanctions.

This light of transparency will help U.S. manufacturing and technology companies that do business anywhere in China ensure their commerce and investments do not enable or perpetuate the PRC's human rights abuses. It is incumbent on the board of directors for each company to conduct a detailed analysis of the supply chain to reveal who their company is buying from and who it is selling to.

U.S. financial institutions have a duty to establish governance principles when it comes to investing in entities that directly or indirectly facilitate human rights abuses. Hard currency is the lifeblood of the CCP authoritarian regime, and the average American bondholder has historically financed the CCP's surveillance state, which is now being exported around the world.

The board of governors of these institutions have a moral duty and perhaps even a fiduciary duty to divest from companies that contribute to human rights violations. Pension funds, university endowments, indexes, mutual funds, insurance companies, venture capital firms, institutional investors, and particularly emerging index funds, at a minimum, should disclose to their constituents the Chinese companies they invest in.

Chinese companies' financial practices are opaque for a reason. Chinese companies on U.S. stock exchanges do not comply with Sarbanes-Oxley transparency provisions, which puts all investors at risk.

I am confident that our business community will reject any involvement or association with the oppression in Xinjiang—first, because it is the right thing to do, and second, because of the significant legal and business risks involved. For more information, please visit: www.state.gov/xinjiang-supply-chain-business-advisory/

With respect and appreciation,



Keith J. Krach
*Under Secretary of State for Economic Growth,
Energy, and the Environment*



Keith J. Krach

UNDER SECRETARY of STATE
for ECONOMIC GROWTH, ENERGY, and the ENVIRONMENT

August 18, 2020

Dear Governing Boards of American Institutions of Higher Education and Affiliates,

During this unprecedented period in modern history, American universities and colleges are on the frontlines of addressing many of the challenges presented by the pandemic. At the same time, these great institutions are at the forefront of an equally serious challenge brought on by the authoritarian influence of the Chinese Communist Party (CCP).

At the U.S. Department of State, one of our primary missions is to monitor and advocate for freedom, including academic freedom, around the world. American institutions of higher learning are the envy of the world and have always been an invaluable partner in that mission. That is especially true now as we join hands to work through myriad challenges brought on by the pandemic so that we can continue welcoming students from around the world to America's shores. This includes an orderly resumption of student visa issuances as the situation dictates at our embassies and consulates around the world.

In that same spirit of partnership, I am writing to you about a real and urgent threat that has broad implications for ensuring academic freedom, honoring human dignity, protecting university endowments, and safeguarding intellectual property. As a former Chairman of the Board of a major university, I recognize that when addressing a long-term strategic issue of this magnitude, the responsibility sits squarely on the shoulders of each and every board member.

Our concern is with the malign actions of the CCP and specific individuals, not with the Chinese people or the overwhelming majority of Chinese students in the United States. Our goal is to see an improved, open, and transparent environment in which U.S. and Chinese scholars can engage with greater trust. We seek your assistance in an effort to safeguard U.S. technology and institutions, and to ensure our national and economic security remain safe and free from foreign interference.

GROWING THREAT OF AUTHORITARIAN INFLUENCE

Citizens around the world are waking up to the truth about the CCP's three-prong strategy of concealment, co-optation, and coercion. The CCP's concealment of the virus resulted in the pandemic, its co-optation of Hong Kong has eviscerated the freedoms of its citizens, and its relentless coercion of the Uyghur people has continued in the brutal internment camps of Xinjiang.

This has given political will to government leaders and CEOs in free nations around the world to stand up to this increasingly aggressive behavior. On both sides of the aisle in Washington, it has become one of the most passionately unifying bipartisan issues of our time. The U.S. government is now shining the light of transparency on the CCP in every way possible, including with regards to institutions of higher learning.

After spending many years leading public companies, I have learned that leadership in the face of challenges starts with that magical principle of transparency. Good leaders know that visibility is accountability. And this is where university and government leaders are partners once again.

ENSURING ACADEMIC FREEDOM

To help shine the light of transparency on CCP infiltration of American campuses, on August 13 [the State Department designated the Confucius Institute U.S. Center \(CIUS\)](#) as a People's Republic of China (PRC) foreign mission controlled by a foreign government. A number of American universities and colleges are home to Confucius Institutes, partially funded and controlled by the PRC. As the American Association of University Professors noted in a 2014 report, "Confucius Institutes function as an arm of the Chinese state and are allowed to ignore academic freedom."

While ostensibly intended to teach Americans about Chinese language and culture, they also exert malign influence on U.S. campuses and disseminate CCP propaganda. There is increasing evidence that Confucius Institutes spread PRC influence by providing institutions with financial incentives to abstain from criticizing PRC policies; putting pressure on faculty to self-censor; monitoring overseas students for loyalty to the party; and undermining freedom of expression by disrupting campus events deemed controversial to the CCP.

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The goal of this action is to shine a light on the CIUS and its relationship to Confucius Institutes operating on U.S. campuses. This designation will provide much-needed transparency by requiring CIUS to regularly provide information to the State Department about Confucius Institutes' PRC citizen personnel, recruiting, funding, and operations in the United States. With this increased level of transparency, U.S. stakeholders, including universities and colleges, can make more informed choices about the PRC influence exerted on their communities.

While this designation is not directed at U.S. universities and colleges, we ask that your board examine carefully the Confucius Institutes' activities on your campus to ensure that academic freedom, institutional autonomy, transparency and clean financial practices are being upheld.

HONORING HUMAN DIGNITY

On July 1, the Departments of State, Treasury, Commerce, and Homeland Security together published a Xinjiang Supply Chain Business Advisory, a clear statement of concern for the attention of U.S. companies, institutions, investors, and their business partners around the world. As Secretary of State Pompeo stated when he announced this advisory, U.S. businesses with potential supply chain and investment exposure to Xinjiang should consider the ethical, reputational, economic, and legal risks of involvement with entities that engage in human rights abuses, including forced labor in the manufacture of goods intended for domestic and international distribution.

What I have come to learn through running economic diplomacy for the State Department is that nowhere are the CCCP's human rights abuses more pronounced than in the mass internment camps of the Xinjiang region and the indentured servitude of its population shipped all over China. These facilities are designed to eradicate the ethnicity and religious beliefs of Uyghurs and other Muslims and are responsible for human rights abuses of epic proportions with reported torture, sexual abuse, sterilization, forced abortions, and ingestion of unidentified drugs.

In recent months the U.S. government has added dozens of PRC government agencies, state-owned, and notionally private corporations to its export control Entity List related to human rights abuses in Xinjiang. This light of transparency and published studies will help your board conduct a detailed analysis to ensure your community can do everything possible to promote partnerships only with those whose supply chains are free from human rights violations.

PROTECTING UNIVERSITY ENDOWMENTS

The boards of your institution's endowment funds have a moral obligation, and perhaps even a fiduciary duty, to ensure that your institution has clean investments and clean endowment funds. I urge you to divest from companies that are on the Entity List or that contribute to human rights violations. I also ask that you strongly consider publicly disclosing to your campus communities immediately all PRC companies that your endowment funds are invested in, especially the PRC companies in emerging markets index funds.

Studies have shown that the majority of the U.S. university endowment fund portfolios own PRC stocks listed on American exchanges either directly or indirectly through emerging markets index funds. I would also like to call your attention to the recommendations issued by the President's Working Group on Financial Markets (PWG), which examine the risks to U.S. investors posed by Chinese companies listed on U.S. securities exchanges.

On August 10, Treasury Secretary Mnuchin indicated that the U.S. Securities and Exchange Commission (SEC) would adopt the recommendations, which could lead to the delisting of companies from the PRC and other "Non-Cooperating Jurisdictions" from U.S. exchanges at the end of next year. PRC firms, unlike other foreign issuers in the United States, do not follow audit transparency requirements. This is due to Article 177 of the PRC Securities Law and its longstanding prohibition on PRC firms providing work papers to foreign regulatory agencies on the basis of concerns about "state secrets" in financial documentation.

Consequently, the boards of U.S. university endowments would be prudent to divest from PRC firms' stocks in the likely outcome that enhanced listing standards lead to a wholesale delisting of PRC firms from U.S. exchanges by the end of next year. Holding these stocks also runs the high risks associated with PRC companies having to restate financials.

SAFEGUARDING INTELLECTUAL PROPERTY

U.S. government agencies are accelerating investigations at American universities for illicit PRC funding of research, intellectual property theft, and the recruitment of talent. Earlier this year the Justice Department indicted the now-former head of the Harvard University chemistry department for allegedly lying about his participation in the Thousand Talents

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Plan where he was awarded \$1.5m to establish a research lab at Wuhan University, and failing to disclose being paid \$2.25m over 3 years. In July, the [Justice Department filed 42 charges](#) against a longtime University of Arkansas professor who allegedly failed to disclose his participation in the Thousand Talents Plan while securing NASA funding after a fellow employee attempted to identify the owner of his misplaced hard drive.

[The U.S. academic community is in the crosshairs](#) of not only foreign competitors contending for the best and brightest talent, but also our most valuable intellectual property. America built successful research universities on certain values: reciprocity, integrity, merit-based competition, and transparency. These values foster a free exchange of ideas, encourage the most rigorous research results to flourish, and ensure that researchers receive the benefit of their intellectual property. In turn, America attracts the best and brightest.

The PRC, however, seeks to exploit America's openness by implementing a well-financed, whole-of-government campaign to recruit foreign experts through its more than 200 talent recruitment plans including to speed its own efforts at [Military-Civil Fusion](#). As of 2017, China reportedly has recruited 7,000 researchers who focus on or have access to cutting-edge research and technology. For the CCP, international scientific collaboration is not about advancing science, it is about advancing the PRC national security interests.

It is of the utmost importance that the board members of your university move quickly to address this threat by protecting your research systems from PRC co-option and infiltration. Just as our fine institutions vet employees for scientific rigor or allegations of plagiarism, we also must vet for financial conflicts of interests and foreign sources of funding. If our researchers can assess potential collaborators' experience and past publications, they should also assess any government affiliations and ulterior motivations.

ACADEMIC FREEDOM VERSUS AUTHORITARIANISM

The good news is that our strongest ally in promoting academic freedom over authoritarianism is your most important constituent—students. Reports suggest that College Republicans and College Democrats, like elected officials at the national level, are united in their recognition of the threat posed by the CCP. A recent [letter](#) signed by the leadership of both the College Republican National Committee and the College Democrats of America states:

“The Chinese government’s flagrant attempts to coerce and control discourse at universities in the United States and around the world pose an existential threat to academic freedom as we know it. It is a civic and moral imperative that we protect that freedom. In the fight against authoritarianism, universities can continue to benefit from the largess of an emboldened authoritarian state, or they can stand on the right side of history. They cannot do both.”

The CCP’s actions pose an immense threat to academic freedom and to human dignity. While Americans may differ on many issues, this is a threat that unites us all. The CCP would love nothing more than to silence business leaders, conservatives, environmentalists, feminists, labor advocates, LGBTQ activists, people of faith, and anyone else who speaks up about their beliefs.

As we push back against efforts to infiltrate and divide us, it is imperative that we distinguish between the CCP’s totalitarian regime and the Chinese people, whom we must steadfastly defend from abhorrent acts of xenophobia, racism, and hatred, including those from the PRC government. We must act to give voice to the long-oppressed among PRC ethnic minority groups including Uyghur, Kazakh, and Tibetans. We must condemn in the most unequivocal terms any and all anti-Asian sentiment wherever and whenever it arises.

My experience in the business, education and government sectors tells me that there is tremendous power in uniting those sectors as a force for good if we are all armed with the truth. The world is watching, and the integrity of our democracy and educational institutions is in our hands. I look forward to working together to protect the freedoms we all hold dear.

With respect and appreciation,



Keith J. Krach

*Under Secretary of State for Economic Growth,
Energy, and the Environment*

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. EDWARD MARKEY TO
HON. MICHAEL WESSEL

Question 1. The pandemic has highlighted shortcomings in U.S. supply chain resiliency and demonstrated just how strong China's control over supplies has become in some sectors. While there is agreement on the need to address dependence on China for critical supply chains, Beijing is working actively to counteract such efforts. President Xi has said that protecting supply chains is one of China's six national priorities in the wake of COVID-19. How have other countries succeeded in diversifying and rehomeing their supply chains?

- *Supply chain realignment is in its early stages and will be challenging to achieve.* The United States and other countries are just beginning to formulate and implement supply chain reshoring and diversification initiatives. It is too early to assess which governments have been successful on this score. Unfortunately, with supply chains in China, the outsourcing and offshoring that has occurred is also a result of deeply-embedded and supported industrial policies designed to promote China's interests often at the expense of other countries. While many of the dependencies have existed for some time, the current pandemic has elevated attention on these issues in the United States and in other nations.
- *Some governments are making concerted efforts to mitigate supply chain risks.* Although the intricacy of global supply chains and China's outsized role in global production make supply chain restructuring highly complex, some governments are taking proactive steps toward this end:
 - a. Taiwan: The Taiwan government has accelerated efforts to reduce the Taiwan economy's reliance on China. The urgency of this pursuit has elevated in recent years against the backdrop of U.S.-China trade frictions and the COVID-19 pandemic in 2020. In July 2019, Taipei launched "Invest Taiwan," a three-year program incentivizing Taiwan firms, particularly those with manufacturing operations in the Mainland, to increase their domestic investment through preferential loan financing, land rental concessions, assistance in ensuring stable water and electricity supplies, and other perks.¹ Taipei set a target for the initiative to generate \$45.7 billion in domestic private sector investment and create 118,000 new jobs by December 31, 2021.² Taiwan is on track to meet these targets ahead of schedule, with \$36.8 billion in investment already generated and more than 90,000 new jobs created as of late August 2020.³ Taiwan businesses returning from China have underpinned this success, accounting for nearly three quarters (\$26.6 billion) of total investment and 71.2 percent (64,232) of new jobs created.⁴
 - b. Japan: As part of a stimulus package deployed in April to contain the COVID-19 pandemic's economic fallout, Tokyo earmarked \$2.2 billion to subsidize manufacturers' relocation of production out of China and diversify supply chain risks.⁵ So far, 57 companies have received a total of \$535 million to open new factories in Japan while another 30 companies have received \$220 million to expand production in Vietnam, Myanmar, Thailand, and other Southeast Asian countries.⁶ Separately, the Japanese government has re-

¹ Invest Taiwan, *Three Major Programs for Investment in Taiwan (Chinese language)*. Translation. <https://investtaiwan.nat.gov.tw/showPagecht1135?lang=cht&search=1135>; Taiwan's Executive Yuan, *Three Major Programs for Investment in Taiwan—Government Encourages Taiwan Firms to Invest at Home (Chinese language)*, April 23, 2020. Translation. <https://www.ey.gov.tw/Page/5A8A0CB5B41DA11E/af6d44ca-f3df-467e-8538-b4213684bbf6>.

² Taiwan's Executive Yuan, *Three Major Programs for Investment in Taiwan—Government Encourages Taiwan Firms to Invest at Home (Chinese language)*, April 23, 2020. Translation. <https://www.ey.gov.tw/Page/5A8A0CB5B41DA11E/af6d44ca-f3df-467e-8538-b4213684bbf6>.

³ Invest Taiwan, *Three Major Programs for Investment in Taiwan (Chinese language)*. Translation. <https://investtaiwan.nat.gov.tw/showPagecht1135?lang=cht&search=1135>.

⁴ Bryan Chuang, "Taiwan Makers Invest Nearly NT\$780 Billion Domestically," DigiTimes, July 28, 2020. <https://www.digitimes.com/news/a20200728PD203.html>.

⁵ Isabel Reynolds and Emi Urabe, "Japan to Fund Firms to Shift Production out of China," Bloomberg, April 8, 2020. <https://www.bloomberg.com/news/articles/2020-04-08/japan-to-fund-firms-to-shift-production-out-of-china?sref=FLHD1WjR>.

⁶ Hiroyuki Akiyama, "Japan Companies Line Up for 'China Exit' Subsidies to Come Home," *Nikkei Asian Review*, September 9, 2020. <https://asia.nikkei.com/Economy/Japan-companies-line-up-for-china-exit-subsidies-to-come-home>; Simon Denyer, "Japan Helps 87 Companies to Break From China After Pandemic Exposed Overreliance," *Washington Post*, July 21, 2020. https://www.washingtonpost.com/world/asia_pacific/japan-helps-87-companies-to-exit-china-after-pandemic-exposed-overreliance/2020/07/21/4889abd2-cb2f-11ea-99b0-8426e26d203b_story.html

cently initiated discussions with the governments of India and Australia to establish a trilateral supply chain resilience initiative.⁷ According to a joint statement issued by the trade ministers of each country, the initiative will focus on “enhancing the resilience of supply chains in the Indo-Pacific region” and promoting a “stable trade and investment environment.”⁸

- *Companies are also restructuring their supply chains as market conditions change.* It is important to note that companies themselves are already diversifying production and supply lines away from China. Against the backdrop of NAFTA renegotiations in 2017 and particularly the escalation of U.S.-China trade frictions in 2018, multinational companies are moving to regionalize production around key markets. In the automotive sector, for example, production is increasingly hubbed around Mexico to serve North American consumers; eastern Europe and Morocco to serve European consumers; and Southeast Asia and China for Asian consumers.⁹
- *The U.S. government is taking preliminary steps to bring supply chains closer to home.* In May 2020, the Trump administration authorized the Development Finance Corporation to execute loans using the Defense Production Act’s Title III authorities to shore up domestic production of strategic resources needed to respond to the COVID-19 pandemic.¹⁰ Administration officials are also reportedly considering establishing a \$25 billion “reshoring fund” to subsidize U.S. companies’ movement of manufacturing activity out of China.¹¹
- *But U.S. companies continue their China sourcing strategies for a variety of reasons.* U.S. businesses’ deep commitment to the Chinese market may frustrate U.S. policy efforts to reshore production. In its September 2020 China Business Report, for example, the American Chamber of Commerce in Shanghai found just 4 percent of U.S. member companies surveyed plan to shift production to the United States.¹² Instead, more than three quarters of these firms plan to stay in China.¹³ While reaching China’s consumers is a factor, the Chinese Communist Party continues to pursue policies that prefer domestic production to serve the market, rather than having an open and fair import climate. Companies continue to be pressed to produce there if they want to sell there, based on a variety of formal and informal policies. It is notable that 46 percent of China’s exports emanate from foreign-invested enterprises.¹⁴ China is still an export platform for many U.S. and multinational firms.

Question 2. In your testimony, you lay out robust recommendations for policymakers to address the challenges discussed at the hearing. In your view, what are the most important steps that Congress can take in the short term?

- *Address critical U.S. dependence on pharmaceuticals from China.* As I noted in my testimony to the Committee, 80 percent of active pharmaceutical ingredients (APIs) in U.S. pharmaceuticals—key inputs into finished drugs—are sourced

⁷Pranab Dhal Samanta, “India-Japan-Australia Supply Chain in the Works to Counter China,” *Economic Times*, August 19, 2020. https://m.economictimes.com/news/economy/foreign-trade/india-japan-australia-supply-chain-in-the-works-to-counter-china/amp_articleshow/77624852.cms.

⁸Japan’s Ministry of Economy, Trade, and Industry, *Australia-India-Japan Economic Ministers’ Joint Statement on Supply Chain Resilience*, September 1, 2020. <https://www.meti.go.jp/press/2020/09/20200901008/20200901008-1.pdf>.

⁹*Economist*, “Supply Chains for Different Industries Are Fragmenting in Different Ways,” July 11, 2019. <https://www.economist.com/special-report/2019/07/11/supply-chains-for-different-industries-are-fragmenting-in-different-ways>.

¹⁰White House, “EO on Delegating Authority Under the DPA to the CEO of the U.S. International Development Finance Corporation to Respond to the COVID-19 Outbreak,” May 14, 2020. <https://www.whitehouse.gov/presidential-actions/eo-delegating-authority-dpa-ceo-u-s-international-development-finance-corporation-respond-covid-19-outbreak/>.

¹¹Andrea Shalal, Alexandra Alper, and Patricia Zengerle, “U.S. Mulls Paying Companies, Tax Breaks to Pull Chains from China,” *Reuters*, May 18, 2020. <https://www.reuters.com/article/us-usa-china-supply-chains/u-s-mulls-paying-companies-tax-breaks-to-pull-supply-chains-from-china-idUSKBN22UOFH>.

¹²Bruce Einhorn, “U.S. Businesses in China Not Heeding Trump’s Call to Return Home,” *Bloomberg*, September 9, 2020. <https://www.bloomberg.com/news/articles/2020-09-09/u-s-businesses-in-china-not-heeding-trump-s-call-to-return-home?sref=FlHD1WjR>.

¹³AmCham Shanghai, “AmCham Shanghai Releases 2020 China Business Report,” September 9, 2020. <https://www.amcham-shanghai.org/en/article/amcham-shanghai-releases-2020-china-business-report>.

¹⁴Mary E. Lovely, testimony before the U.S.-China Economic and Security Review Commission, *Hearing on Risks, Rewards, and Results: U.S. Companies in China and Chinese Companies in the United States*, February 28, 2019. https://www.uscc.gov/sites/default/files/Mary%20Lovely_Testimony.pdf.

from abroad, and China is the world's leading source of APIs. Critical medicines like penicillin and doxycycline contain APIs that originate from China and are no longer produced in the United States. We are dependent on China for many life-saving and life-sustaining drugs. Indeed, our U.S. dependence on China for certain pharmaceutical ingredients is directly related to potential COVID-19 treatments. For example, of the active 10 ingredients in Remdesivir, one of the therapeutics reportedly showing promise for treating COVID-19, eight come from China.¹⁵ Congress can play an important role in assessing the productive capacity of the U.S. pharmaceutical industry and identifying the risks of U.S. dependence on Chinese pharmaceuticals and active ingredients. Therefore, the Commission recommended in 2019:

- a. Congress hold hearings assessing the productive capacity of the U.S. pharmaceutical industry, U.S. dependence on Chinese pharmaceuticals and active pharmaceutical ingredients (APIs), and the ability of the U.S. Food and Drug Administration (FDA) to guarantee the safety of such imports from China, with a view toward enacting legislation that would:
 - i. Require the FDA to compile a list of all brand name and generic drugs and corresponding APIs that: (1) are not produced in the United States; (2) are deemed critical to the health and safety of U.S. consumers; and (3) are exclusively produced—or utilize APIs and ingredients produced—in China.
 - ii. Require Medicare, Medicaid, the U.S. Department of Veterans Affairs, the U.S. Department of Defense, and other federally funded health systems to purchase their pharmaceuticals only from U.S. production facilities or from facilities that have been certified by the FDA to be in compliance with U.S. health and safety standards and that actively monitor, test, and assure the quality of the APIs and other components used in their drugs, unless the FDA finds the specific drug is unavailable in sufficient quantities from other sources.
 - iii. Require the FDA, within six months, to investigate and certify to Congress whether the Chinese pharmaceutical industry is being regulated for safety, either by Chinese authorities or the FDA, to substantially the same degree as U.S. drug manufacturers and, if the FDA cannot so certify, forward to Congress a plan for protecting the American people from unsafe or contaminated drugs manufactured in China.
- *Bring listing standards for Chinese companies in line with those applied to U.S. companies.* The Commission has longstanding concerns about how Chinese companies use U.S. exchanges to raise capital in significant amounts, which affords them additional advantages that U.S. companies do not enjoy. In our first hearing of this year's annual report cycle, expert witnesses were unanimous in underscoring that existing U.S. law enabling the delisting of Chinese issuers non-compliant with U.S. accounting standards must be upheld and better enforced. The lack of disclosure, oversight, and enforceability in listing of Chinese companies on U.S. stock exchanges opens the door to adverse activities such as insider trading and accounting fraud, among other things.* Such issues remain present in U.S. capital markets in 2020, as evidenced by revelations of accounting fraud at Chinese headquartered and formerly Nasdaq listed Luckin Coffee.¹⁶ Congress must act to ensure compliance with U.S. listing standards and protect the integrity of U.S. capital markets. To this end, in 2019, the Commission recommended:
 - a. Congress enact legislation to preclude Chinese companies from issuing securities on U.S. stock exchanges if:

¹⁵ Mary Denigan-Macauley, written testimony for U.S. House of Representatives Subcommittee on Oversight and Investigations, Committee on Energy and Commerce, *Hearing on Securing the U.S. Drug Supply Chain: Oversight of FDA's Foreign Inspections Program*, December 10, 2019, 1.

* For a comprehensive introduction to U.S. regulatory concerns regarding insufficient oversight of U.S.-listed Chinese companies, see Jay Clayton et al, "Emerging Market Investments Entail Significant Disclosure, Financial Reporting and Other Risks; Remedies are Limited," *U.S. Securities and Exchange Commission*, April 21, 2020. <https://www.sec.gov/news/public-statement/emerging-market-investments-disclosure-reporting>.

¹⁶ *Luckin Coffee*, "Luckin Coffee Announces Formation of Independent Special Committee and Provides Certain Information Related to Ongoing Internal Investigation," April 2, 2020. <https://investor.luckincoffee.com/news-releases/news-release-details/luckin-coffee-announces-formation-independent-special-committee>.

- i. The Public Company Accounting Oversight Board is denied timely access to the audit work papers relating to the company's operations in China;
 - ii. The company disclosure procedures are not consistent with best practices on U.S. and European exchanges;
 - iii. The company utilizes a variable interest entity (VIE) structure;
 - iv. The company does not comply with Regulation Fair Disclosure, which requires material information to be released to all investors at the same time.
- *Strengthen our ability to analyze U.S.-China economic relations.* The development of approaches to preserve and protect U.S. economic competitiveness will necessitate more granular data on the profile of U.S.-China economic relations. As I noted in my testimony, there are many questions concerning the scope and scale of U.S. multinational firms' business in China that are left unanswered by data aggregated by the U.S. Department of Commerce. Enhanced collection of data on U.S.-China commercial ties will enable the United States to more readily assess supply chain vulnerabilities with respect to China and determine where we should prioritize our efforts to strengthen economic resilience. The Commission thus recommended in 2019:
 - a. Congress enact legislation requiring the collection of data on U.S.-China economic relations. This legislation would:
 - i. Direct U.S. economic statistics-producing agencies, including the U.S. Census Bureau, the U.S. Department of Commerce's Bureau of Economic Analysis, and the U.S. International Trade Commission, to review methodologies for collecting and publishing not only gross trade flows data, but also detailed supply chain data to better document the country of origin for components of each imported good before it reaches U.S. consumers.
 - ii. Direct the U.S. Census Bureau to restart data releases in its Current Industrial Reports at the ten-digit industry level.
 - iii. Direct the U.S. Department of the Treasury to coordinate with the U.S. Census Bureau to match U.S. firm-level data with their U.S. employees' data.

Question 3. Has the Trump administration done enough to work with partners and allies to build a coalition to oppose China's increasing power at international institutions, particularly when it comes to technology and business interests?

- *Coordination with allies and partners is key to responding to China's undue influence in international organizations.* This issue has not been given adequate attention. Disunity among the United States and its European allies amid the election of the Food and Agriculture Organization director-general in June 2019 enabled Beijing to split the vote and allow its preferred candidate, Qu Dongyu, to secure 108 out of 191 votes from the organization's 194 member countries.¹⁷ Contrastingly, ahead of the March 2020 election of the director-general for the World Intellectual Property Organization, the United States coordinated its vote with key allies such as the United Kingdom, Japan, and Australia to ensure Daren Tang, the Chief Executive of the Intellectual Property Office of Singapore, won the election.¹⁸ Such coordination must be sustained, as Chinese officials currently hold leadership positions in four out of 15 UN specialized agencies, far more than those from any other country (see Table 1).

Table 1: UN Special Agency Leadership

Organization	Leadership Nationality	Next Election
Food and Agriculture Organization	Chinese	Jun. 2023
International Civil Aviation Organization	Chinese	Oct. 2022
International Fund for Agricultural Development	Togolese	Feb. 2021

¹⁷ Colum Lynch and Robbie Gramer, "Outfoxed and Outgunned: How China Routed the U.S. in a UN Agency," *Foreign Policy*, October 23, 2019. <https://foreignpolicy.com/2019/10/23/china-united-states-fao-kevin-moley/>.

¹⁸ David Ignatius, "Trump's Pushback Against China Pays Off with an Important Win," *Washington Post*, March 10, 2020. https://www.washingtonpost.com/opinions/global-opinions/us-diplomats-scored-a-quiet-but-important-win-against-china/2020/03/10/64dd0fdc-62fb-11ea-845d-e35b0234b136_story.html.

Table 1: UN Special Agency Leadership—Continued

Organization	Leadership Nationality	Next Election
International Labour Organization	British	Nov. 2021
International Maritime Organization	South Korean	Nov. 2022
International Monetary Fund	Bulgarian	Nov. 2022
International Telecommunications Union	Chinese	Nov. 2022
United Nations Educational, Scientific and Cultural Organization	French	Oct. 2021
United Nations Industrial Development Organization	Chinese	Nov. 2021
Universal Postal Union	Kenyan	2020–TBD
World Bank Group	U.S.	Apr. 2024
World Health Organization	Ethiopian	May 2022
World Intellectual Property Organization	Singaporean	May 2026
World Meteorological Organization	Finnish	Dec. 2023
World Tourism Organization	Georgian	Dec. 2021

Source: Various.¹⁹

- *The Chinese government seeks to bring the UN system in line with its preferences.* Beijing’s expanding leadership in international organizations and subsequent accumulation of geopolitical and economic influence threatens U.S. interests. Beijing increasingly exploits this influence within UN organizations to advance its political objectives, including promotion of Chinese companies and technical standards and marginalization of Taiwan.*

Question 4. What steps can the United States take to reassert U.S. influence, particularly in bodies that directly impact American businesses like the International

¹⁹ World Intellectual Property Organization, “Daren Tang of Singapore Appointed as WIPO Director General,” May 8, 2020. https://www.wipo.int/pressroom/en/articles/2020/article_0011.html; Bishar A. Hussein, “Postponement of 27th UPU Congress, Abidjan,” April 20, 2020. http://www.upu.int/uploads/tx_sbdownloader/circularLetterPostponementOf27ThUpuCongressAbidjanEn.pdf; World Bank Group, “David R. Malpass, 13th President of the World Bank Group,” 2020. <https://www.worldbank.org/en/about/people/d/david-malpass>; World Meteorological Organization, “Petteri Taalas Secretary-General,” 2020. <https://public.umo.int/en/about-us/secretariat/petteri-taalas>; International Civil Aviation Organization, “ICAO Assembly Elects New Council for Three-Year Term,” October 1, 2019. <https://www.icao.int/Newsroom/Pages/ICAO-Assembly-elects-new-Council-for-three-year-term-A40.aspx>; International Monetary Fund, “Kristalina Georgieva,” October 1, 2019. <https://www.imf.org/en/About/senior-officials/Bios/kristalina-georgieva>; Food and Agriculture Organization, “Candidates for the Post of FAO Director-General Announced,” March 4, 2019. <http://www.fao.org/news/story/en/item/1183644/icode/>; Julian Bray, “Kitack Lim Wins Re-Election to Lead IMO amid Regulatory Upheaval,” *TradeWinds* November 22, 2018. <https://www.tradewindsnews.com/legal/kitack-lim-wins-re-election-to-lead-imo-amid-regulatory-upheaval/2-1-483743>; International Telecommunications Union, “Secretary-General,” November 1, 2018. <https://www.itu.int/web/pp-18/en/home/election/Result>; UN World Tourism Organization, “New Year Message by UNWTO Secretary-General, Zurab Pololikashvili,” January 5, 2018. <https://www.unwto.org/global/press-release/2018-01-05/new-year-message-unwto-secretary-general-zurab-pololikashvili>; UN International Development Organization, “Director General Re-Appointed for Second Term as 17th UNIDO General Conference Opens,” November 27, 2017. <https://www.unido.org/news/director-general-re-appointed-second-term-17th-unido-general-conference-opens>; World Health Organization, “World Health Assembly Elects Dr Tedros Adhanom Ghebreyesus as New WHO Director-General,” May 23, 2017. <https://www.who.int/news-room/detail/23-05-2017-world-health-assembly-elects-dr-tedros-adhanom-ghebreyesus-as-new-who-director-general>; International Labour Organization, “Guy Ryder Re-elected as ILO Director-General for a Second Term,” November 7, 2016. https://www.ilo.org/global/about-the-ilo/newsroom/news/WCMS_534283/lang-en/index.htm; Post and Parcel, “Kenya’s Bishar Hussein Elected As New UPU Director General,” October 10, 2012. <https://postandparcel.info/51121/news/breaking-news-kenyas-bishar-hussein-elected-as-new-upu-director-general/>; International Fund for Agricultural Development, “IFAD Governing Council to Elect President for Next Four Years,” September 24, 2012. <https://www.ifad.org/en/web/latest/news-detail/asset/39069474>; UN Education, Scientific, and Cultural Organization, “Director-General, Audrey Azoulay,” <https://en.unesco.org/director-general>.
* For example, in early 2020 Beijing exerted pressure on both the World Health Organization and International Civil Aviation Organization to suppress information about the novel coronavirus outbreak within China’s borders and marginalize Taiwan from international coordination and global pandemic response. Anastasya Lloyd-Damjanovic, “Beijing’s Deadly Game: Consequences of Excluding Taiwan from the World Health Organization during the COVID-19 Pandemic,” *U.S.-China Economic and Security Review Commission*, May 12, 2020, 1.

Telecommunication Union (ITU) which sets standards for communications technologies worldwide?

- *The United States needs to first show up to reassert its influence.* In the United States and in international standards-making bodies, technical standards are developed in response to commercial need and adopted by consensus. In contrast, Beijing uses standards as a policy tool to elevate its technological leadership.[†] Beijing has been especially active in international standards setting for technologies that will support application of artificial intelligence, such as the Internet of Things and 5G. Tactics deployed include placing Chinese nationals or companies in leadership positions within standards-setting bodies focused on connected technologies and coordinating between firms to ensure their participation in international processes is unified.²⁰ This enables Beijing to influence international norms to China's strategic and economic advantage.²¹
- *U.S. engagement in standards-setting needs to be both broad, but also targeted.* In order to determine where the United States should prioritize engagement, policymakers must first determine where Beijing's influence is most pervasive and harmful to U.S. interests. To this end, in 2019, the Commission recommended:
 - Congress direct the National Science Foundation, in coordination with other agencies, to conduct a study on the impact of the activities of Chinese government, state-sponsored organizations, or entities affiliated or supported by the state in international bodies engaged in developing and setting standards for emerging technologies. The study should examine whether standards are being designed to promote Chinese government interests to the exclusion of other participants.
- *U.S. participation in the global standards-setting process must be sustained and appropriately funded.* In our third hearing of this year's annual report cycle, expert witnesses underscored that the U.S. government should attach more importance to its participation in international standards setting processes moving forward. For example, Naomi Wilson, Senior Director for Policy, Asia at the U.S. Information Technology Industry Council, recommended the U.S. government establish consistent standards participation as a U.S. priority related to maintaining U.S. technological competitiveness and innovation.²² Ms. Wilson also recommended ensuring multi-year funding lines for U.S. government staff to participate in standards bodies and streamline processes for their sustained participation.²³

[†]The Chinese government is expanding its presence in international standards-setting bodies to increase the adoption of Chinese technology abroad and shape how emerging technologies are deployed. China now leads 64 out of roughly 750 technical committees and subcommittees in the International Standards Organization, compared to 104 for the United States, and 11 out of 196 technical committees and subcommittees in the International Electrotechnical Commission, compared to 26 for the United States. As the Chinese government's prominence in such standard-setting bodies rises, it is able to undermine U.S. technological leadership. Adam Segal, written testimony for U.S.-China Economic and Security Review Commission, *Hearing on A "China Model?" Beijing's Promotion of Alternative Global Norms and Standards*, March 13, 2020, 4–5. Cui Gang, "Press Briefing on the Results of China's Standardization Reform and Development (Chinese language here)," State Council Information Office, September 11, 2019. Translation. <http://www.scio.gov.cn/xwfbh/xwfbh/wqfbh/39595/41645/zy41649/Document/1664162/1664162.htm>; Eric Thun and Timothy Sturgeon, "When Global Technology Meets Local Standards: Reassessing China's Communications Policy in the Age of Platform Innovation," in Loren Brandt and Thomas G. Rawski, eds., *Policy Regulation and Innovation and China's Electricity and Telecom Industries*, Cambridge University Press, 2019, 184–189, 207.

²⁰John Chen *et al.*, "China's Internet of Things," SOSi Special Programs Division (prepared for the U.S.-China Economic and Security Review Commission), October 25, 2018, 69–81.)

²¹U.S.-China Economic and Security Review Commission, *Hearing on Technology, Trade and Military-Civil Fusion*, written testimony of Jeffrey Ding, June 7, 2019, 6–7.

²²Naomi Wilson, written testimony for U.S.-China Economic and Security Review Commission, *Hearing on A "China Model?" Beijing's Promotion of Alternative Global Norms and Standards*, March 13, 2020, 8.

²³Naomi Wilson, written testimony for U.S.-China Economic and Security Review Commission, *Hearing on A "China Model?" Beijing's Promotion of Alternative Global Norms and Standards*, March 13, 2020, 8.

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. EDWARD MARKEY TO
DR. RUSH DOSHI

Question 1. The pandemic has highlighted shortcomings in U.S. supply chain resiliency and demonstrated just how strong China's control over supplies has become in some sectors. While there is agreement on the need to address dependence on China for critical supply chains, Beijing is working actively to counteract such efforts. President Xi has said that protecting supply chains is one of China's six national priorities in the wake of COVID-19. How have other countries succeeded in diversifying and rehomeing their supply chains?

Answer. A number of countries have sought to "reshore" manufacturing currently in China or to diversify supply chains to markets outside China. Japan has subsidized exit from China for eighty-seven companies, expending \$2 billion on efforts to bring production back to Japan or to diversify it into Southeast Asia. Similar discussions are underway in the EU as well, with top officials discussing the possibility of reshoring or diversification of some critical industries. And of course, the United States is also considering a variety of instruments to promote reshoring and supply chain diversification, including through low-interest loans, corporate tax cuts, a dedicated fund, and proposals to pay 100 percent of a company's reshoring expenses.

Most of these efforts at reshoring undertaken by other leading economies have not had great success yet. China retains significant advantages in manufacturing and continues to function as the world's workshop. Moreover, its large domestic economy means that many firms will retain capacity there for China's domestic market, even as they consider duplicating supply chains outside of China to serve foreign markets.

Taiwan has attempted a fairly ambitious program of reshoring that has met with mixed success, but more than other economies. Taiwan's effort to develop a "non-red supply chain" offers the outlines of an approach the United States could adopt. To lure manufacturers back from China, Taiwan used a wide range of policy instruments that went far beyond tax credits and subsidies, relying on measures like rent assistance, cheap finance, land acquisition, and simplified provisions on reinvestment, among others. The effort self-consciously addressed what Taiwan calls its "five shortages": land, water, power, manpower, and talent to entice companies to return. Most critically, the initiative was housed in a dedicated office serving as a "one-stop shop" for manufacturers considering reshoring. The United States could create a similar single point of contact for its manufacturers to proactively work with businesses and to address a wide range of concerns beyond questions of credits and subsidies.

Question 2. In your testimony, you lay out robust recommendations for policymakers to address the challenges discussed at the hearing. In your view, what are the most important steps that Congress can take in the short term?

Answer. In the short term, there is much Congress could do immediately that does not require creating new government agencies or capacities. A technology ecosystem requires skilled workers and human capital as much as it does financial capital. The United States could increase funding for basic science research, ideally doubling it from .6 percent of GDP to something closer to 1.2 percent, though this would still remain below China's levels. In immigration, Congress could also (1) raise the cap on H1-B visas; (2) automatically grant green cards (exempt from green card caps) to postgraduate degree holders, particularly in STEM; and (3) emulate Canada's dedicated post-graduation employment visa for international students. Foreign students flows to the United States have fallen in light of the coronavirus pandemic and visa restrictions. If the United States is to remain at the technological frontier, it needs to plan now to attract those students once more after the pandemic abates.

Other recommendations in the testimony are also critically important, but because they involve creating new administrative capacity in some cases, they are more complex and less immediately implementable, and therefore may not qualify as "short-term."

International Institutions. I am concerned that the United States has fallen sorely behind in terms of our engagement at international institutions, and with our allies, in support of our own interests. For instance, the decision to withdraw from the World Health Organization will leave the United States out of important public health decisions, such as the development of the seasonal flu vaccine, and hand China an even greater opportunity for influence.

Question 1. Has the Trump administration done enough to work with partners and allies to build a coalition to oppose China's increasing power at international institutions, particularly when it comes to technology and business interests?

Answer. I do not believe that the Trump administration has done enough to work with allies and partners to build a coalition to counteract China's increasing influence in international institutions. Four of fifteen UN special agencies are led by Chinese nationals, and no other country approaches this number. Some officials—like former undersecretary general for the UN Department of Economic and Social Affairs Wu Hongbo—have been explicit that they see themselves not primarily as international civil servants but more specifically as Chinese civil servants advancing Chinese interests.

The U.S. agenda on international institutions is broad, but it is unique as an area of competition in that the United States need not invest enormous sums to be competitive. An agenda for the future should involve ratifying UNCLOS, contesting elections for leadership of key bodies (as the Trump administration did for the World Intellectual Property Organization), refusing to cede institutions to China (as the Trump administration did with its withdrawal from the UN Human Rights Council and World Health Organization), and paying attention to the composition of senior management at a given institution. We cannot exercise influence if we do not show up. This is doubly true for standard setting bodies and other UN agencies that focus on technology, business, or development where there are important implications for U.S. companies and workers.

Question 2. What steps can the United States take to reassert U.S. influence, particularly in bodies that directly impact American businesses like the International Telecommunication Union (ITU) which sets standards for communications technologies worldwide?

Answer. First, in standard setting bodies that involve states, the United States needs to engage them more vigorously, pay attention to the politics of their membership, consult closely with business—and, critically, ensure the United States government has offices with the capability and institutional memory to engage them effectively over the long term.

Second, in bodies that primarily involve companies, the United States cannot be a bystander and leave decisions entirely up to industry. Instead, as China does, it should take efforts to work with U.S. industry and companies in allied and partner states, play a role in coordination among them, keep informed of the activities of Chinese companies within these bodies, and consider the implications of standards for security as well as the health of the industrial base. Not all standards will require U.S. government intervention, though others might. Knowing the difference is not possible without greater U.S. capacity and attention.

Third, the United States should build democratic and allied technology coordination bodies that can collectively exert pressure and influence on other standard setting bodies when necessary. A “D10” or “D11” as some have proposed would do this. While some fear that such ad hoc coalitions would fragment technology standards, these bodies need not adopt contradictory standards but simply threaten to do so in cases where standards evolve in ways unfavorable to democratic values or allied interests. The credible threat of exit can exert pressure. Moreover, when necessary, coordination prior to exit from another process can actually minimize fragmentation.

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. DAN SULLIVAN TO
HON. KEITH KRACH

For us to compete effectively, we have to have good people on the ground who can advance our economic and commercial partnerships. That's certainly true in every region, but especially in the Indo-Pacific. There have been calls for shifting more U.S. government personnel to the Indo-Pacific region, and that would include Econ Officers at the Department of State and Foreign Commercial Service officers—something I've looked at as Co-Chair of the Senate Foreign Service Caucus and an issue that was and addressed in SFRC Chairman Risch's recently introduced STRATEGIC Act.

Question 1. What are both the Departments of State and Commerce doing to ensure that your personnel footprint matches the strategic importance of the Indo-Pacific region?

Answer.

1. More than anything else we must lead while we amplifying American values.
2. At State, we are shifting more personnel into that region from a few other ones
3. Bringing in more Econ officers.
4. Significantly increasing the level of partnership, communication, planning and leveraging strengths between State and Commerce. We set a goal a year ago

to make the level of partnership between State and Commerce so tight that it would serve as the role model of teamwork in the interagency. So far, I'm pleased with the progress. Here is an example:

5. I launched with my partner Commerce Acting Under Secretary Joe Semsar the first DC Central Deal Team on February 18 at the State Department. The DC Central Deal Team is tracking, promoting, and marshaling government support, to secure new business opportunities for U.S. companies in key economic sectors abroad. While U.S. government agencies have unique mandates, I believe the whole is greater than the sum of its parts and all the agencies share the common goal of accelerating economic growth that is key to economic security. The DC Central Deal Team is a new and proactive multi-agency initiative. It will advance U.S. strategic economic interests by: facilitating and identifying new business opportunities for U.S. companies abroad; proactively supporting U.S. companies competing for contracts; developing a common methodology and sharing best practices for Embassy Deal Teams; ensuring integration of the multiple programs at various U.S. government agencies and financial entities to support U.S. companies abroad. DC Central and Embassy Deal Teams are an important part of establishing a level playing field for U.S. businesses and taking economic statecraft to the next level. The agencies represented in the DC Central Deal Team (DCC) include the Departments of Agriculture, Commerce, Energy, State, Transportation, and Treasury; the United States Agency for International Development (USAID), the U.S. Trade and Development Agency (USTDA), the Export-Import Bank of the United States (EXIM), the U.S. International Development Finance Corporation (DFC), and the Millennium Challenge Corporation (MCC).

President Trump has identified advancing a free and open Indo-Pacific region as a top priority, and United States prosperity and security are inextricably linked to its future development and progress. The Department is optimizing its diplomatic presence and programmatic engagement in the region to: ensure the freedom of the seas and skies; insulate sovereign states from the coercion, cooption, and control of authoritarian nations; promote market-based economies, open investment environments, reciprocal trade, clean technology systems, and clean infrastructure; and support good governance and respect for human rights. The Department recently concluded a global review of strategic priorities and associated resource needs and, as a result, expects to internally realign a considerable number of positions to the region. The Department of State is working in close coordination with the Department of Commerce to advance economic interests in the Indo-Pacific.

Question 2. What more needs to be done?

Answer. Three critical things:

1. Leverage even more the innovation and resources of the private sector, taking our partnership to the next level.
2. Further strengthen our relationships with our allies and partners.
3. Build a trusted network of partners comprised of many like-minded countries, companies, and civil society that operates under a set of trust standards for all areas of economic collaboration.

In the Department's recent global review of strategic priorities and associated resources, we identified the need to internally realign positions to the Indo-Pacific region. We may request additional resources to keep pace with strategic competitors in this critical region, including the President's \$105 million FY 2022 request for regional programs. The Department is bolstering our efforts in the region, increasing our diplomatic engagement, amplifying our messaging, promoting the Clean Network, and expanding our programming. For instance, our economic diplomacy is promoting opportunities for U.S. firms to enter and compete in clean infrastructure projects through the Blue Dot Network and improving investment climates to facilitate free, fair, and reciprocal trade.

Question 3. Do your Departments need any flexibility to make these shifts? How can Congress be helpful in that regard?

Answer. Yes, thank you for asking.

1. The Department is grateful for the funding Congress has provided us. In order to have the greatest impact with these funds however, it is important that the funds have flexibility on how and where they can be spent. Conditions change on the ground extremely fast. The most important competitive weapon is speed. Statutorily directed spending extremely limits our degrees of freedom to direct funding to skillful use and slows us down in deploying it. My recommendation is that you dramatically reduce earmarks for funds dedicated to combat Chi-

na's economic aggression. We know what to do with these resources. The current restrictions are a constant frustration for us and impede our ability to get the job done.

2. In addition to speed, we need to be proactive on the ground. We need to free up the time to do that. Congressionally mandated reports are a big time consumer. My recommendation is that we double down on efforts to combine reports or eliminate those that no longer make sense, freeing up time for our economic officers to conduct economic diplomacy in the field.
3. We continue to explore ways to further increase our linkages with the private sector. I have run an experiment by bringing in 12 senior advisors from the private sector Silicon Valley and teamed each one of them up with career officers. It is synergistic and magical.

Department leadership continually evaluates priorities and resource needs to determine where tradeoffs must be made to meet our strategic objectives, including in the Indo-Pacific region. Congress can support the Department's regional objectives by reinforcing with foreign governments, the private sector, and civil society our key goals there: preventing China from expanding its surveillance state and establishing regional hegemony; addressing the Democratic People's Republic of Korea's illicit nuclear and ballistic missile programs; and assisting our partner countries on their journeys to self-reliance. In addition, reducing statutorily directed spending and providing additional discretionary funding, as we are provided with in the Countering Chinese Influence Fund, is a useful mechanism that allows us to bolster our programs and is something Congress could consider using elsewhere.

China is rolling out a network of corporate social credit systems. In 2018, the Civil Aviation Administration of China pressured multiple international airlines to change their websites' descriptions of Taiwan, threatening to lower their social credit records if they didn't. This issue is a major focus in the STRATEGIC Act introduced by Chairman Risch last week, and it's important to both the Foreign Relations Committee and this Committee.

Question 4. What are the U.S. government's views on the corporate social credit system?

Answer.

1. This is a great question because the implications are enormous. The corporate social credit system also allows the CCP to reward behavior that they want to see. So, for companies they use it as a carrot and a stick.
2. There are two choices for companies, treat the symptom by having companies game the system or attack the problem. This is the aim of the Clean Network.
3. The Clean Network is the U.S. State Department's comprehensive effort to address the long-term threat to data privacy, security, human rights, and trusted collaboration posed to the free world from authoritarian malign actors, such as the CCP. The Clean Network is rooted in internationally accepted digital trust standards and reflects our commitment to an open, interoperable, reliable, and secure global Internet based on shared democratic values and respect for human rights. This effort represents the execution of a multi-year, enduring strategy built on a coalition of trusted partners.

The Chinese Communist Party (CCP) has explicitly described the corporate social credit system as a tool for "enhancing China's soft power and international influence," and is another example of the willingness of the People's Republic of China to weaponize its economic leverage to coerce countries and companies to toe Beijing's political line. Just as the individual social credit system is intended to increase CCP control over all aspects of PRC citizens' lives, the corporate social credit system seeks to control the behavior of companies that do business in or with China. We oppose CCP efforts to extend its influence through intimidation and retaliation. That is why we are encouraging companies to join the Clean Network, which is intended to keep their critical technology systems and supply chains free from the control of malign actors, including the CCP.

Question 5. How is it affecting U.S. companies?

Answer.

1. Though the corporate social credit system remains in a pilot phase, over 30 million entities already have been enrolled in this system.
2. Once fully active, businesses with low corporate social credit scores may be subject to more frequent audits and inspections and may face exclusion from public procurement opportunities and commercial incentive programs.

3. Several behaviors, ranging from tax fraud and sustained noncompliance with environmental regulations to spreading false information online, can result in a company's inclusion on a blacklist.
4. Inclusion on the blacklist would effectively prevent a firm from doing business in or with PRC firms. This is a prime example of the CCP's strategy of seduce with money and reinforce with intimidation and retaliation.

Question 6. What role do you think the U.S. government should be playing when it comes to the Chinese government putting pressure on U.S. companies to comply with this system?

Answer.

1. The U.S. government will continue using diplomatic and commercial engagement to ensure U.S. companies enjoy fair treatment, a level playing field, and reciprocal market access.
2. We will continue our work to build a Clean Network of companies and countries that are free from the influence or control of authoritarian malign actors, such as the Chinese Communist Party.
3. To turn the tide, on April 29, 2020, Secretary Pompeo announced that, as part of the 2019 National Defense Authorization Act, the State Department will require a Clean Path for all standalone 5G network traffic entering and exiting U.S. diplomatic facilities at home and abroad. Last month, he announced the expansion of the Clean Network to include Clean Carrier, Clean Store, Clean Apps, Clean Cloud, and Clean Cable.
4. Momentum for the Clean Network initiative is accelerating. The United States calls on our allies and partners in government and industry around the world to join the growing tide to secure our data from the CCP's surveillance state and China's Great Firewall.
5. By building a coalition of partners, we will enhance efforts to protect our citizens' data and our freedoms. The Clean Network protects national security and preserves the open global Internet. It maximizes connectivity without the risks from untrusted vendors, counters the CCP's balkanization of apps while safeguarding user data privacy, and takes down the CCP's Great Firewall inside the U.S. that is censoring Americans' free speech.
6. The network will provide strength in numbers to help all parties overcome the threat of CCP retaliation or intimidation.

In May, the White House published the U.S. Strategic Approach to the People's Republic of China announcing a multi-faceted posture towards China on several fronts. For the economic aspect, this strategy document announced a whole-of-government approach to support fair trade, advance U.S. competitiveness, promote U.S. exports, and break down unjust barriers. Part of accomplishing this, is the creation of an Economic Security Strategy, which, in my opinion, is long overdue.

Question 7. In crafting our Economic Security Strategy, how do you view the security risk that is posed by China's ownership of over \$1 trillion in American debt?

Answer.

1. People's Republic of China (PRC) ownership of U.S. debt, by itself, does not pose a security risk. Countries hold U.S. debt due to the soundness of the U.S. economy and the liquidity of our debt instruments.
2. While the PRC owns a large amount debt in absolute terms, it only owns approximately 15 percent of the U.S. debt held by foreigners, five percent of U.S. debt held by the public, and four percent of total U.S. debt outstanding.
3. Nonetheless, we should be prepared to ensure that the CCP does not use this debt as an attempt to gain any sort of undue leverage over the United States, including considering all appropriate preemptive moves that signal we are serious about protecting our financial markets and demanding a level playing field as described in the question below.

Question 8. By calling in our loans, is China able to use this credit as a pressure point for economic leverage over the United States?

Answer. No, because the United States dollar is the world's reserve and settlement currency. There is ample demand for U.S. assets both domestically and internationally to limit the consequences to the United States of a PRC divestiture, and the United States is capable of managing any short-term market disruption. Moreover, the PRC stands to lose economically if it attempts to use this credit as a pressure point. Divesting a portion of its holdings of U.S. debt would depress the value of its remaining U.S. debt. If the PRC were to sell off all its holdings of U.S. debt

at the same time, the resulting market disruption would likely damage the PRC's own economy and reduce the value of the People's Bank of China's foreign reserves.

In addition, due to the United States' and the U.S. dollar's central roles in the global financial system, we have far more leverage than they do. Therefore, we can insist that PRC firms abide by the same standards of transparency that are required for U.S. companies in order to access U.S. financial markets. We need to do much more to safeguard our financial systems from the PRC's national securities laws designed to withhold critical audit papers for accounting oversight purposes in order to protect our citizens investments and create a level playing field for our companies. The President's Working Group of Financial Markets does not go into effect until 2022. In the meantime, I sent a letter to all U.S. CEOs and then another one to all the Governing Boards of American Universities and Colleges making them aware the risks associated with investing Chinese companies' stocks and emerging market index funds.

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. RICK SCOTT TO
HON. KEITH KRACH

Under Secretary Krach, we have seen Communist China employ an array of unfair business practices, like luring U.S. companies to the mainland China to force technology transfers. Some of these same U.S. companies operating in Communist China fear retribution from the government if they speak up against these practices.

Question 1. Do you believe that our focus on short-term prosperity in dealing with Communist China has severely impacted the United States' long-term economic success?

Answer.

1. Absolutely. The 800-pound elephant in the room is PRC retaliation for companies as well as countries.
2. The CCP's doctrine is seduce with money and reinforce with intimidation and retaliation. The CCP is a bully. Bullies back down when they're confronted. They really back down when they're confronted with your friends by your side.
3. The Department continues to expand coordination and joint efforts with allies and partners. There is strength in numbers, and power in solidarity and unity.
4. This is the beauty of the Clean Network comprised of like-minded countries and companies. The CCP can't retaliate against all of us at once. Their strategy has been to divide and conquer.

As Secretary Pompeo recently noted, the United States for years allowed the PRC to engage in unfair business practices and exploit our country. It's time to see the PRC as it is, not as we wish it to be. This Administration has prioritized a global strategy that aims to both protect our national and economic security interests and ensure U.S. long-term economic success. We are strengthening U.S. economic competitiveness in key emerging technologies. We are protecting our firms and workers from unfair competition, rampant intellectual property theft, forced technology transfer, and infiltration from the CCP's surveillance state. And we are building networks of trusted partners—democracies and the private sector—to push back against unfair practices, and through the Clean Network, to ensure that our supply chains do not wittingly or unwittingly support PRC human rights violations and abuses.

Under Secretary Krach, earlier this month you sent a letter to U.S. business leaders bringing attention to the Department of State's Xinjiang Supply Chain Business Advisory, where you state, "corporate responsibility is social responsibility."

Question 2. Do you find it hypocritical that American companies, including some that have been in the news recently for fighting against "social injustices", have spent years profiting off slave labor in China?

Answer. No, because many leaders of U.S. companies have not been sufficiently aware of conditions in Xinjiang, China. I would point out three factors behind their lack of awareness:

1. Many of them had no idea of the magnitude and scope of horrific human rights abuse and did not understand that the forced labor is shipped all over China. (This was one of the purposes of the business advisory that went out.)
2. U.S. Government officials had not previously reached out to them directly about this matter in such a formal way. (That is why I sent a letter directly

to U.S. business leaders as well as to all American universities drawing their attention to the issue and the Supply Chain Business Advisory.)

3. They often lack detailed information because it is difficult to conduct supply chain due diligence within China.

As I stated in my recent letter to U.S. business leaders, all U.S. businesses have a moral and perhaps even a fiduciary duty to ensure that they are not doing business with Chinese firms that engage in or benefit from forced labor. Most U.S. businesses take seriously the law that prohibits importation of goods produced by forced labor into the United States. What has changed in recent years is that the Chinese Communist Party has engaged in large-scale human rights abuses against Uyghurs, ethnic Kazakhs, ethnic Kyrgyz, and members of other Muslim minority groups in Xinjiang, including forced labor involving members of these groups outside Xinjiang. The Supply Chain Business Advisory called attention to certain firms and entities that are complicit in these abuses, so that U.S. businesses can make informed decisions about with whom they do business and how to begin mitigating these risks. In order to mitigate potential reputational, operational and legal risks, businesses should implement human rights due diligence policies and procedures and should also consider disclosing their investments in or relationships with suspect Chinese firms and entities.

Question 3. Did you receive any responses or outreach from the companies who received the letter?

Answer.

1. Absolutely. The CEOs were very appreciative of the letter because it was personal in nature and in the spirit of partnership from someone who has been a Chairman/CEO of three public companies.
2. They also appreciated understanding the magnitude of the human rights abuse and what the government's position and recommendations are.
3. Also very enthusiastic response from trade associations as well such as Trade groups Such as the U.S. Chamber of Commerce, Motion Picture Association of America, PhRMA, National Association of Manufacturers and others when they also distributed the letter to their members.
4. Stripe CEO Patrick Collison tweeted "As a U.S. business (and tech) community, I think we should be significantly clearer about our horror at, and opposition to, the atrocities being committed by the Chinese government against its own people."
5. It was a great exchange when I talked to the NBA CEO Adam Silver about his experiences in Xinjiang. He shared the NBA's governance policies and position on its training camp in Xinjiang. So, it also educated me. I sent a similar letter to all the Governing Boards of American institutions of higher education but this time as the former Chairman of the Board of Purdue University which also got tremendous pick up in the press and TV.

<https://www.wsj.com/articles/state-department-urges-universities-to-disclose-china-stocks-held-in-index-funds-11598015636>

<https://www.bloomberg.com/news/articles/2020-08-18/state-department-urges-colleges-to-divest-from-chinese-companies?sref=RfJLbe1B>

<https://money.usnews.com/investing/news/articles/2020-07-02/state-department-warns-top-us-firms-over-supply-chain-risks-linked-to-chinas-xinjiang>

6. The University letter about the CCP threat covered the broad implications for ensuring academic freedom, honoring human dignity, protecting university endowments, and safeguarding intellectual property.
7. AGB CEO sent out this tweet after he got my letter: "*We deeply appreciate Under Secretary of State Krach's letter to the Boards of our institutions and our partnership with the U.S. Department of State, in dealing the authoritarian influence of the Chinese Communist Party on our campuses,*" said Association of Governing Boards' CEO Henry Stoeber. "*As the former Chairman of Purdue, Under Secretary Krach recognizes ensuring academic freedom, honoring human dignity, protecting university endowments, and safeguarding intellectual property is a responsibility that sits squarely on the shoulders of all institution's board members.*"

The response to the letter was overwhelmingly positive. U.S. businesses of all kinds have expressed their continued support and focus on identifying and eradicating forced labor from their supply chains. They want to make sure their operations adhere to U.S. values such as transparency, accountability and respect for human rights. As I often tell my team: U.S. business leaders are patriots.

Question 4. How do you think U.S. companies should rethink their foreign supply chains?

Answer. This is what I tell my fellow CEOs—keep five things top of mind:

1. Corporate responsibility is national security. You are an American company first.
2. Demand reciprocity for how we treat foreign companies in the United States.
3. Insist on transparency. For everything.
4. Never be overly dependent on one country.
5. Always get advice from the United States State Department and Commerce Department. (Before I came to government, I had no idea the level of resources available to U.S. businesses and, conversely, how much the government needs advice from the private sector.)

COVID-19 has highlighted the risks of overreliance on single suppliers of goods that are critical to national security. The PRC has a long history of anti-competitive practices, including market access restrictions, subsidies, forced technology transfers, and intellectual property theft. These practices allow PRC companies to compete unfairly and create economic dependency that Beijing exploits to advance its political agenda. To protect our businesses and prosperity, it is essential that we diversify global supply chains by prioritizing investment not in countries with a record of predatory economic policies, but rather in countries where the rule of law is respected, where businesses can compete on a level playing field, and where institutions are accountable to citizens and consumers.

RESPONSE TO WRITTEN QUESTION SUBMITTED BY HON. EDWARD MARKEY TO
HON. KEITH KRACH

Question. You described in your testimony the Administration’s plan to form a group “comprised of like-minded countries, companies, and civil society [organizations] that operate under a set of ‘trust principles.’” One of the principles you have mentioned is “respect for the planet.” Please explain how, specifically, environmental concerns will be translated into principles and implemented by the Economic Prosperity Network, the name you have previously used to describe such a group.

Answer. In my testimony, I referenced several of the principles that underpin American values, including: integrity, accountability, transparency, reciprocity, respect for rule of law, respect for property of all kinds, respect for sovereignty of nations, respect for human rights, and respect for the planet. These principles are interrelated, each supporting the others. Respect for the planet requires adherence to these same principles. Environmental concerns feature prominently in our efforts to build a network or an alliance of democracies to oppose malign actions by the People’s Republic of China (PRC).

The PRC claims to be a “torchbearer” on global environmental issues, but the facts point to the opposite.

- Beijing is the largest emitter of numerous pollutants and greenhouse gases, and irresponsibly exploits natural resources around the globe, threatening the world’s economy and environment.
- The PRC is the largest source of plastic pollution, which harms marine life and clogs the world’s oceans. According to its own experts, in 2017 the PRC released up to one million tons of plastic waste into the ocean, and China’s marine debris costs the global economy billions of dollars each year.
- The PRC subsidizes the world’s largest distant water fishing fleet. Many PRC-flagged vessels engage in illegal, unreported, and unregulated (IUU) and irresponsible fishing, stealing resources from nations across the globe and further depleting declining fish stocks.

As Secretary Pompeo stated, it may be time for a new grouping of like-minded nations, a new alliance of democracies to advance international actions that push the PRC to change its problematic behaviors and hold it accountable. We work with partners and like-minded countries to expose and push back against the PRC’s harmful activities that diminish natural resources, create global health risks, and negatively impact economic prosperity globally. We expect this alliance to operate under the same set of trust principles that apply to all areas of economic collaboration.

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. DAN SULLIVAN TO
HON. NAZAK NIKAKHTAR

For us to compete effectively, we have to have good people on the ground who can advance our economic and commercial partnerships. That's certainly true in every region, but especially in the Indo-Pacific. There have been calls for shifting more U.S. government personnel to the Indo-Pacific region, and that would include Econ Officers at the Department of State and Foreign Commercial Service officers—something I've looked at as Co-Chair of the Senate Foreign Service Caucus and an issue that was and addressed in SFRC Chairman Risch's recently introduced STRATEGIC Act.

Question 1. What are both the Departments of State and Commerce doing to ensure that your personnel footprint matches the strategic importance of the Indo-Pacific region?

Answer. Recognizing the importance of the Indo-Pacific region, the International Trade Administration (ITA) is reallocating resources to ensure that by the summer of 2021 it will add: a second Commercial Service Officer in Australia to engage on Pacific Island Country (PIC) outreach; a third Commercial Service Officer in Thailand to work on Thai and ASEAN matters; and a third Commercial Service Officer in Singapore to support commercial interests in the region. We are adding a Commercial Liaison detail to INDOPACOM in Honolulu in early FY21 to support expanded PIC outreach.

Additionally, the Bureau of Industry and Security (BIS) has fully staffed a contingent of five new Export Control Officers (ECOs) in our embassies and consulates in the Indo-Pacific region, which includes two ECOs in Beijing, one in Hong Kong, one in Singapore, and one in New Delhi. These transitions are underway, consistent with travel restrictions related to COVID-19, and will ensure compliance with U.S. export controls in the region.

With regard to the PIC outreach initiative, ITA is providing technical assistance to multiple congressional committees to enhance the U.S. presence in the PICs through a pilot project using Locally Engaged Staff (LES). Managed by ITA Senior Foreign Commercial Service Officers in Australia and Japan, the LES would focus on expanding U.S. commercial engagement in this strategic region by promoting U.S. exports, strengthening bilateral trade, and ensuring a strong U.S. commercial presence across the Indo-Pacific. The PIC pilot project would build upon ITA Asia's existing footprint in the Indo-Pacific region that currently covers 27 cities in 14 markets. Although the PIC pilot project would be a commercial diplomacy initiative intended to foster bilateral economic ties with, and American economic interests in, the PICs, it also would play an important role in broader U.S. efforts to counter strategic competitors and potential adversaries that are attempting to expand their spheres of influence in the Indo-Pacific region.

The Administration has a forward-leaning agenda in the Indo-Pacific region. ITA's presence in overseas markets is needed to support that agenda. ITA is working with U.S. allies to advance bilateral, multi-lateral and sector-specific initiatives that will ensure free and fair trade for U.S. businesses in the region. This includes efforts in the Asia-Pacific Economic Cooperation (APEC) to promote telehealth, cybersecurity, and data privacy. It also includes private sector engagement in the energy sector as part of the Asia Enhancing Development and Growth Through Energy initiative, or Asia EDGE (See below). These efforts to work with our allies and partners in the Indo-Pacific region will strengthen our economic and national security relationships.

In addition, the Department of State has recently completed its Strategic Staffing Initiative, which resulted in almost 100 positions realigned from within existing resources based on Administration priorities. Many of these realignments involved moving Political, Economic, and Public Diplomacy positions in the Indo-Pacific Region.

Question 2. What more needs to be done?

Answer. The Administration is implementing the Indo-Pacific Strategy as a whole-of-government strategy to champion the values that have served the Indo-Pacific so well: (1) respect for sovereignty and independence of all nations; (2) peaceful resolution of disputes; (3) free, fair, and reciprocal trade based on open investment, transparent agreements, and connectivity; and (4) adherence to international law, including freedom of navigation and overflight.

Additionally, ITA is directly engaging with our Indo-Pacific partners to ensure that regional standards and regulatory practices for emerging technology allow U.S. companies to compete. As I mentioned in my statement, China is taking aggressive action in international bodies, such as standards organizations, to influence the de-

velopment of technology markets. If Chinese practices are adopted across the region, it will put U.S. technology leadership at risk.

Another way the United States can counter this risk is by participating in regional fora. ITA is working with APEC countries to foster policy discussions with regional partners that simultaneously allow technology markets to grow in a way that fits the needs of the partner country and also enable U.S. companies to continue to compete.

The United States must also ensure U.S. companies have the information they need to compete for business in the region. As one example, ITA leads the Communications, Industry Engagement, and Outreach Sub-Committee of the Asia EDGE Secretariat. Asia EDGE is a whole-of-government effort to grow sustainable and secure energy markets in the Indo-Pacific. Further, ITA is currently hosting a 10-part series of virtual workshops from June to December 2020 to deepen private sector engagement. The Asia EDGE Virtual Workshop Series convenes U.S. private sector stakeholders and U.S. Government (USG) officials across nine Federal agencies to: (1) ensure U.S. firms understand Asia EDGE priorities and current programming; (2) increase access to the strategic tools and resources available to U.S. companies pursuing energy projects in the Indo-Pacific region; and (3) leverage U.S. private sector feedback to inform future Asia EDGE programming.

We are also leveraging our BIS colleagues in the region to enhance the effectiveness of export control implementation by our partners in the region, including through government capacity building, outreach to industry, and enforcement liaison.

Question 3. Do your Departments need any flexibility to make these shifts? How can Congress be helpful in that regard?

Answer. Within our existing authorities and appropriations, we are focusing our resources as appropriate on the Indo-Pacific region in support of the USG's strategy. We are working closely with the State Department, which has provided funding for the ITA-directed APEC programs noted above in question 2.

Question 4. China is rolling out a network of corporate social credit systems. In 2018, the Civil Aviation Administration of China pressured multiple international airlines to change their websites' descriptions of Taiwan, threatening to lower their social credit records if they didn't. This issue is a major focus in the STRATEGIC Act introduced by Chairman Risch and it's important to both the Foreign Relations Committee and this Committee.

What are the U.S. government's views on the corporate social credit system?

Answer. We are very concerned by many aspects of China's corporate social credit system (CSCS), a Chinese program to use big data to track and score companies' behavior. First, there is, as Vice President Pence has pointed out, the Orwellian aspect of a system that seeks to rate and punish companies based on their 'social behavior.' More specifically, we are concerned about the data protection implications of requiring firms to transfer the large amounts of data necessary to comply with the system; the system's potentially extraterritorial reach; the lack of transparency into how scores will be calculated, including lack of clear procedures to challenge an adverse score; the potential for the system to be misused to induce the production of information or changes to company policies that are disfavored by the Chinese Communist Party; and the cost and difficulty of compliance, including monitoring the compliance of suppliers and the possibility for numerous enforcement authorities to impose penalties for a single alleged compliance problem. The European Chamber of Commerce in China stated that this program could spell life or death for individual companies.

The CSCS is situated within a broader ecosystem of Chinese laws and policies—including Military-Civil Fusion, the Cyber Security Law, the National Intelligence Law, and the National Security Law—designed to enhance the Chinese government's influence and its ability to access information held largely by the private sector. For example, CSCS intersects with Made in China 2025 (MIC 2025) because the next-generation information technologies China is developing under MIC 2025 will be integral to gathering data needed to support the CSCS. China's July 2019 *Guiding Opinion on Accelerating the Building of the Social Credit system and Building a Credit-based Monitoring System* focuses on making "full use of next-generation information technologies such as big data and artificial intelligence to achieve comparable credit monitoring data." CSCS is also explicitly identified in the State Council's 2014 planning outline as a means of "enhancing China's soft power and international influence" and is intended to impact firms operating outside of China.

Question 5. How is it affecting U.S. companies?

Answer. U.S. companies operating in China are expected to meet the political demands of the Chinese Communist Party (CCP), but in recent years these demands

have increased, which has increased the difficulty of operating in China. The CSCS is being implemented this year, and it is one of several recent legal initiatives aimed at augmenting the Chinese government's coercive exercise of power.

Given this history of economic coercion and corporate intimidation, Beijing may very well use the CSCS to extraterritorially pressure companies to comply with party doctrine and penalize those companies that do not toe the CCP line. This system may be used against U.S. companies directly, by preventing them from being able to operate in China unless their behavior meets Chinese government standards. It could similarly be used against U.S. companies' employees, as a means of influencing or controlling their personal behavior.

In practice, the CSCS could be used to further China's efforts to acquire data from foreign firms for reasons not directly related to the CSCS. The rating system could be leveraged as a means to acquire personal information and access intellectual property. Threatening a company with a low social credit score may compel companies to hand over information they would not otherwise have chosen to share or engage in other behaviors not otherwise in their interest.

As noted, China's CSCS model may be applied beyond Mainland China. The recently passed Hong Kong National Security Law has also raised concerns that the CSCS will have serious implications for U.S. firms and Americans conducting business in the financial hub.

Question 6. What role do you think the U.S. government should be playing when it comes to the Chinese government putting pressure on U.S. companies to comply with this system?

Answer. The Administration continues to press China to on market principles, and compliance with principles of fair trade, the rule of law, transparency, and the right to privacy.

However, as I noted in my testimony, because China is a sovereign state, foreign laws may never be sufficient to fully address China's predatory conduct. It is also not an actor that has shown a great interest in adhering to international laws. Part of the USG response must include decreasing the United States' overall reliance on China so that the impact of programs like the CSCS on U.S. firms and people can be minimized. Protecting the innovations, creations, and inventions that power our country are vital to our economic prosperity and national security. This Administration is committed to keeping persistent pressure on China to keep it from taking advantage of the United States.

Question 7. In November 2019, the Bureau of Economic Analysis at the U.S. Department of Commerce announced it would solicit new information in its surveys of U.S. multinational enterprise activity abroad, including on R&D employment and sales of digital services such as cloud computing.

How will the resulting data and information collected enable the U.S. government to better assess U.S.-China commercial ties?

Answer. The Bureau of Economic Analysis (BEA), a statistical agency, conducts surveys of U.S. multinational enterprises to collect detailed information about their U.S. and foreign activities that is used to produce and publish economic statistics on foreign direct investment. The mandatory annual and benchmark surveys collect financial and operating data for U.S. parent companies and their foreign affiliates in all countries where they operate. Data items include employment and compensation of employees; property, plant, and equipment; research and development expenditures; balance sheet and income statement details; sales or gross operating revenues; and data used to calculate value added. The statistics are needed to understand and evaluate the impact of the activities of U.S. multi-national enterprises (MNEs) on the economies of the United States and foreign host countries. They help business leaders make more informed investment decisions, aid policymakers' decisions on international trade and investment policy, and have been extensively used by the academic research community. The data are collected for statistical purposes only and the information on individual companies is confidential by law.

For the 2019 benchmark survey of U.S. direct investment abroad that is currently underway, BEA added questions about collaborative R&D agreements, such as cost-sharing agreements, and revenues related to the provision of digital services. The questions about R&D agreements will provide information on the production and use of intellectual property in global value chains, and the questions related to digital services will contribute to BEA's ongoing efforts to measure the digital economy. These questions, like all others on the survey, are collected from foreign affiliates in all countries, including China. This is the first time these data will be collected on the survey, and BEA will assess the robustness of the data before deciding how best to present them in its publications and whether to continue collecting these measures in the future.

Question 8. Is there other information the U.S. government ought to be soliciting from U.S. companies operating in China?

Answer. BEA regularly updates the content of its surveys to provide relevant and timely information to meet the evolving needs of data users in understanding the activities and economic significance of multinational enterprises. For example, in past benchmark surveys BEA has collected additional destination information on foreign affiliate sales and information on contract manufacturing services, based on suggestions by data users. BEA consults with key users in the academic and business communities, as well as users from across the government, and these efforts are particularly comprehensive during the planning stages of benchmark surveys, conducted once every five years. Changes to the survey are submitted to OMB for approval and are highlighted in notices published in the Federal Register to solicit public comment. In reaching decisions on what questions to include in the survey, BEA considers the government's need for the data and resources for processing the data, the burden imposed on respondents, the quality of the likely responses (e.g., whether the data are readily available on respondents' records), and BEA's experience in previous surveys.

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. RICK SCOTT TO
HON. NAZAK NIKAKHTAR

Question 1. Assistant Secretary Nikakhtar, our Nation has become too reliant on imports from adversaries like Communist China, which has become even more apparent in this pandemic. I believe we can no longer rely on countries like Communist China for our critical supply chains like PPE, and we can no longer accept Chinese technology that could be used to spy on us.

In your opinion, are there other industry sectors where the United States is overly reliant on the global supply chain that we should be addressing? If so, what are they?

Answer. The International Trade Administration (ITA) is analyzing critical supply chains and overall industry competitiveness, performing assessments of industries weakened by predatory import competition and foreign direct investment practices, and developing policy recommendations. This work has been used to develop U.S. policy responses on a range of topics, from Section 301, to solutions to encourage U.S. 5G competitiveness, to addressing vulnerabilities in the national security supply chain. In many cases, this work ties directly back to Chinese government activities that impede the competitiveness and national security of the United States. In this context, we are also leading the Administration's reshoring initiative, including working through ITA's SelectUSA unit to leverage interagency efforts and engage companies to encourage them to reshore supply chains to the United States.

Supply chain resiliency concerns have been brought to the spotlight by COVID-19. I note that Senators Portman and Peters recently proposed legislation to address U.S. vulnerabilities in PPE such as masks and gloves. Our dependence on China for a range of health and safety products remains an issue of national concern, and we are working to resolve this through our reshoring strategy.

It is worth noting that Chinese companies, strongly supported by Chinese government policies—including distorted domestic prices, intellectual property misappropriation, and enormous subsidization—dominate global production in key areas. Below are some areas where my office is working with other USG agencies and the private sector to advance U.S. industry competitiveness and domestic supply chain resilience:

Advanced Energy Storage: Chinese companies, strongly supported by Chinese government policies, dominate global production for lithium-ion batteries for electric vehicles, for example. ITA's Industry and Analysis unit is currently working with the Department of Energy and others on policy options for encouraging the advanced energy storage industry in the United States.

Critical Minerals: As we stated in the Department of Commerce's 2019 report *A Federal Strategy to Ensure Secure Reliable Supplies of Critical Minerals*, the United States is highly dependent on imports of some critical minerals. The Commerce Department has been working holistically to support the six calls to action laid out in that report.

Large Power Transformers and High Voltage Circuit Breakers: The USG has had long-standing concerns about large power transformers (LPTs) due to their criticality to the bulk power system and their difficulty to replace. High Voltage Circuit Breakers are critical to the safe and reliable operation of the bulk power system at both the transmission and sub-transmission system.

On May 1, the President signed Executive Order No. 13920 on “Securing the United States Bulk-Power System,” which prohibits acquisitions of LPTs and other “bulk-power system electric equipment designed, developed, manufactured, or supplied, by persons owned by, or controlled by, or subject to the jurisdiction or direction of a foreign adversary” when the transaction is determined to pose an undue or unacceptable risk to national security or the security and safety of U.S. persons. High voltage circuit breakers also fall within the scope of this Executive Order, which applies to acquisitions by both public and private sector entities. The Secretary of Energy is tasked with implementing this Executive Order, and in the coming months the Department of Energy’s Office of Electricity will coordinate with Commerce and other interagency counterparts listed in the Executive Order to formulate rules and procedures for implementation.

Semiconductors: The semiconductor industry is critical to U.S. economic growth, underpinning many of the advanced technologies that consumers depend on including smart phones, transportation safety applications, advanced medical devices, and telecommunications. TSMC’s announced investment in the United States will reinforce American leadership in cutting-edge semiconductor design and manufacturing and will further accelerate Arizona’s rise as a global hub for the technology industry.

Civil Nuclear: China and Russia’s efforts to displace the United States in the international civil nuclear market are detrimental to global nonproliferation, safety, and security culture and harm U.S. national security, the U.S. economy, and U.S. influence in the global energy sector. ITA supports the policy recommendations noted in the Department of Energy’s *Strategy to Restore American Nuclear Energy Leadership*. We will work with other USG agencies to implement these recommendations. Action on the Report’s recommendations will help to revitalize and strengthen the U.S. civil nuclear industry so that it can compete effectively in the global civil nuclear energy market.

Solar Energy: The United States is the second largest consumer of solar power in the world but is largely dependent on China for the solar panels (modules) that are being deployed throughout the country. Due in part to the Section 201 safeguard remedy, for which President Trump signed a Presidential Proclamation in January 2018, solar module manufacturing is making a comeback in the United States. However, these U.S. manufacturers still struggle to compete with the massive scale of Chinese manufacturing and injurious Chinese imports, despite the huge domestic demand for solar.

Question 2. Beyond additional Federal spending when our Nation is already severely in debt, what actions or policies can we implement to incentivize the growth of U.S. industry bases and further U.S. competitiveness?

Answer. Many of the actions the Administration has taken over the past four years were designed to incentivize the growth of U.S. industries. This includes enforcing our trade laws to protect our industries against the predatory practices of foreign governments, negotiating new trade agreements to ensure free and fair trade between nations, and removing burdensome, unnecessary regulations that make our companies less competitive. In addition, the Department of Commerce provides a robust set of products and services to U.S. businesses and our state and local partners to help U.S. companies compete and win in the international marketplace.

From technical assistance and development grants to export support and supply chain analysis, the Commerce Department is at the forefront of providing American businesses and workers with the resources needed to support the growth of U.S. industry bases and further U.S. competitiveness. The Department of Commerce will continue to identify new and effective ways to leverage its existing resources to advance these important objectives.

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. EDWARD MARKEY TO
HON. NAZAK NIKAKHTAR

Question 1. Has the Department of Commerce identified the relevant international laws and agreements to which China is viewed to be noncompliant? If so, which international laws and agreements are included?

Answer. The Administration has published many documents detailing China’s unfair practices that impact U.S. businesses. The Commerce Department provided significant input to the Office of the United States Trade Representative’s (USTR) Section 301 Report into *China’s Acts, Policies, and Practices Related to Technology Transfer, Intellectual Property, and Innovation*, published in March 2018. Further

information on China's practices with respect to intellectual property are described in the 2020 Special 301 report also published on USTR's website.

The Commerce Department is a key part of the Administration's work in closely monitoring China's compliance with its international trade obligations. For example, the 2020 National Trade Estimate Report devotes 26 pages to outlining China's trade practices of concern. Even more detail is provided in USTR's 128-page annual report on China's World Trade Organization Compliance. The Administration has not hesitated to challenge Chinese practices that violate China's WTO obligations, and in fact has pursued a number of WTO dispute settlement cases against China for failure to comply with its WTO obligations, ranging from China's antidumping and countervailing duty actions to its agricultural subsidies to its restrictions on electronic payment services to its restrictions on the export of important raw materials. Examples of cases include:

- That China's unilateral decision to adopt retaliatory duty and tariff measures on 3 billion dollars-worth of U.S. products violated the *General Agreement on Tariffs and Trade (GATT) 1994's* Article I:1 most-favored nation provision and Article II:1(a) and (b). This matter is still pending in the WTO.
- That China's insufficient and discriminatory intellectual property protection for foreign right holders violated Articles 3, 28.1 & 28.2 of the *Trade-Related Aspects of Intellectual Property Rights (TRIPS) Agreement*. This matter is still pending in the WTO.
- That China's subsidies to domestic producers of primary aluminum violated Articles 5(c), 6.3(a), 6.3(b), 6.3(c) and 6.3(d) of the *Agreement on Subsidies and Countervailing Measures (SCM Agreement)*, and Article XVI:1 of the *GATT 1994*. This matter is still pending in the WTO.
- That China's administration of tariff rate quotas (TRQs) on wheat, short-and medium-grain rice, long-grain rice, and corn violated Article X:3(a), XI:1, and XIII:3(b) of the *GATT 1994* and Part 1 of *China's Protocol of Accession*. In particular, the United States argued that China failed to administer its TRQs in a transparent, predictable, and fair basis, and failed to clearly specify requirements and administrative procedures in a manner that would not inhibit the filling of each TRQ. The WTO Panel agreed with the U.S. complaint in part.
- That China's "market price support" and subsidies program for domestic agricultural producers, which exceeded the level set out in Section I of Part IV of China's Schedule of Concessions on Goods (CLII), violated Articles 3.2., 6.3, and 7.2(b) of the *Agreement on Agriculture*. The WTO Panel agreed with the U.S. complaint in full.
- That China's export duties and quantity restrictions on various forms of antimony, cobalt, copper, graphite, lead, magnesia, talc, tantalum, and tin violated Part 1 of *China's Accession Protocol*. This matter is still pending in the WTO.

