HEARING ON U.S. TOOLS TO ADDRESS CHINESE MARKET DISTORTIONS

HEARING

BEFORE THE

U.S.-CHINA ECONOMIC AND SECURITY REVIEW COMMISSION

ONE HUNDRED FIFTEENTH CONGRESS
SECOND SESSION

FRIDAY, JUNE 8, 2018

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UNITED STATES-CHINA ECONOMIC AND SECURITY REVIEW COMMISSION

WASHINGTON: 2018

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The Commission was created on October 30, 2000 by the Floyd D. Spence National Defense Authorization Act for 2001 § 1238, Public Law No. 106-398, 114 STAT. 1654A-334 (2000) (codified at 22 U.S.C. § 7002 (2001), as amended by the Treasury and General Government Appropriations Act for 2002 § 645 (regarding employment status of staff) & § 648 (regarding changing annual report due date from March to June), Public Law No. 107-67, 115 STAT. 514 (Nov. 12, 2001); as amended by Division P of the "Consolidated Appropriations Resolution, 2003," Pub L. No. 108-7 (Feb. 20, 2003) (regarding Commission name change, terms of Commissioners, and responsibilities of the Commission); as amended by Public Law No. 109-108 (H.R. 2862) (Nov. 22, 2005) (regarding responsibilities of Commission and applicability of FACA); as amended by Division J of the "Consolidated Appropriations Act, 2008," Public Law Nol. 110-161 (December 26, 2007) (regarding responsibilities of the Commission, and changing the Annual Report due date from June to December); as amended by the Carl Levin and Howard P. "Buck" McKeon National Defense Authorization Act for Fiscal Year 2015, P.L. 113-291 (December 19, 2014) (regarding responsibilities of the Commission).

The Commission's full charter is available at www.uscc.gov.

June 21, 2018

The Honorable Orrin Hatch
President Pro Tempore of the Senate, Washington, DC 20510
The Honorable Paul Ryan
Speaker of the House of Representatives, Washington, DC 20515

Dear Senator Hatch and Speaker Ryan:

We are pleased to notify you of the Commission's June 8, 2018 public hearing on "U.S. Tools to Address Chinese Market Distortions." The Floyd D. Spence National Defense Authorization Act for 2001 § 1238, Pub. L. No. 106-398 (as amended by the Carl Levin and Howard P. "Buck" McKeon National Defense Authorization Act for Fiscal Year 2015 § 1259b, Pub. L. No. 113-291) provides the basis for this hearing.

At the hearing, the Commissioners received testimony from the following witnesses: Chad Bown, Ph.D., Reginald Jones Senior Fellow, Peterson Institute for International Economics; former Senior Economist for International Trade and Investment, White House Council of Economic Advisors; Linda Dempsey, VP, International Affairs and Economic Policy, National Association of Manufacturers; Celeste Drake, Trade and Globalization Policy Specialist, AFL-CIO; Jennifer A. Hillman, Professor from Practice, Georgetown Law School; former Member, WTO Appellate Body; Lee Branstetter, Ph.D., Professor of Economics and Public Policy, Carnegie Mellon University; former Senior Economist for International Trade and Investment, President's Council of Economic Advisor; Mark Cohen, head of the Asia IP Project, University of California at Berkeley; former Senior Counsel, U.S. Patent and Trademark Office; Willy Shih, Ph.D., Robert and Jane Cizik Professor of Management Practice in Business Administration, Harvard Business School; and Graham Webster, China Digital Economy Fellow at New America; Senior Fellow, Paul Tsai China Center at Yale Law School. This hearing explored U.S. policy options available to address Chinese market distortions. The first panel, "A Coordinated Policy Response to Chinese State Capitalism," addressed industrial policy challenges like subsidies, price distortions, and investment restrictions. The second panel, "A Coordinated Policy Response to China's Techno-nationalism," focused on challenges from China's push to develop domestic-led intellectual property, including technology transfer, IP or data theft, and restrictions on cross-border data flows.

We note that the full transcript of the hearing is posted to the Commission's website. The prepared statements and supporting documents submitted by the participants are now posted on the Commission's website at www.uscc.gov. Members and the staff of the Commission are available to provide more detailed briefings. We hope these materials will be helpful to the Congress as it continues its assessment of U.S.-China relations and their impact on U.S. security.

The Commission will examine in greater depth these issues, and the other issues enumerated in its statutory mandate, in its 2018 Annual Report that will be submitted to Congress in November 2018. Should you have any questions regarding this hearing or any other issue related to China, please do not hesitate to have your staff contact our Congressional Liaison, Leslie Tisdale, at 202-624-1496 or ltisdale@uscc.gov.

Sincerely yours,

Robin Cleveland
Chairman

Carolyn Bartholomew
Vice Chairman

cc: Members of Congress and Congressional Staff

CONTENTS

JUNE 8, 2018

U.S. TOOLS TO ADDRESS CHINESE MARKET DISTORTIONS

Panel I: A Coordinated Policy Response to Chinese State Capitalism

Panel II: A Coordinated Policy Response to China's Techno-nationalism

PUBLIC COMMENT SUBMITTED FOR THE RECORD

U.S. TOOLS TO ADDRESS CHINESE MARKET DISTORTIONS

FRIDAY, JUNE 8, 2018

U.S.-CHINA ECONOMIC AND SECURITY REVIEW COMMISSION

Washington, DC

The Commission met in Room 562 of Dirksen Senate Office Building, Washington, DC at 9:00 a.m., Commissioner R. Glenn Hubbard and Commissioner Jonathan Stivers (Hearing Co-Chairs) presiding.

OPENING STATEMENT OF COMMISSIONER R. GLENN HUBBARD HEARING CO-CHAIR

HEARING CO-CHAIR HUBBARD: Good morning. Welcome to the sixth and final hearing of the U.S.-China Economic and Security Review Commission's 2018 Report cycle. I think it's fair to say that today's discussion is extremely topical, perhaps even more topical than when we started putting it together.

The circumstances certainly surrounding China's accession to the WTO were distinctive if not unique. China acceded on the grounds it wouldn't immediately comply with all requirements but would increasingly be able to do so over time.

Prior to its accession, China had enacted sweeping and painful reforms to state-owned enterprises. And its leadership used the WTO to expand China's integration with global markets and devolve government control in many industries.

But those positive circumstances have changed. China's President Xi Jinping has called for renewed centralization of economic and political authority under the government and the Party, writing that "East, West, North, or South, the Party leads everything."

Though the global economy has been driven in part by China as a growth engine, the Chinese government continues to use tariff and non-tariff barriers, like investment restrictions and government subsidies, to block access to China's domestic market and tilt the playing field in favor of Chinese companies.

These barriers are actually compounded by two imperatives for Chinese leadership. First, they seek to promote China's economic transition to higher value-added industries, requiring technological innovation to boost wages and productivity. Now, in theory, this would entail firm investments in R&D and government support for scientific research, education, and human capital. In practice, it's often incorporated theft of foreign intellectual property, cyber espionage, and requests to transfer technology at the expense of American and other foreign companies.

Second, the Chinese government has published targets encouraging domestic companies to be internationally competitive, not only in low-cost manufacturers but in more sophisticated products and services. And Chinese government subsidies that have led to steel overcapacity may lead to high export volumes of electric cars, of lithium-ion batteries, and semiconductors.

China's domestic giants then become global competitors, protected at home and undisciplined by commercial considerations.

Today, and particularly in the topical global environment surrounding all these issues, we will explore in what I think is extremely interesting testimony what U.S. policymakers can do to address these challenges.

To our distinguished witnesses, thank you for joining us to survey the various policy tools the nation has at its disposal. I certainly look forward to hearing from each of you as I know all the commissioners do.

Before we begin, I'd like to thank Senate Minority Leader Chuck Schumer. I'm one of his five Republican constituents in New York State.

[Laughter.]

HEARING CO-CHAIR HUBBARD: And the Senate Committee on Rules and Administration for securing this room for our use today. I now turn the floor over to my colleague and co-chair for the hearing, Commissioner Jonathan Stivers.

PREPARED STATEMENT OF COMMISSIONER R. GLENN HUBBARD
HEARING CO-CHAIR

Good morning, and welcome to the sixth and final hearing of the U.S.-China Economic and Security Review Commission's 2018 Annual Report cycle. Thank you all for joining us today.

The circumstances surrounding China's accession to the WTO were unique. China acceded on the grounds that it could not immediately comply with all requirements, but would increasingly be able to do so over time. Prior to accession, China had enacted sweeping and painful reforms to its state-owned enterprises. Its leadership used the WTO to expand China's integration with global markets, and devolve government control in many industries.

Those circumstances have changed. China's President Xi Jinping has called for renewed centralization of economic and political authority under the Chinese government and the Chinese Communist Party, writing that "East, West, North, or South, the Party leads everything." Though the global economy has been driven by China's growth engine, the Chinese government continues to use tariff and non-tariff barriers like investment restrictions and government subsidies to block access to China's domestic market and tilt the playing field in favor of Chinese companies.

These barriers are compounded by two imperatives for Chinese leadership. First, they seek to promote China's economic transition to higher value-added industries, requiring technological innovation to boost wages and productivity. In theory, this would entail firm investments in R&D and government support for scientific research, education, and human capital development. In practice, this has often incorporated theft of foreign intellectual property, cyber espionage, and requests to transfer technology at the expense of U.S. and other foreign companies.

Second, the Chinese government has published targets encouraging domestic companies to be internationally competitive, not only in low-cost manufactures but in more sophisticated products and services. Chinese government subsidies that have led to steel overcapacity may lead to high export volumes of electric cars, lithium-ion batteries, and semiconductors. China's domestic giants then become global competitors: protected in their domestic market and undisciplined by commercial considerations.

Today, we will explore what U.S. policymakers can do to address these challenges.

To our distinguished witnesses, thank you for joining us to survey the various policy tools the U.S. has at its disposal. I look forward to hearing from each of you. I would also like to thank Senate Minority Leader Chuck Schumer and the Senate Committee on Rules and Administration for securing this room for our use today. I now turn the floor over to my colleague and co-chair for this hearing, Commissioner Jonathan Stivers.

OPENING STATEMENT OF COMMISSIONER JONATHAN STIVERS
HEARING CO-CHAIR

HEARING CO-CHAIR STIVERS: Thank you, Commissioner Hubbard.

Good morning, everyone. It's nice to see such a great turnout, especially this early, especially after such a late night of celebration as the Capitals won the Stanley Cup. I just had to get that in the record.

[Laughter.]

HEARING CO-CHAIR STIVERS: I want to thank our witnesses for joining us today and the thought and consideration they put into their testimonies.

It is a particularly interesting time, as Commissioner Hubbard mentioned, and I might say historic or unprecedented time, to be analyzing U.S. tools to address the Chinese government's market distortions and trade policies. It seems that most U.S. analysts, legislators, trade officials agree that the policies pursued by Beijing are a challenge that needs to be addressed in some way by the global community.

The question then becomes what policies can the U.S., and in particular the U.S. Congress, use to push back on China's harmful policies that distort the free market.

Over the last six months, we have seen multiple policy options employed. First, in the Section 201 case brought against solar panels and washing machines, then in the Section 232 investigations into steel and aluminum, and most recently in the Section 301 investigation into China's policies and practices related to intellectual property and technology transfer.

Such actions have provoked a heated debate, both within the United States and among our allies and trade partners.

And beyond unilateral trade actions, multilateral policy options may present opportunities for the U.S. to engage with allies on issues of mutual concern. To cite one recent example, the Office of the United States Trade Representative initiated a WTO dispute against China's technology licensing requirements on March 23, and by April 5, the European Union and Japan had both requested to join in those consultations.

The policy tools available may involve tradeoffs and contain gaps, and some tools may provoke unintended consequences, and some tools may be seen as insufficient, as previously negotiated WTO agreements sometimes and often cannot effectively address many of the problems identified in a Section 301 investigation.

Fear of unintended consequences can paralyze policymaking, but we must acknowledge that inaction, which is another policy option, carries its own risk.

In recent years, it's been easier to identify a current problem than to evaluate it and offer a potential solution.

Our witnesses today will draw on their government, academic and industry experience to discuss the various courses of action and craft policy proposals. I commend you all for the openness of thinking broadly and strategically about these challenges, and for the experience, insight and vision that you bring to your responses.

Before we begin, I would like to remind everyone that the testimonies and transcript from today's hearing will be posted on our website, www.uscc.gov. And, finally, the 2018 Annual Report will be released in early November, and we invite everyone to follow the Commission's research reports and issue briefs published in the interim.

PREPARED STATEMENT OF COMMISSIONER JONATHAN STIVERS
HEARING CO-CHAIR

Thank you, Commissioner Hubbard, and good morning everyone. I want to thank our witnesses for joining us today and for the thought and consideration they have given their testimonies.

Multiple policy options have been proposed to address the challenges posed by Chinese trade-distorting practices to U.S. economic and national security. Over the last six months, we have seen some of these options employed, first in the Section 201 case brought against solar panels and washing machines, then in the Section 232 investigations into steel and aluminum, and most recently in the Section 301 investigation into China's policies and practices related to intellectual property and technology transfer. Such actions have provoked heated debate, both within the United States and among our allies and trading partners.

Beyond unilateral trade actions, multilateral policy options may present opportunities for the U.S. to engage with allies on issues of mutual concern. To cite one recent example, the Office of the U.S. Trade Representative initiated a WTO dispute against China's technology licensing requirements on March 23; by April 5, the European Union and Japan had both requested to join those consultations.

The policy tools available may involve tradeoffs and contain gaps. Some tools may provoke unintended consequences: as former trade negotiator Wendy Cutler recently mentioned, a domestic policy choice to protect one industry through tariffs or quotas may occur at the expense of another industry. Some tools may be seen as insufficient: as trade attorney Terence Stewart argued, previously negotiated WTO agreements "do not concern, and therefore cannot address many of the problems identified" in the Section 301 investigation. Fear of unintended consequences can paralyze policymaking, but we must acknowledge that inaction—another policy option—carries its own risk.

It is often simpler to identify a current problem than to evaluate it and offer a potential solution. Our witnesses today will draw on their government, academic, and industry experience to discuss various courses of action and craft policy proposals. I commend you all for your openness to thinking broadly and strategically about these challenges, and for the experience, insight, and vision you bring to your responses.

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PANEL I INTRODUCTION BY COMMISSIONER JONATHAN STIVERS

HEARING CO-CHAIR STIVERS: So in our first panel, we'll hear from an absolutely phenomenal set of experts.

First, we'll begin by Dr. Chad Bown, Reginald Jones Senior Fellow at the Peterson Institute for International Economics. Dr. Bown's research focuses on international trade policy, negotiations and disputes.

He previously served as a senior economist on the Council of Economic Advisers and as a lead economist at the World Bank.

Dr. Bown will discuss economic challenges brought by China's state-owned enterprises and the policy tools available to address them, including import restrictions and trade remedies, worker mobility assistance, the WTO, and multilateral SOE disciplines.

Next we will hear from Linda Dempsey, Vice President of International Economic Affairs Policy at the National Association of Manufacturers. Ms. Dempsey has led NAM's efforts to increase U.S. manufacturing competitiveness through the promotion of intellectual property protection and the elimination of trade barriers.

Ms. Dempsey previously served as vice president of the Emergency Committee for American Trade representing Fortune 500 companies, and prior to that, she served as trade counsel for the Senate Finance Committee.

And her testimony will focus on the challenges faced by U.S. manufacturers, including localization policies, investment restrictions, import regulations, and how to address those challenges.

Then we will hear from Celeste Drake, Trade and Globalization Policy Specialist at the AFL-CIO. Ms. Drake advocates for U.S. trade policy reform on behalf of working families, testifying before various House and Senate committees and the U.S. International Trade Commission and the EU's Economic and Social Committee.

Prior to her work at AFL-CIO, Ms. Drake served as legislative director for Representative Linda Sanchez.

Her testimony will address the impact of China's subsidies, support for SOEs, IP practices, and trade composition on U.S. jobs and the standard of living for working families.

And finally, we will hear from Jennifer Hillman, Professor from Practice at Georgetown Law. Ms. Hillman's research focuses on international trade law, policy, and dispute settlement. She is frequently quoted in news and media outlets ranging from the Council on Foreign Relations to Inside U.S. Trade to Bloomberg Law.

Ms. Hillman previously served as one of the seven international members of the World Trade Organization's Appellate Body.

Prior to that, Ms. Hillman served as a commissioner on the U.S. International Trade Commission for nine years. And Ms. Hillman will assess various U.S. unilateral and multilateral trade policy tools and how they have been employed previously.

Thank you all very much for your testimony. Please keep your remarks to around seven minutes and leave time for a great question and answer period that I expect will soon follow after that.

And, Dr. Bown, we will begin with you.

OPENING STATEMENT OF CHAD BOWN, PH.D., REGINALD JONES SENIOR FELLOW, PETERSON INSTITUTE FOR INTERNATIONAL ECONOMICS; FORMER SENIOR ECONOMIST FOR INTERNATIONAL TRADE AND INVESTMENT, WHITE HOUSE COUNCIL OF ECONOMIC ADVISORS

DR. BOWN: Commissioners, thank you for the opportunity to provide my testimony in front of you today as part of this distinguished panel.

Let me start off by recognizing that a major factor in the rising tensions that we're currently observing between the United States and China has been the resurgent role of the state in the Chinese economy.

Since 2013, the trend away from private sector and toward state management is clear; the policy climate has discernibly shifted toward more state control.

Indeed, China's economic growth in the first decade after its 2001 accession to the WTO was largely driven by the private sector. Nevertheless, the state and the Communist Party even remained major players in the private sector during this era.

But today, more than 15 years after China's accession to the WTO, it has become clear that China's state-owned enterprises are not going to disappear. Thus, ensuring a competitive environment for American firms and workers requires imaginative and new approaches in thinking by U.S. leadership, especially about the issues of SOEs.

In this testimony, I want to provide a framework to help set priorities for future U.S. policymakers. I will illustrate why current U.S. domestic policy tools have proven insufficient and why a U.S.-only approach is also bound to fail.

I propose a two-pronged multilateral approach to attack the heart of the underlying problem regarding China's SOEs. America's domestic policy tools have not worked. So let's, as a case study, consider the example of steel. American application of antidumping and countervailing duties, the most oft-used trade policies in the United States, have long been effective at actually shutting Chinese steel out of the U.S. market.

Even by 2009, more than 80 percent of U.S. steel imports from China were covered by antidumping. By 2017, this had increased to 95 percent. Yet stopping U.S. imports from China directly has not solved the underlying problems of distortions created by China's SOEs.

Even with the U.S. trade restrictions in place, China continues to export to third-country markets. China has expanded from less than a third of global capacity in 2005 to nearly 50 percent of the world's capacity in steel production today. As its economic growth has slowed recently, China has increased the share of its production that it exports from only four percent in 2009 to nearly 14 percent by 2015.

All else equal, China's exports lower world prices; they push steel producers out of third markets and into the U.S. market. This is simply the economic phenomenon of arbitrage.

While U.S. antidumping and countervailing duties have not worked at addressing the distortions created by China's SOEs, U.S. government, the United States government has recently deployed three additional policies that involve putting additional resources toward trade remedy enforcement. But these will also not address the underlying distortion problems.

The first involves the issue of transshipment. Transshipment is when the Chinese steel being exported to a different country--let's call it Country X--is relabeled as "made in Country X" and then shipped back to the United States, thus violating a U.S. antidumping order. This is clearly a criminal violation. But take the following example of this Country X, which has its own steel industry. With less world capacity, it would simply produce for its own domestic

market. But the introduction of low-priced Chinese steel into Country X means that its own production is no longer needed for domestic production or domestic consumption. It can now be exported into the United States market that is now more attractive. The U.S. price of steel is higher because of these American trade restrictions in place on China.

But by how I've constructed this example, there is no illegal transshipment activity. The same economic problem for America arises even though the transshipment problem is legally addressed.

The second policy involves how the United States government has begun applying a "particular market situation"--this is legal terminology--this context to the construction of dumping margins and antidumping investigations. Take a recent case in which South Korea's production of oil country tubular goods, which is a downstream steel product, was found to benefit from access to Chinese subsidized hot-rolled steel as an input.

The result was higher duties on the South Korean firm, keeping those imports out of the U.S. market. But again if China's overcapacity drives down world prices of hot-rolled steel everywhere globally, downstream steel consuming industries elsewhere benefit, even in countries that don't import the steel from China directly.

Punishing South Korea, even though an OCTG producer in another country also benefits from low world prices without importing it from China, does not attack the SOE problem.

The third policy initiative involves the recent U.S. global import restrictions. These include the application of steel and aluminum tariffs under Section 232 of the Trade Expansion Act of 1962, as well as tariffs and other import restrictions on solar panels under Section 201 of the Trade Act of 1974.

In these three cases, most U.S. imports from China had already long been covered by antidumping and countervailing duties. In each, the major countries facing the new global import restrictions in 2018 were military allies and economic allies, countries that also struggle to cope with the distortions introduced by China's economic system.

Yet instead of being treated as allies, these countries have now been targeted by U.S. trade restrictions. This makes it more difficult to pursue the multilateral solutions that I propose next.

So if these tools aren't going to work, what will? Well, here is my two-pronged approach. The first is to file a WTO dispute against China over the issues of its state-owned enterprises and the distortions that they are having on the U.S., on U.S. market access.

It would be the most direct way of attacking the underlying concern. The dispute should include allegations of both Chinese violations under the WTO's Agreement on Safeguards and Countervailing Measures but also non-violation claims that China's economic evolution has not allowed benefits expected under the agreement to materialize even if China is not found to have technically broken any WTO commitments.

Now, the United States should not do this by itself. It should file a broad-based WTO dispute jointly alongside America's economic allies, the countries with market-oriented systems that confront the same challenges posed by China.

The European Union and Japan have indicated a willingness to engage as evidenced by joint trade ministerial statements issued in Buenos Aires in December 2017, in Brussels in March of 2018, and just last week in Paris. But other major players with systemic interests should also be engaged as well.

The second and complementary prong of my proposed approach is to develop new and enforceable rules that both address any economic distortions arising from China's SOEs and that would be adopted via an international agreement to which China is actually a party.

The political bargain for China would be an enforceable agreement on SOE rules, and in exchange China would be allowed to keep its SOEs.

So how to do so? I recommend beginning with the state-owned enterprise chapters of the recently negotiated Trans-Pacific Partnership Agreement signed by the United States and 11 other countries in February 2016.

The TTP's SOE provisions mandate nondiscriminatory treatment, commercial considerations, noncommercial assistance, and competitive neutrality. There are also rules involving transparency and corporate governance that are fundamental issues since Chinese government and Communist Party officials often sit on the boards of companies and direct SOE decisions in ways that may be inconsistent with market signals.

But importantly, this SOE agreement need not be negotiated under the context of a full Doha- like round or a single undertaking that would include the entire WTO membership. It would be better negotiated as a plurilateral agreement with a critical mass of countries but including China. Examples of recent plurilateral deals include the first and second Information Technology Agreements.

Finally, new rules on SOEs not only need to be multilateral but they also need to be enforceable and thus imbedded into a trade agreement. Here there may be additional lessons learned from the regulatory experience of other economies, including the European Commission.

Its member states have tasked the Commission with enforcing state-aid rules between member countries that have differing levels of SOE involvement in their economies, to do so in a way that ensures a European level playing field.

Thank you for the opportunity to testify, and I welcome the opportunity to take your questions.

PREPARED STATEMENT OF CHAD BOWN, PH.D., REGINALD JONES SENIOR FELLOW, PETERSON INSTITUTE FOR INTERNATIONAL ECONOMICS; FORMER SENIOR ECONOMIST FOR INTERNATIONAL TRADE AND INVESTMENT, WHITE HOUSE COUNCIL OF ECONOMIC ADVISORS

Testimony before the U.S.-China Economic and Security Review Commission

Hearing on U.S. Tools to Address Chinese Market Distortions

Chad P. Bown*

Peterson Institute for International Economics

June 8, 2018

1 Introduction

A major factor in the rising economic tensions between China and the United States has been the resurgent role of the state in the Chinese economy in recent years. For example, in 2017, three of the top four companies on the Fortune Global 500 were Chinese state-owned enterprises (SOEs).[1] However, it would be incorrect to assume from this statistic China's economy is entirely state-owned, or to conclude that the Chinese system is on the verge of taking over global economic activity.

The reality is more nuanced, of course, as documented by my colleague Nicholas Lardy at the Peterson Institute. Since 2013, the trend away from the private sector and toward state management is clear; the policy climate has discernibly shifted toward more state control. Lardy and other scholars point to declines in private investment relative to state investment.[2] The trend appears in fact to have inflicted damage on China itself – easy access to credit and diversion of resources toward SOEs and away from the private sector may, in fact, be holding back Chinese economic growth.

China's economic growth in the first decade after its 2001 accession to the World Trade Organization (WTO) was driven largely by the private sector, as Chinese reforms led the state-sponsored sector of the economy to shrink in relative terms.[3] Most of the bright spots of the Chinese economy – growth in industrial output, exports, returns on assets – were disproportionately and increasingly arising from private enterprise. Nevertheless, the state and the Communist Party remained major players during this era, even in the private sector.

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* Chad P. Bown is *Reginald Jones Senior Fellow* at the Peterson Institute for International Economics in Washington, DC. His previous positions include serving as a senior economist on the White House Council of Economic Advisers and as a Lead Economist at the World Bank.

[1] Walmart topped the Global Fortune 500, followed by State Grid, Sinopec Group, and China National Petroleum. Rounding out the top ten were Toyota Motor, Volkswagen, Royal Dutch Shell, Berkshire Hathaway, Apple and Exxon Mobil.
[2] Lardy (2017)
[3] Lardy (2014).

And the growing role of the state in the economy more recently highlights Chinese concern for objectives other than company profits. In 2003, for example, China created the State-owned Assets Supervision and Administration Commission (SASAC), a single government agency that now controls many SOEs.[4] As the legal scholar Mark Wu indicates, "In many ways, SASAC operates as other controlling shareholders do. It is happy to grant management operational autonomy so long as it delivers along the agreed-upon metric. The difference is that the metric is not pure profit, but rather *the Chinese state's interest, broadly defined*" (Wu 2016, p. 272, emphasis added).

These developments pose extraordinary frustrations and challenges for the United States and other countries seeking to sustain an open international trade and investment regime that is inclusive of China. More than 15 years beyond China's accession into the WTO, it has become clear that China's SOEs are not going to disappear anytime soon. Thus, ensuring a competitive environment for American firms and workers requires imaginative new approaches and thinking by U.S. leadership.

In this testimony, I want to provide a framework to help set priorities for future U.S. policymakers. I will illustrate why current U.S. domestic policy tools – such as the application of tariffs – have proven insufficient to address the underlying distortions. Importantly, in some instances, I argue that continued reliance on existing tools – including the expansion of tariff coverage beyond China and its SOEs – runs the risk of making matters much worse.

A U.S.-only approach is also bound to fail. And while there is still an important and untapped current role for WTO dispute settlement, I also identify how new and enforceable international rules on SOEs must be developed – through a process of multilateral cooperation – to address these concerns. And because of the nature of international trade, cooperation with like-minded economic allies and political engagement by China must be mobilized to create a sustainable, long-run solution. A final section explains one approach toward achieving this outcome.

2 China's SOEs through the lens of steel

China's steel industry can serve as an illustrative case study to motivate why a new approach is needed. The issue of steel has caught the eye of the public and policymakers because of recent U.S. government actions that have created a crisis in the global trading system.[5]

While global capacity for crude steel production increased by almost 80 percent between 2005 and 2017, little of that expansion took place in the Organization for Economic Co-operation and Development (OECD), where capacity increased by only 13 percent. Significant expansion took place in several non-OECD countries, including India, Brazil, and Russia. But by far the largest source of growth in steel capacity was in China, where capacity expanded by 176 percent over this period. China's share of global steel production capacity went from less than one-third in 2005 to nearly 50 percent in 2017.

[4] Wu (2016)
[5] This section draws from Bown (2017).

China's production of crude steel was 1.26 times higher in 2015 than it was in 2005, largely tracking China's overall growth in capacity during this period. Combined production in the rest of the world was essentially flat.

There are two sources of concern arising in the period since the global financial crisis when China's growth has coincidentally also slowed down.

First, as its economy began to slow down, China substantially increased the export share of its production, from 4.2 percent in 2009 to 7.5 percent in 2013 to 13.7 percent in 2015.

Second, relative to most other major exporters, China still exports a relatively small share of its total production. Although it the world's largest exporter of steel products—accounting for 30 percent of world (net of EU-28) exports in 2014, up from 12 percent in 2005—among the major economies, only India currently exports as small a share of its steel production. Japan and South Korea are the next-largest exporters of steel after China, with 13 percent and 10 percent of global exports in 2014, respectively. But the differences are that Japan and South Korea export 35–40 percent of production per year. Foreign steelmakers are concerned with what would happen if China exported the same share of its steel as these other Asian economies.

The Chinese government has recognized periodically its overcapacity in steel production. In early 2016, for example, it revealed plans to transition 500,000 workers out of the steel sector.[6]

However, like many areas of the Chinese economy, the steel sector is a mix of private companies and SOEs. In 2014, for example, private firms accounted for 50 percent of Chinese steel production and steel capacity, up from only 5 percent in 2003.[7] One challenge for Chinese policymakers seeking to address overcapacity is that they do not have control over the entire sector. A second is, like policymakers everywhere, the Chinese government is highly concerned with the ability of laid-off workers to adjust to take advantage of new economic opportunities.

Despite using the case of steel to inform the analysis undertaken here, a global policy approach toward SOEs should not be based on or limited by the experience of this one industry. The American steel sector has been transforming for decades, first facing new competition from Europe and other countries in Asia beginning in the 1960s, as well as the technological revolution spurred by mini-mills, long before the more recent arrival of competition from China's SOEs.[8] As such, steel is unlikely to be representative of the "average" American industry that may face competition from state-owned enterprises.

Thus, the next section introduces a more general framework that can account for other economic problems that may arise. Industries with different market structures or conditions of competition may face different sets of challenges arising from China's SOEs. In these sectors, intellectual property protection or research and development may play a more distinctive role.

[6] Kevin Yao and Meng Meng. 2016. China Expects to Lay Off 1.8 million Workers in Coal, Steel Sectors. *Reuters*, February 29. Available at http://uk.reuters.com/article/us-china-economy-employment-idUKKCN0W205X .

[7] Lu (2016), based on data taken from the China Iron and Steel Association.

[8] Collard-Wexler and De Locker (2015).

3 The Economic Problems to the United States and Other Countries from China's SOEs

One concern with China's SOEs is that, because of their soft budget constraints, they act like subsidized firms. Unless there are market failures, subsidies incentivize firms to produce too much and to charge too low a price relative to what the market would have delivered. What, if anything, to do about those foreign subsidies requires policymakers have a lot more information and careful consideration of tradeoffs.

A frequent policy response to date has been to try to counteract effects of the subsidy in the U.S. market by imposing a tariff. Interestingly, from the perspective of pure economic cost-benefit analysis, that is not necessarily the best policy prescription. Suppose markets are competitive, so that there is free entry and exit into the industry. Then even though a Chinese subsidy introduces a distortion and hurts some American interests – so that there are some distributional implications within the United States – the gains to American consumers from China's subsidy are larger than the losses to American producers. Under this scenario, on net, the United States is actually better off than if China had not imposed a subsidy.

Nevertheless, the salience of this purely economic outcome is based on one set of underlying assumptions. A more comprehensive cost-benefit analysis is contemplated next, whereby I consider different scenarios so as to investigate how each affects the appropriate policy response.

3.1 Equity and adjustment concerns

Chinese policymakers may prefer SOEs to private firms if the SOEs allow for greater domestic social sustainability; as Wu indicated earlier "the metric is not pure profit, but rather *the Chinese state's interest, broadly defined*." One possibility is the Chinese state uses SOEs to prevent bankruptcies and layoffs when negative "shocks" arise. This is distinct from more market-oriented economies in which firms and workers may not receive the same state-provided protections.

However, the Chinese approach can have at least two important implications for trading partners.

The first is relevant if there are significant impediments to adjustment – or the reallocation of resources across firms or industries – in the face of "shocks." Consider a shock to global demand that would be expected to affect firms and workers in all countries equally – i.e., that would lead to an equal reduction in supply across countries. If China's system of SOEs means that it fails to absorb its "share" of such shocks, then China's SOEs impose negative externalities on trading partners by passing along a disproportionate amount of costly adjustment.

The second is relevant if it erodes willingness to participate in the system. American firms and workers may perceive the Chinese system as not only different but one that is unfair, because the American government does not make the same levels of insurance available to them.

3.2 Profit-shifting concerns

Some industries are heavily concentrated and involve very few firms. Commercial aircraft is the quintessential example, for decades the industry has been dominated by the Boeing and Airbus

rivalry. A key feature of such industries is large barriers to entry, typically due to large costs of research and development.

In sectors with such characteristics, it is possible that strategically-timed subsidies could give a Chinese SOE a first mover advantage relative to rivals in foreign countries like the United States.[9] In the standard set-up, a commitment by the Chinese government to subsidize capacity in an industry could end up discouraging entry by foreign rivals and shift potential profits to Chinese firms.

3.3 Concentration concerns

Even in industries that are not so concentrated that they breed oligopolies, there can still arise concern with excessive concentration of the global industry within the Chinese market. Recent empirical work suggests that while globalization has led to less industry concentration in general, exceptions may arise in sectors where China's SOEs are prominent.[10]

The concentration of industry within China could be problematic if China were to then exercise its accumulated market power – say, by implemented policies that encouraged its SOEs to withhold output or raise prices. Unfortunately, there is evidence in which China has exploited its market power when it had it. China has frequently restricted exports of several raw materials and rare earth metals over which it had a significant share of total global extraction. This has led to three different WTO disputes being filed against the Chinese policies.

3.4 Global economic efficiency concerns

One final concern could arise if inefficient SOEs begin to make up too much of global industry in a given sector. Just has arisen within China, too much allocation of resources toward SOEs – if in critical, innovate sectors – could result less investment.

Overall, this could be a concern for global economic growth which relies on innovation to drive increases in productivity and economic well-being.[11]

4 U.S. Domestic Policy Tools

U.S. reliance on domestic policy tools have been insufficient at addressing the political and economic challenges arising from China's SOEs. The United States' primary domestic policy approach to address side effects arising from China's SOEs has been reliance on trade remedy policies of antidumping and countervailing duties. This has been shown ineffective and counterproductive, and it has been made worse by recent U.S. government imposition of comprehensive import restrictions under other U.S. trade laws. Finally, the American approach to labor market adjustment concerns has also been problematic.

[9] See, for example, Brander and Spencer (1985) or Maggi (1994).
[10] Freund and Sidhu (2017).
[11] See for example, possibilities illustrated in the research of Grossman and Helpman (1990).

4.1 Antidumping and countervailing duties

Consider U.S. use of its trade remedy laws of antidumping and countervailing duties. Figure 1 illustrates my estimates of the coverage of U.S. imports from China over time that have become subject to these import restrictions.[12] It also documents U.S. imports from other trading partners covered by the same sorts of barriers. There are three main results.

First, U.S. application of trade remedies on imports from China has increased steadily over time. In the year prior to China's WTO entry in 2001, the U.S. applied these import restrictions to only 1.4 percent of imports from China. By the end of 2017, the stock of accumulated trade barriers had covered an estimated 9.4 percent of U.S. imports from China.

Second, the increased use of these trade barriers on imports from China has taken place during a broader period of decline in their application toward the rest of U.S. trading partners. Even during the Great Recession of 2008-2009, there was no major uptick in U.S. use of such protection against other partners.

Third, there may be signs that the broader trend of low relative U.S. use of such trade barriers against non-Chinese partners is reversing. While still relatively low in historical terms, U.S. use of these import restrictions against other U.S. partners nearly doubled by 2017 from its low point in 2013.

Figure 2 illustrates these same data, but for the steel and aluminum sectors. Three additional messages emerge.

First, by the end of 2017, nearly 95 percent of U.S. imports from China of steel and aluminum were already subject to U.S. special tariffs under these laws. To clarify, these are the import restrictions in place prior to the U.S. government's recently-imposed tariffs on steel and aluminum under Section 232 of the Trade Expansion Act of 1962. Thus, any new import restrictions imposed on China under Section 232 – as arose in March 2018 – were largely redundant. They were simply another layer of tariffs on China covering products that already had high levels of previously-imposed special tariffs.[13]

Second, for the steel industry, U.S. antidumping and countervailing duties had already covered nearly 80 percent of U.S. imports from China by 2009.

Third, also for the steel industry, there was a considerable increase in U.S. use of antidumping and countervailing duties imposed on other trading partners between 2012 and 2017. The share of U.S. steel imports from non-China covered by these import restrictions increased from 29.5 percent in 2012 to 54 percent by 2017.

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[12] Figures 1 and 2 also include use of safeguards. Notably there was no use of global safeguards (Section 201) between the steel safeguard import restrictions imposed over 2002-2003 and those imposed on imports of solar panels and washing machine in January 2018.

[13] Many of the U.S. antidumping and countervailing duties on imports from China were imposed at such high levels they may be prohibitive. Bown (2016, Table 2) reports that, with respect to imports from China, the average antidumping and countervailing duty in place in 2015 was over 80 percent.

The steel data illustrate the scope of concern arising from the potential problem of Chinese overcapacity and the futility of American attempts to address it through unilateral trade restrictions. While antidumping and countervailing duties may have been effective at shutting Chinese steel out of the U.S. market since 2009, Chinese steel has still been exported to third markets.[14] Excess capacity and production can thus still lead to lower world prices. What likely results is a shift in other exporter's steel sales from third markets to the U.S. market, essentially taking advantage of arbitrage opportunities.

Two recent United States government initiatives seem vaguely intended to address the issue. But because both address only the symptoms, neither is likely to prove sufficiently effective at targeting the underlying cause of the apparent problem of excess global production.

One initiative focuses additional government resources on preventing Chinese transshipment.[15] The transshipment issue involves Chinese steel being exported to country X, relabeled as "made in country X," and then shipped to the United States, thus violating a U.S. antidumping or countervailing duty order. Without denying the criminal nature of the transshipment violation, unfortunately the dedication of resources to this issue is unlikely to materially affect the problem of overcapacity.

Take the following example. Country X has its own steel industry that, with less world capacity, would produce only for its domestic market. The introduction of low-priced Chinese steel into country X means X's production is no longer needed for domestic consumption; it can be exported instead to foreign markets. The United States, with considerable trade restrictions in place and steel prices higher than the world price, is an attractive destination market.

But by construction in this example, there is no illegal transshipment activity. The economic implication is that, for commodities that are relatively homogenous products, the natural economic profit motives creates incentives to take advantage of arbitrage opportunities.

A second initiative involves how the U.S. government has begun applying a "particular market situation" context to the construction of dumping margins in antidumping investigations.[16] Drawing on an example from an actual case, the concern involves U.S. imports of refined, or "downstream" steel products that may use raw Chinese steel as an "upstream" input. In this example, the investigation decided that since South Korea's production of oil country tubular goods (OCTGs) benefit from access to Chinese-subsidized (or SOE-provided) hot rolled steel as an input, that this was unfair and contributed to the finding of dumping. This technique will not only allow for findings of higher dumping margins (equivalent to higher duties) but also an increased likelihood of finding evidence of dumping and thus imposing duties.

The same economic incentives affect other OCTG producers who do not necessarily rely on the Chinese hot-rolled steel as an input, and to whom the particular market situation will not apply. The result is that applying the particular market situation to South Korea will continue to fail to

[14] This is phenomenon is referred to as "trade deflection" (Bown and Crowley, 2007).
[15] For example, Presidential Proclamation on Adjusting Imports of Steel into the United States, which indicated "I expect that Canada and Mexico will take action to prevent transshipment of steel articles through Canada and Mexico to the United States." (White House, 2018a)
[16] See Department of Commerce (2018c).

address the source of the underlying distortion. Again, if hot-rolled steel is a commodity and China's overcapacity drives down world prices, the world price for that input will be abnormally low everywhere, and not only in the countries that import the steel from China. Put differently, this approach punishes a country like South Korea even though an OCTG producer in another country may also be benefiting from low world prices of the hot-rolled input, even without directly purchasing the input from China.

The policy focus on transshipment and the particular market situation will thus not eliminate the economic distortion, and new problems are only likely to pop up elsewhere, especially in the case of products with high degrees of substitutability. The only way to address the concern coherently is to focus directly on the underlying problem of overcapacity.

Finally, it is worth noting one other important non-feature of the U.S. antidumping law involving the issue of anti-competitive practices, as this will come up again in Section 6. Ignore, for a moment, the issue of China and its non-market economy status. The law defines dumping as either international price discrimination (selling at a lower price in the U.S. market low than the price in a foreign market) or selling below a constructed measure of the firm's costs. Yet neither definition disqualifies, as an example, the analog behavior of an American firm that may set its prices differentially across two different regional markets in the United States or temporarily sell at a price in the United States below its average cost.[17]

Dumping under the antidumping law is defined without reference to anti-competitive concerns or predation. This is a problem. While one potential economic concern with SOEs is when they behave in an anti-competitive manner, U.S. trade remedy statutes are not written so as to screen for such concerns. As such, there is scope to also reform U.S. trade remedy statutes to guide use toward instances in which there is an underlying anti-competitive concern.

4.2 Global import restrictions: Section 201 and Section 232

The failure to address the underlying source of the problem of excess capacity arising from SOEs has led to the spread of trade restrictions beyond China. As Figure 2a indicated in the case of steel, since 2012, the United States has already been increasing the share of imports from non-China that it has made subject to antidumping and countervailing duties.

In 2018, the United States government increased the trade barrier coverage of steel imports by turning to a different trade law. In March 2018, it imposed 25 percent tariffs under the authority granted to the president under Section 232 of the Trade Expansion Act of 1962. Initially, the tariffs were applied to only about one third of all U.S. steel imports in 2017, with temporary exemptions initially granted to seven trading partners. But on June 1, the tariffs were applied to three of those previously exempted economies – the European Union, Canada, and Mexico – and three others were forced to accept quantitative limits on their exports under the threat of U.S. tariffs.

[17] A standard result from economic principles is that it can be profit maximizing for a firm to continue to produce even when the market price is lower than its average total cost in the short run, provided it can cover its average variable cost. Here the short run is defined as the period over which it has some fixed costs that cannot be adjusted – e.g., debt-servicing, long-term contracts, etc. For a discussion, see Blonigen and Prusa (2016).

Similar increases in the coverage of trade protection took place in the aluminum sector. In March 2018, the U.S. government imposed 10 percent tariffs under Section 232 on 46 percent of all U.S. aluminum imports in 2017. Temporary exemptions were initially granted to imports from a number of major economies, but it applied almost comprehensive tariffs and quotas on imports as of June 1.

A third industry example is solar panels. In January 2018, the U.S. government imposed import restrictions (tariffs, tariff-rate quotas) on solar panels as a global safeguard after an investigation conducted under Section 201 of the Trade Act of 1974.[18] Much of the alleged source of the economic concern was again Chinese excess capacity and state subsidies, though no evidence of subsidies was needed to obtain import protection under the law under which the January 2018 trade restrictions were imposed. Similarly to steel and aluminum, the United States had also imposed country-specific import restrictions in 2012 and in 2014 on solar imports from China. Similarly, these did not address the underlying economic distortion and it did not stop trade deflection or low-priced imports from entering into the United States from third markets.

In the steel, aluminum and solar panel cases, most U.S. imports from China had already been covered by antidumping and countervailing duties prior to the new investigations that led the United States to impose "global" import restrictions in 2018. In each, the major new U.S. imports sources facing trade restrictions in 2018 were both military allies and "economic" allies; i.e., market-oriented economies that struggle to cope with the distortions introduced by China's economic system. Yet, instead of being treated as allies, imports from these countries became the target of U.S. trade restrictions as well.

4.3 Mobility assistance

Any discussion of international trade and economic policy must also reckon with the fact that the United States government has historically done a very poor job at assisting workers needing to cope with shocks – arising from any source – and who need to transition to new opportunities. This is not a China-specific trade policy problem, let alone an issue tied to China's economic system. Nevertheless, the issue of lack of U.S. labor market adjustment and mobility has received renewed attention due to the "China shock" research in economics. At the high end, imports from China can account for an estimated 20 percent of manufacturing job loss in the United States over the 2000s.[19] The remaining 80 percent of dislocation stems of improvements in technology and productivity, changes in consumer demand for certain products, or other shocks that may have nothing to do with trade or globalization.

U.S. mobility adjustment policy should focus much more on the needs of workers and less on attempts to "save" particular jobs. Programs should focus support on workers irrespective of the source of job loss that is outside of their control. Improving mobility – or the ability to transition to a new job or employer, in the face of any sort of economic shock – also means having a policy environment that eases the portability of incomes and benefits, including health care and retirement.

[18] White House (2018b).
[19] See Acemoglu, Autor, Dorn, Hanson and Price (2016) and Autor, Dorn and Hanson (2016) for a survey.

Lessons can be learned from other countries that have also been confronted with adjustment shocks, but that have better social insurance policies to support workers and communities. But one clear lesson is that improvements should not take place via a limited program of Trade Adjustment Assistance (TAA). TAA would have done nothing to assist the 80 percent of job loss in manufacturing during the 2000s that were not associated with trade. The United States labor market would be better served to stop treating "trade-related" shocks to workers differently from shocks arising because of technology, changes to what consumers want, bad managerial decisions, climate, or numerous other forces beyond the workers' control.[20]

5 The Use of WTO Dispute Settlement

The first prong of attack is to deploy WTO dispute settlement to address the systemic concerns with China's state-owned enterprises. This would enforce existing international legal provisions and Chinese commitments on subsidies and other trade-distorting behavior.

5.1 The historical approach

The United States has filed 22 formal WTO disputes against China since its accession to the multilateral organization in 2001. For context, the United States has filed 39 against the European Union (or its member states), 7 each against Canada and India, 6 against Mexico, and dozens against other countries. The United States and China are two of the most active litigants in the system, which is consistent with research that finds that countries that trade a lot together have more bilateral irritants and frictions, and thus tend to utilize WTO dispute settlement.[21] The U.S. has brought cases against China over subsidies, intellectual property protection, investment restrictions, trade remedies and other import restrictions, export restraints, and local content requirements. American challenges have involved economic interests in manufacturing – such as autos, aircraft, steel and aluminum – minerals, agricultural and a variety of services industries.

One benefit of deploying dispute settlement resources is the transparency that results. It shines an international spotlight on the Chinese policies that are at the heart of the underlying distortion.

Failing to utilize the WTO, and turning to trade remedies like countervailing duties instead, sometimes creates unintended consequence: the U.S. policy becomes the subject of a WTO dispute settlement investigation. And in such disputes, the global spotlight never turns to the underlying subsidy; the legal procedures keep it focused instead on the U.S. trade remedy response.

There are challenges to using WTO dispute settlement to address subsidies and China's SOEs. Ironically, one arises because the concerns raised by China's policies are not limited to affecting the market access interests of the United States.

For example, other countries stand to benefit from a U.S. dispute that would cause China to reign in its subsidies. But this creates the standard "free rider" – or collective action – problem. Each

[20] See Alden (2016).
[21] Bown and Reynolds (2015).

government, including the United States, tends to under-invest in enforcing its individual rights. The result is too few cases are brought forward over these systemic issues.

To address this concern, the U.S. government has frequently chosen not to go at it alone in WTO disputes. Since WTO rules of nondiscrimination extend the benefits to third countries from a U.S.-led dispute against China, the approach has been to engage third countries so that they also bear some of the costs of the enforcement action. In at least a half dozen different disputes against China at the WTO, the European Union, Japan, Canada, Mexico and Guatemala have joined the United States as complainants.[22]

5.2 Future use of WTO dispute settlement to address China's SOEs

In the current context, the United States government should pursue a WTO dispute against China over the issues of its state-owned enterprises, and the distortions they are having on U.S. market access. It would be the most direct way of attacking the underlying policy concern.

Even though the United States has brought disputes against China's subsidies before, such a dispute would not be without controversy. There are potentially legitimate concerns that neither the original General Agreement on Tariffs and Trade (GATT) nor the WTO itself were written so as to expressly define rules for state-owned enterprises, as well as various other issues that arise from state planning and non-market economies. Even the lengthy disciplines found in China's 2001 Protocol of Accession into the WTO do not provide useful guidelines for how market-oriented economies would want China's SOEs to behave.[23]

Nevertheless, the are broad existing provisions that litigation has yet to fully explore that might address some of the more pressing concerns with China's SOEs. For example, there are rules disciplining the use of subsidies under not only GATT Article XVI, but also the WTO's Agreement on Subsidies and Countervailing Measures. Protection of intellectual property is covered by the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) and foreign investment under the Agreement on Trade-Related Investment Measures (TRIMs). And even if there are not explicit WTO red lines that China may have crossed, WTO members still have access to a final GATT Article XXIII provision that allow "nonviolation nullification and impairment" (NVNI) claims – that China's economic evolution has not allowed benefits expected under the agreement to materialize.[24]

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[22] *China – Auto Parts* (DS340, with European Union and Canada), *China – Taxes* (DS358, with Mexico), *China — Measures Affecting Financial Information Services and Foreign Financial Information Suppliers* (DS373, with European Union and Canada), *China — Grants, Loans and Other Incentives* (DS387, with Mexico and Guatemala), *China — Raw Materials* (DS394, with European Union and Mexico), *China – Rare Earths* (DS431, with European Union and Japan), *China — Raw Materials II* (DS508, with European Union).

[23] See Levy (2017)

[24] See Staiger and Sykes (2011). Article XXIII(1) reads

> If any contracting party should consider that any benefit accruing to it directly or indirectly under this Agreement is being nullified or impaired or that the attainment of any objective of the Agreement is being impeded as the result of
>
> (a) the failure of another contracting party to carry out its obligations under this Agreement, or

Historically, many WTO members have not pursued this approach to WTO dispute settlement because it was deemed a risky strategy, and there was a fear of losing offensive cases. Alternatively, there was also concern that pursuing such a broad strategy might also put "too much" pressure on the dispute settlement system.

These worries are less salient in this context, given the enormous pressure currently on the WTO to deal with this area of conflict. Unfortunately, the system may now be close to a make-or-break moment anyway. It is under stress from several different quarters and from policies pushing the limits of WTO-consistent behavior, including by the United States government.

A United States government approach of filing such a broad-based WTO dispute would best be done jointly, alongside American economic allies with market-oriented systems that confront the same economic challenges (identified in Section 3) as the United States. The most-willing participants would be the European Union and Japan, as indicated by the joint statements issued in Buenos Aires at the WTO Ministerial Conference in December 2017, in Brussels in March 2018 and in Paris in May 2018.[25] But other major players with systemic interests – e.g., Australia, Canada, New Zealand, South Korea, etc. – should also be consulted for engagement.

The benefits of such an approach would begin with the burden-sharing of the costs of enforcement against China. But a joint and collective approach would also not allow China the opportunity to play one trading partner off another – e.g., through implicit or explicit retaliation – that might create discriminatory and preferential market-opening opportunities for other countries in the Chinese market.

In a best-case scenario, the United States and other WTO members "win" such a dispute. They could be collectively authorized to retaliate against China if China were unwilling to bring its policies into conformity with WTO provisions. This would be the rules-based approach to incentivizing Chinese reform.

In a worst-case scenario, the United States and other WTO members "lose" such a dispute, and China is permitted to continue operating under the status quo. This could be the final blow to the WTO. But in the unlikely event that were to happen, it would have been clear that all relevant tools of the organization had been attempted and nothing potentially useful had gone untried. There would also be lessons learned for what new rules and approaches are needed to replace the existing system.

6 Design, Negotiation, and Enforcement of New WTO Disciplines on SOEs

Even if the best-case scenario were to result from a successful WTO dispute, litigation and authorized retaliation will not resolve the problem. This would only be part of a strategy to get China to recognize the seriousness of the issue and to come to the bargaining table to reach a mutually-agreeable, negotiated solution. Just like the status quo may not be working for the

(b) the application by another contracting party of any measure, whether or not it conflicts with the provisions of this Agreement, or
(c) the existence of any other situation

[25] See USTR (2017) and USTR (2018a, 2018b).

United States and other major market economies in the trading system, a strategy that dictates to China how it must reform its economy is unlikely to be politically sustainable for China.

What is needed are new and enforceable rules that both address any economic distortions arising from SOEs and that are adopted via an international agreement to which China is a party. The political bargain would be an enforceable agreement on SOE rules, and in exchange, China would be allowed to keep its SOEs. And the best approach would be to negotiate new SOE rules directly with China and within the framework of the WTO.[26]

There are a several areas in which work to address this issue has been taking place. This final section describes how those experiences can inform negotiation and enforcement of new international rules.

First, an SOE agreement need not be negotiated in the context of full multilateral round or as part of a single undertaking that would include the entire WTO membership. An alternative approach would be to negotiate a plurilateral agreement with a critical mass of countries, including China. Examples of recent agreements in this vein include the first and second Information Technology Agreements.[27] Provided the agreement does not discriminate against WTO member non-participants, it should not be objectionable to the multilateral system.

What rules and disciplines should be included in a plurilateral, WTO agreement on SOEs? The provisions negotiated in free trade agreements are one place to start.[28]

The United States government developed and negotiated to agreement an SOE chapter in the Trans-Pacific Partnership Agreement that it and 11 other countries signed in February 2016. Though it was never ratified by the U.S. Congress, the remaining TPP-11 countries have signed a new Comprehensive and Progressive Agreement for Trans-Pacific Partnership that includes a chapter on State-Owned Enterprises and Designated Monopolies (chapter 17). The European Union has similarly introduced SOE chapters into its free trade agreement negotiations, including as part of the Trans-Atlantic Trade and Investment Partnership (TTIP) talks with the United States. The EU has also introduced such texts as part of trade agreement negotiations with Mexico, and MERCOSUR, among others.

[26] Previous work articulating potential U.S.-China trade agreement negotiations includes Bergsten et al (2014).
[27] See also the Codes emanating from the Tokyo Round. For a discussion of the potential for adding new plurilaterals within the current WTO framework, see Hoekman and Mavroidis (2015a,b).
[28] The OECD has done considerable work on state-owned enterprises and governance. But given that China is not yet an OECD member and that some of the provisions will need to be enforceable, there are reasons to build from the OECD approach and implement it into a formal trade agreement framework like the WTO. Other approaches are arising at the sectoral level, including the OECD Global Forum on Steel Excess Capacity. National aluminum associations from the United States, Canada, Europe and Japan called for establishment of a similar forum at a summit in Montreal in advance of the June 2018 Group of 7 meeting (Metal Bulletin, 2018). In the context of the joint statement released in 2017 and 2018 by the trade ministers of the United States, European Union and Japan, there have also been discussions about the semiconductor industry.

There are many common elements in these SOE texts.[29] There are provisions related to nondiscriminatory treatment, commercial considerations, non-commercial assistance, and competitive neutrality. There are also rules involving transparency and corporate governance – a fundamental issue raised by Wu (2016) regarding the issue of Chinese government and Communist Party officials sitting on the board of companies and directing SOE decisions in ways that may be inconsistent with market signals. And on this point more broadly, there needs to be procedures in place to understand what exactly are the noncommercial interests or objectives of the SOE, so that its decisions and performance can be benchmarked and evaluated independently against those interests.[30]

The SOE chapter in the TPP also includes provisions related to injury and adverse effects. These would be analogs to injury to the domestic industry either in trade remedy investigations due to imports or in subsidy disputes under the WTO due to losses suffered in export markets, including third markets.

Of course, demanding new disciplines for subsidies and SOEs should make the United States government prepared to be willing to address some of its own policy shortcomings. Other countries will certainly point to American subsidies and tax incentives at the state and local levels that can create economic incentives leading to many of the same, distortive economic effects as SOEs.

The final important issue involves enforcement of the new rules. Here, it is important to evaluate whether the traditional WTO approach of member-initiated, state-to-state disputes and committee engagement would be sufficient.

The European Union has adopted an alternative and more extreme approach for integrating different types of economies – many with high levels of SOE participation – into a relatively cohesive trading area. The mandate granted to the European Commission goes well beyond that granted to date to the WTO Secretariat. The EC enforces state aid limits in pursuit of its regulatory approach of managing the terms of competition between EU member states.[31]

Thus, an informed and evidence-based discussion is needed to evaluate the tradeoffs associated with differing approaches to effectively enforce new SOE disciplines arising in the international trading system.

[29] See Mavroidis and Janow (2017), Bhala (2017), Kovacic (2017), Wolfe (2017), Wu (2017), Prusa (2017), Mastromatteo (2017), and Sappington and Sidak (2003).
[30] Examples of noncommercial interest could be sustaining industry employment or even providing goods or services to underserviced households (whereby commercial losses would arise).
[31] See, for example, European Commission (2016).

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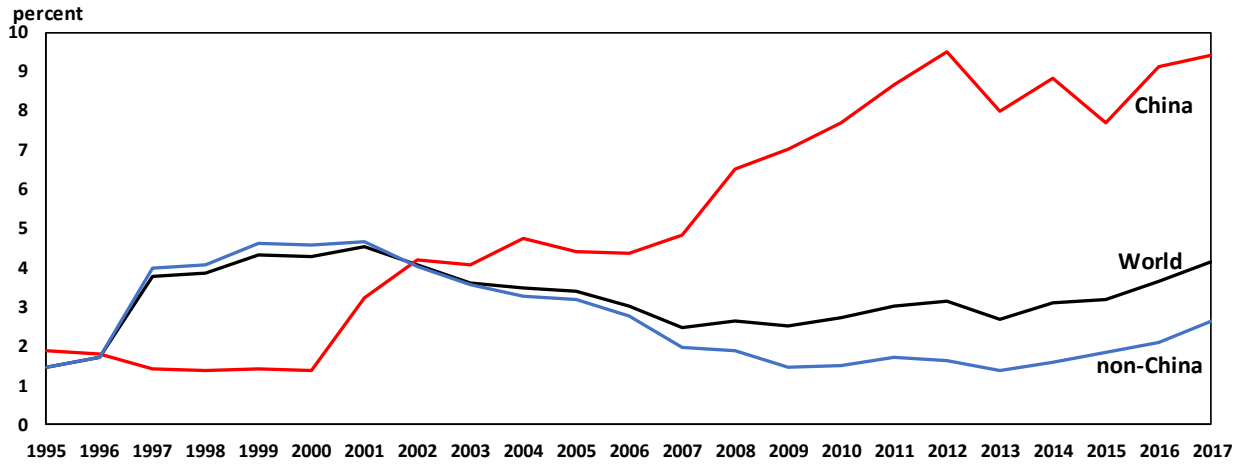
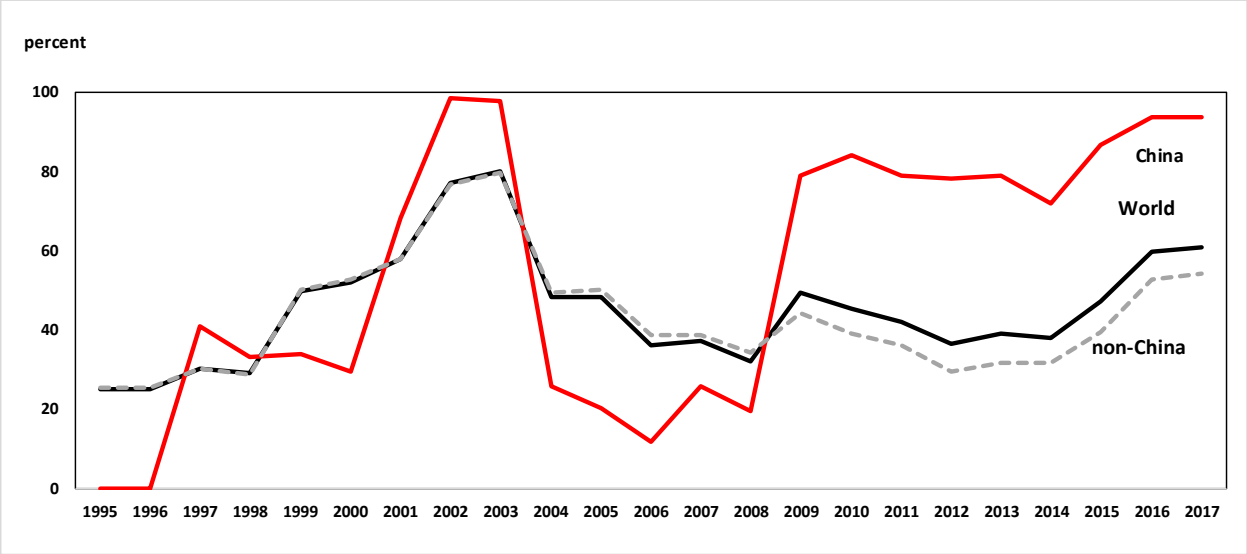
Figure 1. U.S. imports covered by imposed trade remedies by foreign source, 1995-2017



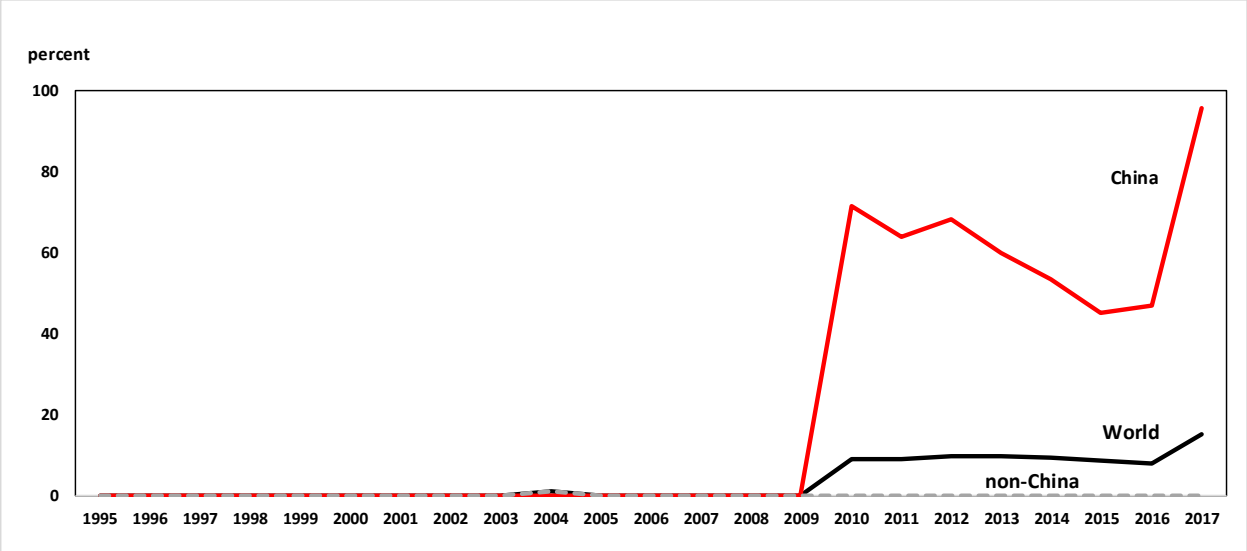
Source: constructed by the author. Trade remedies include antidumping, countervailing duties, and safeguards.

Figure 2. U.S. metals imports covered by imposed trade remedies by foreign source, 1995-2017

a. Steel



b. Aluminum



Source: Bown (2018). Trade remedies include antidumping, countervailing duties, and safeguards. "Steel" and "aluminum" defined as the Harmonized Tariff Schedule product codes identified in the Section 232 investigation reports (Department of Commerce 2018a and 2018b, respectively).

OPENING STATEMENT OF LINDA DEMPSEY, VP, INTERNATIONAL AFFAIRS AND ECONOMIC POLICY, NATIONAL ASSOCIATION OF MANUFACTURERS

HEARING CO-CHAIR STIVERS: Thank you.

Ms. Dempsey.

MS. DEMPSEY: Commissioner Hubbard, Commissioner Stivers, Chairman Cleveland, Vice Chairman Bartholomew, and members of the Commission, thank you for the opportunity to testify today on behalf of the National Association of Manufacturers.

The NAM is the oldest and largest manufacturing association in the United States, representing 14,000 manufacturers, small and large, in every industrial sector and across all 50 states. Manufacturing employs 12.6 million U.S. workers and had a record $2.25 trillion in output in 2017.

International trade is critical for manufacturers of all sizes across the country. Overall, the U.S. exports more than half of its total manufacturing output, which supports about six million U.S. jobs. These jobs not only represent about half the U.S. manufacturing workforce, but they also contribute directly to the success of local communities.

Imports play a somewhat more complicated role in the U.S. economy. While some imports compete unfairly with domestic manufacturing activity, other imports are helpful to U.S. competitiveness and growth and promote U.S. manufacturing, the creation of manufacturing jobs.

That's good for our country because manufacturing, supported and grown through international trade, helps provide good, high-paying jobs across the United States, jobs that pay on average $82,000 annually in pay and benefits. That's about 27 percent higher than the average pay of $64,000 across all nonfarm jobs.

Manufacturers have been energized by the President's commitment to grow manufacturing opportunities across the country. His leadership in securing tax reform and addressing excessive regulation has helped free manufacturers to grow and invest in America. That leadership has also highlighted the urgency of addressing foreign market distortions that have held our manufacturers back for too long.

Nowhere is that focus more important than as it relates to trade with China, which presents both major challenges and major opportunities alike for our nation.

Our manufacturers sell more to China than to any other country outside of Canada and Mexico, and those exports alone support hundreds of thousands of U.S. manufacturing jobs. U.S. manufactured goods exports to China have grown five-fold since China joined the WTO, reflecting both China's market openings and economic growth resulting from the accession.

China is now the number one consumer market in the world for cars, food and a number of other products, with an economy four times larger than it was on accession and a middle class that has grown by hundreds of millions of new entrants.

For the highly productive U.S. manufacturing sector, our manufacturers need to be able to further tap into that enormous growth to support and create more high-paying manufacturing jobs.

Yet our manufacturers have long faced a wide range of distortive activities in China, including many of those highlighted directly in my written testimony. These barriers limit U.S. exports, they distort market conditions in both the United States and third countries, and they result in the theft and mistreatment of U.S. property and investment. Long-lasting and urgent solutions are required.

One approach that has clearly garnered a lot of attention recently is imposing broad-based tariffs on China. The Section 301 investigation launched by this administration raises important IP and technology transfer issues that are a top priority for many in our industry and government.

The investigation has also raised the level of attention, both here and in China, on critical issues that need to be addressed. We hope this investigation and the clear administration commitment to address the underlying IP and technology transfer issues could provide an opening to move forward aggressively on a strategic, innovative approach that I will address in just a few minutes.

Yet we have major concerns about the investigation's remedies, particularly the imposition of tariffs on imports from China. While such tariffs may provide short-term relief for some, their imposition, along with the retaliatory measures that China is sure to trigger, will harm the broad U.S. manufacturing sector, undermine its competitiveness, and put manufacturing jobs at risk.

Moreover, the application of tariffs simply cannot solve the underlying systemic distortions they are intended to address. Manufacturers would bear the brunt of these proposed tariffs, as all of them are on manufactured goods, and these tariffs would harm many manufacturers that depend on imports of covered materials that are not available from U.S. or third-country suppliers. Manufacturers will also be injured by the loss of sales if China imposes its proposed tariffs.

So what is the solution? To begin, there are many tools that we are already using to remedy some of the issues that we face. Work with our allies and trading partners that share a similar view remains vitally important. Tools in U.S. law and through international agreements have also been effective to address specific problematic behavior with some particular products that are injuring manufacturing industries.

Consider that the United States has taken more than 20 WTO challenges against Chinese practices; 150 trade remedy cases putting high tariffs on many unfairly traded imports; and dozens of IP cases that have blocked infringing products exported by hundreds of Chinese companies.

Last year alone, the United States seized hundreds of millions of dollars in IP-infringing Chinese products at the border. While several of these tools can be improved, particularly related to the timeliness of their remedies, they have provided an important response to many of the symptoms of market-distorting activities that we have seen in China in ways that are consistent and supported by WTO rules.

These tools have certainly provided some important relief and must continue to be used, but if we want to solve the underlying Chinese practices that have given rise to the market distortions, then a new approach will be needed.

I'm not talking about just these tools. I'm not talking about tariffs. I'm talking about a new, long-term, and comprehensive way forward. It is critical for the United States to seize the moment with a strong solutions-based approach.

As NAM President and CEO Jay Timmons explained in a letter to the president on January 8, the most effective path forward is a comprehensive and a strategic approach that has at its core a modern, innovative, bilateral trade agreement that restructures our economic relationship with China.

Such an agreement must: eliminate Chinese barriers; raise Chinese standards and create new rules to prohibit market-distorting practice that violate free markets and fair competition; and create binding and neutral enforcement to address cheating and violations.

Doing so will position the United States to get this economic relationship right, with enforceable solutions that solve the significant challenges while positioning manufacturers in the United States to compete fairly for opportunities in China's market.

Manufacturers in the United States need to be able to sell more, compete and succeed in one of the largest markets in the world. In order to do so, our trading relationship with China must be fair, open and free of persistent, systemic barriers that have plagued it for so many years.

We have many tools to address the underlying issues that are preventing a more fair and open U.S.-China commercial relationship. While we are robustly using many of these tools to stop unfairly traded and IP-infringing products, we have yet to set fully in motion the most important one: the ability to negotiate a new agreement with China that will not just address the symptoms but also fix the underlying distortions and unfair practices in which China is engaged.

We, therefore, urge the administration to turn its focus toward the pursuit of a strategic, solutions-oriented approach with China--with an innovative bilateral trade agreement at its core.

This remains the most--and perhaps only--practical solution to ensure manufacturers and workers in the United States can finally achieve a fair and competitive playing field with China.

Thank you.

PREPARED STATEMENT LINDA DEMPSEY, VP, INTERNATIONAL AFFAIRS AND ECONOMIC POLICY, NATIONAL ASSOCIATION OF MANUFACTURERS

NATIONAL ASSOCIATION OF Manufacturers

Leading Innovation. Creating Opportunity. Pursuing Progress.

Testimony

of Linda Menghetti Dempsey
Vice President, International Economic Affairs

National Association of Manufacturers

Before the

U.S.–China Economic and Security Review Commission

on U.S. Tools to Address Chinese Market Distortions

June 8, 2018

Testimony of Linda Menghetti Dempsey,
Vice President, International Economic Affairs,
National Association of Manufacturers
Before the
U.S.–China Economic and Security Review Commission
on U.S. Tools to Address Chinese Market Distortions

June 8, 2018

Chairman Cleveland, Vice Chairman Bartholomew and members of the commission, thank you for the opportunity to testify on manufacturers' views on U.S. tools to address Chinese market distortions.

The National Association of Manufacturers (NAM) is the largest manufacturing association in the United States, representing 14,000 manufacturers small and large in every industrial sector and in all 50 states. Manufacturing employs nearly 12.6 million women and men across the country, contributing $2.25 trillion to the U.S. economy annually. The NAM is committed to achieving a policy agenda that helps manufacturers here in the United States grow and create jobs. Manufacturers very much appreciate your interest in and support of the manufacturing economy.

International trade is critical for manufacturers large and small across the country (as the NAM has detailed in submissions to this administration on the trade deficit and trade agreements and violations).[1] Overall, the United States exports more than half of its total manufacturing output, supporting about six million U.S. manufacturing jobs, representing about half of the U.S. manufacturing workforce that contribute directly to the success of local communities. Imports play a more complicated role in the U.S. economy, as explained in the NAM's comments on the trade deficit. While some imports compete with domestic manufacturing activity, other imports are helpful to U.S. competitiveness and growth and promote the growth of U.S. manufacturing activity and jobs.

Manufacturing, supported and grown through international trade, provides good, high-paying jobs in the United States. On average, manufacturing jobs pay $82,023 annually in pay and benefits, 27 percent higher than the average pay of $64,609 in all nonfarm jobs.[2] Manufacturing in the United States provides rewarding and meaningful careers and supports communities throughout all 50 states. Manufacturing is also transforming as it adapts to a changing world at home and abroad, taking advantage of new technologies, new production methods and new markets to compete and grow. Notably, export-related jobs have also been demonstrated to pay on average 18 to 20 percent more than jobs not related to exports.[3]

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[1] NAM Comments on Administration Report on Significant Trade Deficits and Request to Appear at Public Hearing (May 10, 2017), accessed at http://www.nam.org/Issues/Trade/NAM-Comments-on-Trade-Deficit/; NAM Comments on Administration Review and Report on Trade Agreement Violations and Abuses (July 31, 2017), accessed at http://www.nam.org/Issues/Trade/NAM-Submission-on-Trade-Agreements-and-Violations/.

[2] NAM, Top 20 Facts About Manufacturing, accessed at http://www.nam.org/Newsroom/Facts-About-Manufacturing/.

[3] See *e.g.*, U.S. Department of Commerce, "The Role of Exports in the U.S. Economy" (May 13, 2014); Bernard, A. and J.B. Jensen, "Exceptional Exporter Performance: Cause, Effect, or Both?" *Journal of International Economics* 47: 1–25 (1999); Riker, David, "Do Jobs In Export Industries Still Pay More? And Why?" Manufacturing and Services Economics Brief, International Trade Administration, U.S. Department

U.S.–China commercial and trade relations are a top priority for manufacturers in the United States given both the challenges and opportunities this relationship presents. I appreciate the opportunity to testify today to discuss how to restructure the U.S.–China relationship through improving U.S. tools to address Chinese market distortions.

I. Overview

It's fair to say that our nation's trading relationship with China is complicated.

On the one hand, there are few places in the world where manufacturers sell more products or have increased sales by a higher amount. Indeed, manufacturers in the United States export more goods to China than any other market outside of our North American Free Trade Agreement (NAFTA) partners in North America—to the tune of nearly $96 billion in 2017—which, in turn, supports hundreds of thousands of U.S. manufacturing jobs here at home. Exports of "Made in the USA" manufactured goods to China have grown by more than $76 billion since 2002—and that's more than to any other country except Canada and Mexico. This is especially important considering that more than half of American manufacturing workers depend on exports for their paychecks.

On the other hand, there are few places in the world where fair competition and trade have proven more challenging for American manufacturing. From unfair import and export subsidies to intellectual property (IP) theft and market-distorting policies that shield Chinese companies, manufacturers and workers in the United States face an unfair playing field that harms U.S. manufacturing and holds us back.

There is no doubt that we need to address these challenges. China simply must follow the same rules as everyone else. It simply must be held accountable when it cheats. On this, nearly all parties agree.

The question is how best to go about doing so.

There has been a lot of debate about this for a long time. The United States has, and is, using a wide range of tools to address market-distorting practices that manufacturers face in China. Many have been quite successful in stopping unfairly traded or IP-infringing products from entering the United States. Yet, these tools have not addressed or been able to resolve fully the systemic underlying issues that are spurring in market-distorting activities. While we must continue to use effective tools, the United States needs a comprehensive strategy to achieve the best outcomes for American workers and American enterprise. In our view, that means that the United States must actively and urgently pursue a modern, innovative and comprehensive bilateral trade agreement that wholly restructures our economic relationship with China. This may seem like a radical idea, but in our estimation it represents the most pragmatic and effective way forward to fight for manufacturers.

Imposing tariffs on imports from China will not effectively advance U.S. goals. While such tariffs might provide short-term relief for some, the imposition of the tariffs being considered, as well as the retaliatory measures from China that these tariffs will trigger, will harm the broad U.S. manufacturing sector, undermine its competitiveness, put manufacturing jobs at risk and fail to solve the underlying systemic distortions.

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of Commerce (July 2010), accessed at http://www.trade.gov/mas/ian/build/groups/public/@tg_ian/documents/webcontent/tg_ian_003208.pdf.

At the end of the day, we think it's best to address the underlying systemic issues that have given rise to the imbalances in the U.S.–China relationship in the first place. That's what I look forward to discussing with you further a little later in my testimony.

But first, it's important to understand the nature of our trading relationship with China.

II. The U.S.–China Commercial Relationship

The U.S.–China commercial relationship has grown substantially over the past several decades following China's accession to the World Trade Organization (WTO) in 2001. China is the United States' largest goods trading partner, the largest source of U.S.-manufactured goods imports and the third-largest export market for U.S.-manufactured goods:

- U.S.-manufactured goods exports to China grew from $19 billion to nearly $96 billion between 2002 and 2017, faster than nearly any other major market.
- U.S. imports of manufactured goods from China have grown even more, from $122 billion in 2002 to nearly $496 billion in 2017.

In joining the WTO, China agreed to abide by the WTO agreements that were largely created in the Uruguay Round talks that ended in 1994, as well as some specific requirements in its protocol of accession. In subsequent years, China also agreed to new, targeted agreements, including the Trade Facilitation Agreement (TFA) to cut red tape at the border and regularize customs processing as well as the 2015 expansion of the Information Technology Agreement to cut tariffs on information- and communications-technology products. Unlike some of the original WTO members, most notably Brazil and India, China joined the WTO on much stricter tariff terms, agreeing to cut tariffs to an average rate of 10 percent without any of the flexibility to raise tariffs that Brazil, India and other countries retained. China also changed thousands of regulations, laws and guidelines. Additionally, China's protocol of accession outlined many other requirements specific to China, including some requirements to address distortive activities by state-owned enterprises (SOEs) and unfair government involvement in commercial transactions. While China implemented many of these provisions fully, there are gaps in its implementation and there are issues that were not fully covered by the WTO requirements.

China's economy has more than quadrupled since it joined the WTO nearly 20 years ago, growing by an average of more than nine percent per year. China still boasts the world's largest population, with more than 1.3 billion people, as well as a rapidly expanding middle class that has boosted China to become the top consumer market in the world for products ranging from automobiles to food products. In a fiercely competitive global marketplace, our manufacturers need to be able continue to tap into that enormous growth and win more sales in China in order to support and create more good-paying manufacturing jobs here at home.

As a result of the implementation of many of its WTO commitments—and the economic growth associated with China's accession—there are few places in the world that have created more opportunities for manufacturers in the United States. U.S. manufactured goods exports to China grew approximately five-fold since 2001, equaling a record $95.5 billion in 2017. U.S. manufactured goods exports more to China than to any other country outside of North American Free Trade Agreement (NAFTA) partners Canada and Mexico, and those exports support hundreds of thousands of U.S. manufacturing jobs.

Notably, China is the single largest foreign purchaser of U.S.-manufactured goods outside of North America, and U.S.-manufactured goods exports account for approximately 11

percent of all of China's imports. Among the U.S. manufacturing sectors that have seen the largest growth are:

- Transportation equipment, including aerospace products and parts, motor vehicles, auto parts and related products, railroad rolling stock and ships and boats; overall, U.S. transportation equipment exports increased by nearly $26 billion between 2002 and 2017;
- Chemical products, which have increased by nearly $12 billion since 2002;
- Computer and electronic products, including semiconductors, measuring and medical control equipment, and computer and communications equipment; overall, U.S. computer and electronic product equipment exports to China increased by nearly $12 billion between 2002 and 2017; and
- Machinery, such as industrial machines, engines and power transmission equipment; overall, U.S. machinery exports increased by more than $6 billion between 2002 and 2017.

Other areas of strong U.S. export growth, such as agricultural products, have also fueled manufacturing growth and jobs here at home. Manufacturers of agricultural equipment, from tractors and seeds to farming implements, grain storage structures and fertilizers, have directly benefited from strong growth of exports to China of products ranging from soybeans to almonds. Indeed, U.S. agricultural exports to China have grown to nearly $18 billion in 2017, from a base of less than $1.5 billion in 2002. China is the largest single country purchaser of U.S. farm products.

The U.S.–China investment relationship is also substantial, totaling more than $68 billion in 2016. U.S. manufacturing investment in China equaled $47 billion in 2016, up from just under $6 billion in 2002, and equal to just seven percent of worldwide U.S. foreign direct investment in manufacturing ($667 billion in 2016). Sales by U.S. manufacturing affiliates in China equaled $283 billion in 2015, compared to only $9 billion in U.S. exports by those same affiliates. Chinese foreign direct investment in U.S. manufacturing totaled nearly $21 billion that same year, up from just $215 million in 2002.

While there have been significant improvements in the U.S.–China commercial relationship, the Chinese market remains one of the most frequently cited trouble spots for manufacturers in the United States, and challenges continue to rise. The market-distorting and damaging industrial policies and other measures negatively impacting manufacturers in the United States include the following:

- **Localization Policies:** Manufacturers in the United States have seen in recent years a resurgence of discriminatory policies, particularly those that have a differential impact on products and technologies produced by domestic versus foreign companies, even if they do not explicitly treat domestic and foreign companies differently. These policies are often as problematic for foreign companies as explicit discrimination and should be eliminated. Particularly concerning are localization policies related to production or technology that mandate local testing and certification requirements for products in the information, communications and telecommunications (ICT) and medical sectors as well as policies requiring companies to store China-generated data on local servers and prohibiting their transfer overseas.

  One policy area of significant concern is China's "Made in China 2025" initiative, an ambitious 10-year plan designed to upgrade China's manufacturing economy. The plan sets specific targets for domestic manufacturing (40 percent domestic content of core components and materials by 2020 and 70 percent by 2025), focusing on 10 priority sectors,

such as information technology, new energy vehicles, agricultural equipment and robotics. While the plan's broad objective of promoting smart manufacturing policies in China is common to many countries, the specific implementation and localization targets of the plan raise significant concerns for manufacturers in the United States. In particular, the plan's focus on building globally competitive Chinese companies through specific government policies and financial support raise concerns that the plan's effect will be to benefit Chinese manufacturers over foreign ones, raising significant questions about the consistency of policies with China's WTO commitments.

Examples of other policies with localization elements include:

- Cybersecurity policies that pressure companies to localize technology;
- Data flow restrictions/internet controls; and
- Expedited product approvals for innovative medical device products.

- **IP Rights:** China has increasingly recognized the value of innovation and IP rights and enforcement, with some steps being taken to upgrade IP laws and regulations, promote IP awareness and tackle IP enforcement. Many manufacturers, however, continue to face significant challenges enforcing their IP in China, pointing to the need for much more work on an issue critical to manufacturers of all sizes and types. Among the areas of most concern that impede U.S. market access and fair competition in the Chinese market are:

  - High levels of counterfeiting, piracy and trade secret theft, both physically and online;
  - Structural barriers to strong IP enforcement, such as value thresholds that effectively preclude criminal enforcement;
  - Policies designed to push companies to localize R&D and technology and promote the development of Chinese IP-intensive industries and companies;
  - Policy developments in areas such as competition, standards and product price controls that undercut U.S.-generated IP;
  - Cybertheft that has targeted U.S. companies; and
  - Weak enforcement fed by inadequate resources and a lack of political will.

- **Subsidies and Other Measures:** Manufacturers in the United States continue to be concerned about a range of other Chinese government actions that have led to market distortions, such as subsidies and state-owned enterprise (SOE) supports that have fueled massive overcapacity in key sectors. Steel and aluminum are front and center, but overcapacity is also a problem in industries such as chemicals, fertilizer, concrete, agricultural processing and semiconductors. More broadly, Chinese government agencies continue to utilize a variety of export policies, particularly export restraints and subsidies, to promote or restrict the growth and export of priority products and sectors to provide an advantage to Chinese producers reliant on various metals and raw materials. While the United States has brought and won WTO cases on some of these policies, others continue to pop up. These actions both undermine U.S. market access in China and distort competition in U.S. and third-country markets, all to the disadvantage of manufacturers and their workers in the United States.

- **Investment Restrictions:** Manufacturers also face investment caps in key manufacturing sectors, such as agricultural processing, automotive and telecommunications, forcing them to form joint ventures with domestic companies under the Catalogue Guiding Foreign Investment. Problematically, this allows government and company stakeholders leverage to seek concessions from foreign companies, including investment commitments, local sourcing and access to capital and technology, in exchange for investment approval. In a series of changes over the past few years, China has made some revisions to its main

foreign investment laws, expanded investment openings in its free trade zones (FTZs) and promised other investment openings. While these moves are broadly welcome, they do not fully address remaining concerns from manufacturers in the United States about continued investment caps in critical sectors, efforts to build a national security review system for foreign investment and broader regulatory concerns that disproportionately impact foreign-invested enterprises. Given the role of investment overseas in helping manufacturers reach foreign customers and participate in foreign resource and infrastructure projections, these rules negatively impact market access for manufacturers in the United States.

- **SOEs:** During China's WTO accession, China made a number of commitments related to the activities of SOEs and state-invested enterprises (SIEs), including agreeing that those firms would make purchases and sales based solely on commercial considerations and not be influenced by the government. Despite that commitment, the Chinese government has not fully followed through, and the state continues to play a strong hand in SOE and SIE management and decision-making and pressures these firms to support government priorities. Efforts to strengthen SOEs have only accelerated under President Xi Jinping, with plans that have generally focused not on SOE reform, but on small changes to strengthen SOEs such as promoting mixed-ownership structures, addressing corruption and reforming executive board operations.

- **Import Regulation:** From tariffs and customs barriers to differential import procedures, manufacturers in the United States face a number of border barriers in China that impede U.S. exports and limit market access:

    - While China reduced tariffs as part of its WTO implementation on a broad range of manufacturing products, the process did not eliminate all of China's burdensome tariffs, including some high tariff rates in key manufacturing sectors.
    - While China ratified the WTO's TFA in September 2015, it will not implement its Schedule B commitments, including implementation of a "single window" system for customs clearance, publication of average customs release times or customs cooperation, until 2020. As a result, U.S.-manufactured goods face higher costs and red tape as well as delays in exporting to China.
    - Inconsistencies in customs-related regulations and enforcement create unnecessary challenges for U.S. exporters. Particularly concerning are different customs clearance proceedings and regulations between different ports, different agencies and even different customs agents as they seek to get products cleared, including customs classification, customs valuation procedures and clearance requirements.
    - In addition, China's current import clearance regime unnecessarily complicates trade and restricts low-value shipments (including shipments of manufactured goods sent through e-commerce channels) from benefitting from expedited shipments treatment, as envisioned in the TFA. Although China's complex import clearance procedures can clear products through one of three channels (including an e-commerce category), burdensome requirements to utilize the e-commerce channel prevent many products from benefitting from this option.
    - Manufacturers in the United States are seeing the misuse of Chinese trade laws to retaliate against U.S. industries and limit U.S. imports unfairly.
    - Import bans and other regulatory limits have also undermined U.S. access to China's market, including bans on remanufactured products and units and a July 2018 ban on 24 types of materials, including scrap paper and plastic.

- **Standards, Technical Regulations and Conformity Assessment Procedures:** Manufacturers in the United States continue to experience a variety of challenges related to standards and technical regulations in China, ranging from inadequate channels for

participation in standard-setting processes, treatment of IP in standards setting and Chinese efforts to promote standards, both at home and abroad, that do not harmonize with international standards. China's new Standardization Law includes some reforms to streamline the standards system and create more space for private sector standards development, but has also raised new challenges related to association and enterprise standards that could threaten companies' IP. All of these regulations and requirements can add significantly to the cost of manufacturing products for export to China and limit the ability of U.S.-manufactured products to compete fairly in China. Among the areas where manufacturers in the United States are facing challenges include electric vehicles, medical equipment, and hazardous substances in electric and electronic products.

- **Transparency and the Rule of Law:** Despite Chinese commitments during its accession to a range of reforms related to the rule of law, including regulatory transparency and consistent implementation of laws and regulations, China continues to struggle with many of these areas in ways that have a significant negative impact on the ability of manufacturers in the United States to navigate China's regulatory framework and participate on a level playing field in the Chinese market. Among the most concerning areas are:

    - A lack of full regulatory transparency regarding laws and regulations, where new rules are implemented with limited notice and input from the private sector; and
    - A lack of fair and open processes regarding regulatory approvals.

The NAM has described these issues in greater detail in several of the NAM's submissions to this administration, including in the administration's investigations related to intellectual property and WTO compliance.[4]

III. U.S. Tools to Address Chinese Market Distortions

Given the size and the ties between the United States and China, it is critical to get this economic relationship right, with enforceable solutions that solve the significant challenges while positioning manufacturers in the United States to compete fairly for opportunities in the China market. Manufacturers in the United States need to be able to sell more, compete and succeed in one of the largest markets in the world, but to do so, the trading relationship must be fair and open and must tackle persistent, systemic barriers.

Manufacturers strongly believe that the U.S. government must undertake a comprehensive and strategic approach to drive concrete, lasting and enforceable policy changes while minimizing collateral damage to the U.S. economy. In particular, manufacturers firmly believe that a strategic approach must include the following:

- The negotiation of a modern and innovative bilateral trade agreement that will restructure the economic relationship with China;
- Intensified work with allies to address common challenges; and
- Strategic use of existing domestic and multilateral tools, and creation of new tools, that will be effective in addressing some issues in a targeted manner.

[4] NAM Comments on Section 301 Investigation into China's Acts, Policies, and Practices Related to Technology Transfer, Intellectual Property and Innovation (Sept. 28, 2017), accessed at http://www.nam.org/Issues/Trade/NAM-Submission-Section-301-Investigation-into-Chinese-Intellectual-Property-and-Technology-Transfer-Issues/; NAM Comments on China's Compliance with its World Trade Organization Commitments (Sept. 20, 2017), accessed at http://documents.nam.org/IEA/NAM_2017_Submission_on_China_WTO_Compliance.pdf?_ga=2.114963214.827370317.1522883036-650731274.1513098292.

At the same time, the imposition of broad tariffs on imports from China is not the solution, but rather will undermine U.S. manufacturing and competitiveness and put U.S. jobs at risk, while failing to solve the underlying systemic problems that have given rise to unfair trade, IP infringement and market distortions. Each of these issues is discussed below.

A. Negotiation of an Innovative New Bilateral Trade Agreement with China

As the NAM President and CEO Jay Timmons explained in a letter to the president on January 8,[5] "a long-term strategy will be needed if our country is to tackle our challenges with China comprehensively and achieve the best outcomes for American workers and American enterprise." As part of that strategy, the United States should negotiate a modern, innovative and comprehensive agreement with China that is "crafted specifically to achieve fairness and reciprocity for both countries by setting new rules and demanding accountability." To be successful, a free and fair agreement must:

- Eliminate barriers in China;
- Raise standards and create new rules to prevent the wide range of market-distorting practices that violate free markets and fair competition and hurt American businesses and workers; and
- Create clear mechanisms to mandate strong and binding enforcement of the agreement, providing specific channels for government and industry alike to address cheating and violations.

This approach represents the best way to treat the disease, not just the symptoms. A broad trade agreement provides the U.S. government with the flexibility to cover longstanding China issues such as IP theft, investment restrictions, currency manipulation, labor practices, competition enforcement and industrial policy, that could be developed to ensure that harmful Chinese policies and practices are actionable in ways that they are not through existing WTO disciplines.

In the absence of other bilateral dialogues or negotiating mechanisms, these negotiations would provide an important structure that would reframe the relationship, creating leverage for China to demonstrate clear, regular progress on commercial issues while also providing a focal point for the U.S. government to use leverage generated through use of other trade tools. These negotiations would provide a clear channel to generate short-term wins on priority issues while also building toward a larger, comprehensive solution to our issues.

This approach, combined with the robust, well-considered use of other important parts of the U.S. toolbox (including domestic trade enforcement proceedings, WTO enforcement, and coordination with allies to jointly address problematic Chinese behavior), provides the best possible path to resolve longstanding and harmful distortive activity and provide accountable mechanisms that will serve the interests of the United States, its manufacturers and workers over the long term.

We appreciate the administration's efforts to solve the plethora of trade barriers and problems that China presents, and the clear signals sent during negotiations in Beijing on the need for a strong, enforceable framework with real Chinese commitments. A free and fair agreement on trade that addresses these and the litany of other trade issues with China is the best framework to do just that.

[5] Timmons Letter to the President (Jan. 8, 2018), accessed at http://www.nam.org/Advocacy/Sign-On-Letters/Jay-Timmons-Letter-to-President-Trump-on-Trade-Agreement-with-China/.

Some may say that the negotiation of such an agreement would take too long to produce wins, or that China will might come to the table. In fact, we believe both points are red herrings. This negotiating structure provides a clear, straightforward way to address issues systematically and demonstrate clear wins. As for China's interest, there is no better time to bring China to the table than a moment when its attention, and indeed the world's attention, is focused on these critical issues as a result of the president's leadership. Our nation's manufacturers and workers deserve no less than a real and comprehensive solution.

B. Intensified Work with U.S. Allies

Another important part of any comprehensive strategy is for the United States to continue to intensify engagement and coordination with trading partners and allies. Such engagement already takes place through existing regional and global channels, such as the Asia-Pacific Economic Cooperation forum and G20, as well as sector-specific activities, such as the Global Forum on Steel Overcapacity. The United States, European Union and Japan also announced—in December 2017 at the WTO Ministerial in Buenos Aires—joint work to address foreign trade distorting activity, work that continued with last week's trilateral meeting on the sidelines of the Organisation for Economic Co-operation and Development (OECD) Forum in Paris. More work in all of these fora, as well as the consideration of others to address specific sectoral or systemic issues, should also be explored to advance U.S. goals to address market distortions. In addition, this work should be expanded to consider more direct ways in which work with U.S. allies can translate to direct, enforceable action.

C. Continued Use and Improvement of Existing Trade Tools

The United States has numerous existing tools, both in U.S. law and through international agreements, to address Chinese market-distorting activities. Some of these tools have been used very effectively to address specific problematic behavior with particular products that are injuring manufacturing industries in the United States. Notably, the United States has taken more than 20 WTO challenges against Chinese practices, 150 trade remedy cases to put tariffs on unfairly traded imports, and IP cases to block infringement by hundreds of Chinese companies. Last year alone, the United States seized hundreds of millions of dollars in IP-infringing Chinese products at the U.S. border. Several of these tools can be improved as noted below. While these tools have provided important relief from many unfair Chinese practices, they simply cannot solve or prevent the underlying Chinese practices that have given rise to market distortions. That is why it is critical for the United States and China to engage in full-scale negotiations for a comprehensive and enforceable bilateral trade agreement.

1. Use of WTO Dispute Settlement

As described above, China's accession to the WTO brought China into the rules-based trading system, requiring China to make substantial changes to lower its tariffs and to change thousands of regulations, laws and guidelines. While China implemented many of these requirements, it has not always fully implemented its WTO commitments, to which the United States and other countries have responded by filing challenges through the WTO's dispute settlement mechanism.

The United States has filed more than 20 WTO challenges against Chinese practices since 2001, with many resulting in resolution of the underlying distortions—from raw materials and rare earth export restraints to auto part distortions—and has a strong track record in these cases. While, as discussed above, there are issues that are not adequately addressed through WTO rules currently in place, WTO enforcement has proven a useful channel to address key areas of problematic behavior and its core rules have been critical in curbing Chinese activity

that distorts commerce.[6] The United States should ensure full enforcement of existing WTO rules and bring additional WTO cases in areas where China is falling short of its commitments. It is critical, therefore, that the WTO dispute settlement mechanism continue its full operation, while manufacturers also welcome constructive efforts to improve the timeliness of WTO dispute settlement enforcement and other advancements that can improve its operation.

2. U.S. and Global Identification of Trade-Distorting and IP-Infringing Activities

Annually, the United States seeks and develops reports that identify trade barriers and IP-infringing activities. In recent years, China has figured prominently in those reports, which identify a broad range of actions that undermine a fair and level playing field.[7] Additionally, the United States evaluates China's compliance as part of an annual report[8] and the WTO reviews each country's compliance with WTO rules as part of its own Trade Policy Review Mechanism. The most recent report regarding China was issued in October 2016, with an additional review planned for next month.[9] These reviews of China's activities and compliance with international rules are critical to identify key issues that require resolution.

3. U.S. Trade Law Investigations

There are multiple U.S. trade statutes that have been used to address some of the key import-related concerns about Chinese activity. Those actions that are focused on unfairly traded or IP-infringing products have been most effective in addressing concrete concerns of manufacturers. Among the most used in the U.S. toolkit are:

a. Enforcement of Antidumping and Countervailing Duty Investigations: There have been 150 antidumping and countervailing duty investigations undertaken pursuant to Title VII of the Trade Act of 1930, as amended, resulting in substantial tariffs being placed on hundreds of distinct types of Chinese imports. Such actions are country-specific (sometimes being brought against imports from just China or imports from China and other countries at the same time) and assess both market-distorting practicing (unfairly traded imports based on comparisons of market prices or an evaluation of subsidies) and actual injury, or the threat thereof, to domestic industries. In 2016, Congress passed new trade enforcement tools to combat evasion of trade remedy laws, known as the Enforce and Protect Act, as part of the Trade Facilitation and Trade Enforcement Act (TFTEA). These provisions have already been successfully used to stop Chinese exporters from evading U.S. orders

[6] As explained in the NAM's submission for the administration's review on trade agreement violations and abuses on "trade agreement violations and abuses," as required by Executive Order 13796 of April 29, 2017, manufacturers in the United States have experienced enormous growth and new opportunities as a result of WTO agreements and see the WTO dispute settlement mechanism "as an important advancement ensuring that countries refusing to meet their commitments either come into compliance or pay a severe penalty." NAM Comments on Administration Review and Report on Trade Agreement Violations and Abuses (July 31, 2017), accessed at http://www.nam.org/Issues/Trade/NAM-Submission-on-Trade-Agreements-and-Violations/.

[7] *See, e.g.*, USTR, **2018 National Trade Estimate Report on Foreign Trade Barriers** (March 2018); USTR, **2018 Special 301 Report** (April 2018).

[8] *See e.g.*, USTR, **2017 Report to Congress on China's WTO Compliance** (Jan. 2018), accessed at https://ustr.gov/sites/default/files/files/Press/Reports/China%202017%20WTO%20Report.pdf.

[9] WTO Secretariat, **Trade Policy Review: China** (Oct. 12, 2016), accessed at https://docs.wto.org/dol2fe/Pages/FE_Search/FE_S_S006.aspx?Query=(%20@Symbol=%20wt/tpr*%20or%20press/tprb/*%20)%20and%20(%20@Title=%20china%20not%20(macau%20or%20(hong%20kong%20china)%20or%20(macao%20china)))&Language=ENGLISH&Context=FomerScriptedSearch&languageUIChanged=true#.

against unfairly traded imports by shipping products through third countries although there is interest in more timely investigations and actions.

b. Section 301 Investigations: Section 301 of the Trade Act of 1974, as amended, provides for action to address concerns that U.S. rights under a trade agreement have been violated or when acts, policies and practices of foreign countries are unjustifiable and burden or restrict U.S. commerce. As seen in the current Section 301 investigation with respect to intellectual property and technology practices by China, this type of investigation provides for country-specific inquiries that examine underlying market-distorting practices, and have primarily been used since the creation of the WTO to provide a basis for WTO dispute settlement cases.
c. Actions to Stop IP Infringement: The United States has multiple levers to block IP-infringing imports into the United States, including the enforcement of U.S. customs law. U.S. law with regard to these issues was modernized as part of the TFTEA legislation in 2016, which provides new tools to address IP-infringement at the border and to focus U.S. government resources on identifying and addressing IP theft, although not all of these tools have been fully implemented. Last year, U.S. Customs and Border Protection (CBP) seized more than $554 million in IP-infringing merchandise imported from China and another $386 million in IP-infringing merchandise from Hong Kong.[10] In addition, Section 337 of the Trade Act of 1930, as amended, provides for additional action in response to foreign unfair methods of competition and IP infringement. Since January 2008, U.S. industry has brought more than 157 cases involving Chinese respondents alleged to be exporting IP-infringing products into the United States, representing nearly one-third of the 487 cases filed since 2008. Of those, 46 cases have resulted in exclusion orders against 194 Chinese respondents, with many other cases settled. Additional work in this area, as well as quicker actions to remedy infringement, is welcome.
d. Section 201 Safeguard Investigations: Section 201 of the Trade Act of 1974, as amended, provides for action to facilitate adjustments by domestic industry to foreign competition where product-specific imports on a global basis have increased and have been found to be a substantial cause of serious injury to a domestic industry. Notably, this type of action does not provide the ability to consider imports from a particular country, such as China, and examines only whether imports have increased, not whether the imports are unfairly traded or subsidized. Two Section 201 investigations have been completed during the last two years.
e. Section 232 National Security Investigations: Section 232 of the Trade Expansion Act of 1962, as amended, provides for action with respect to imports that threaten U.S. national security. These investigations are global in nature but there is flexibility for remedies to focus on specific countries of concern.

These investigations and remedies should also be used strategically to push back on unfair and market-distortive practices while considering the impacts on domestic manufacturers and consumers. The United States' Section 301 investigation into intellectual property and technology transfer practices in China has certainly raised the level of focus, both here and in China, and we hope it will ultimately provide just the opening to move forward aggressively on a strategic new approach.

Yet, the actual imposition of broad-based tariffs will not effectively advance the shared goal of changing harmful Chinese practices. The proposed tariffs instead will harm the overall U.S. manufacturing sector, without forcing any immediate or long-term change in China's policies and practices. Tariffs are simply not a solution.

[10] Department of Homeland Security, **Intellectual Property Rights Seizure Statistics Fiscal Year 2017**, accessed at https://www.cbp.gov/sites/default/files/assets/documents/2018-Apr/ipr-seizure-stats-fy2017.pdf.

All of the proposed tariffs are on manufactured goods. Based on the NAM's analysis, an estimated 48 percent of the value of the products covered are components and inputs, many of which are critical to sustain U.S.-based manufacturing. Another approximately 31 percent of the value of the products are capital goods and other equipment used by manufacturers in the United States in their manufacturing operations.

As the NAM detailed in its submission to United States Trade Representative (USTR) as part of the Section 301 action: while some manufacturers may see short-term relief from the imposition of tariffs, the NAM is hearing regularly from manufacturers across the country that are deeply concerned about these tariffs and what the actual imposition of tariffs could mean for their ability to continue to manufacture here at home. Specifically, the imposition of a 25 percent tariff on these products and the risk of escalating tariff threats on both sides that these actions could prompt, raises significant concern for the broad manufacturing sector due to the broad potential negative impact of these tariffs on U.S. manufacturing competitiveness, growth and jobs.

- These tariffs would increase direct costs for some manufacturers that rely on those inputs and other goods, particularly small- and medium-sized manufacturers (SMMs), challenging their broad ability to remain competitive here in the United States compared to Chinese and other foreign competitors.

- These tariffs cripple businesses that depend on imports of components and other materials that are not commercially available in the United States, as the tariffs could directly impact their ability to continue operations. This can include:

    - Products or technologies that are only available from Chinese suppliers;
    - Products or technologies in which there are no alternative non-Chinese suppliers with the capacity to meet existing U.S. demand; and
    - Products or technologies that are being produced by a China-based production facility of a U.S. company and integrated into U.S.-manufactured products, meaning that these tariffs serve as an effective corporate tax on U.S. manufacturers.

- Many of these tariffs will also harm U.S. exports, as USTR's tariffs cover and would raise costs for products that are integrated as components into or used in the production of U.S.-manufactured exports that are bound for other markets.

For many manufactured products, particularly complex industrial products that require federal certification, developing an alternative supplier is not a quick process. Indeed, it can take significant time to identify and certify a qualified supplier (or set of qualified suppliers) that can provide appropriate products. Some manufacturers have indicated that this process can take three or more years and could negatively impact the product's safety and reliability during this period. In the meantime, the tariffs applied to these products undercut these companies' competitiveness, providing a clear advantage to competitors in Europe, Japan and elsewhere in global markets, even China.

In short, engagement with the NAM's members indicates that imposition of tariffs will force manufacturers of final products in the United States using affected inputs to make an unpalatable choice: raise prices on U.S. consumers and likely lose sales, lay off workers to cut costs or shift production of those final products outside of the United States.

Manufacturers will also be injured by the loss of sales if China imposes its proposed retaliatory tariffs on U.S. exports. Three of the top 10 categories of U.S. manufacturing exports to China would be in the crosshairs: aircraft and two categories of automobiles.

Manufacturing Category	U.S. Exports to China Targeted
Automobiles	$11.8 billion
Aircraft	$7.5 billion
Plastics	At least $3.4 billion
Chemicals	At least $2.1 billion
Auto Parts	$555 million
Textiles (Cotton)	$508 million
Rubber and Related Products	$138 million

Source: U.S. Department of Commerce, 2016 U.S. Exports to China

The direct impacts of these retaliatory tariffs would hit SMMs in the United States particularly hard given that more than half of all U.S. exporters in the following main categories being targeted by the Chinese tariffs are SMMs.

Manufacturing Category	Percentage of SMM Exports versus All Exporters
Auto Parts	63%
Plastics	66%
Chemicals	75%
Rubber and Related Products	57%

Source: U.S. Department of Commerce, Exporter Database (2015 Data)

In addition, Chinese-proposed tariffs on U.S. agricultural exports would reduce sales and harm many manufacturers and their workers producing for the U.S. agricultural sector.

These unintended, but heavily disproportionate, negative effects need to be avoided, particularly as the imposition of tariffs will not solve the underlying Chinese distortive behavior.

Rather, the United States and China need to move forward aggressively to cement a new bilateral economic relationship that puts fair rules and free trade at its core through a broad, modern and fully enforceable trade agreement.

IV. Conclusion

The U.S.–China commercial relationship is vitally important to get right given both the enormous opportunities and challenges that manufacturers face from our largest trading partners. The United States has successfully used many of the tools already on the table to address some of the most severe market-distorting practices that are harming U.S. industry, but we have not yet been able to address effectively or fully the underlying Chinese practices that continue to give rise to market distortions that are impacting not just U.S.-Chinese commercial relations, but global markets. It is critical, therefore, the that United States pursue a strategic and comprehensive approach that has at its core the negotiation of a new, innovative and enforceable bilateral trade agreement with China that will truly address the underlying systemic practices and restructure the U.S.–China commercial relationship.

Chairman Cleveland, Vice Chairman Bartholomew and members of the commission, thank you for your work on global trade and competitiveness issues and for holding this hearing.

OPENING STATEMENT OF CELESTE DRAKE, TRADE AND GLOBALIZATION POLICY SPECIALIST, AFL-CIO

HEARING CO-CHAIR STIVERS: Thank you.

Ms. Drake.

MS. DRAKE: Thank you.

Commissioners, good morning. I appreciate the opportunity to testify on behalf of the AFL-CIO on the critical issue of U.S. tools to address Chinese market distortions. I've submitted written testimony for the record and will highlight just a few key points here.

The AFL-CIO values the Commission's work and expertise. The time and attention you devote to promoting U.S. security and prosperity has had a positive impact on the policy debate.

As you well know, China's entry into the WTO exacerbated existing trade tensions even as it created new ones. The impact on working families and the communities in which we live is devastating. We've lost more than three million jobs, tens of thousands of factories, and for about two-thirds of us, nearly $2,000 a year in income.

That in itself is tough to take, but what makes it worse is the lack of effective action on the part of our government. There have been one-off actions here and there, including a 421 action on tires, WTO cases concerning Rare Earth minerals and wind power subsidies, and countless discussions behind closed doors.

But prior to this administration, there has been no concerted strategic response to China's predatory state capitalist model. One of the shortcomings of existing trade remedy actions is that they have not been part of a comprehensive plan of domestic and international policies to ensure that the United States is purposefully building a dynamic economy that creates good jobs with high wages and is able to exploit and benefit from the innovations developed here.

Therefore, we recommend a comprehensive manufacturing policy that pairs trade reforms and robust enforcement with thoughtful investments in infrastructure, training and incentives, and fair tax policies to strengthen our industrial base.

After all, we recognize that our economic and national security are inextricably linked. America's economy is the source and foundation of our national security.

Trade remedies could also be improved by making them less discretionary and expanding opportunities to initiate cases.

Additionally, we recommend the Commission examine a viable social dumping remedy. Harvard economist Dani Rodrik has recommended exploring such an approach, and Senator Jeff Merkley of Oregon has introduced a related bill.

When companies profit by ignoring internationally recognized labor rights and multilateral environmental agreements often putting U.S. competitors out of business, this is not the natural functioning of comparative advantage. This is unfair trade pure and simple.

We tried to address it using existing tools. In 2004, the AFL-CIO filed a Section 301 case about China's labor rights violations. It was rejected immediately. But effectively addressing China's use of forced, prison and child labor and its outlawing of independent unions would be an important step forward toward rebalancing our outrageous trade deficit with China and alleviating some of the downward pressure on domestic wages and union formation.

An added benefit of addressing China's labor issues would be boosting consumer demand in China, potentially expanding the market for America's exports.

With regard to possible bilateral, regional and multilateral solutions, the AFL-CIO remains firmly opposed to a bilateral investment agreement or any other agreement with China

that includes ISDS. First, we oppose the U.S. current model BIT which ignores labor rights while giving foreign corporations the right to use private tribunals to seek U.S. taxpayer money for exotic claims such as the violation of the undefined right to fair and equitable treatment.

Second, signing a BIT with China would not just be a bad idea; it would be awful. It would allow the Chinese government in the guise of state-owned and controlled enterprises to use these private tribunals to attack our laws. That's simply too big a risk. And though some U.S. firms that invest in China have been clamoring for a BIT, we believe such an agreement would, in the words of the CATO Institute, "encourage discretionary outsourcing," something workers and communities don't need.

Nor do we believe the United States needs a BIT with China in order to promote inward bound investment. The U.S. is already a premier destination for that. And while foreign direct investment can contribute to the creation and maintenance of high-wage jobs, this is not given.

Some foreign investors may seek to drive existing U.S. competitors out of the market or to transfer valuable technology, equipment and intellectual property overseas--taking jobs with them.

Chinese state-owned and controlled enterprises in particular invest with a goal to acquire strategic technology for China that could jeopardize U.S. security. Because of these risks, we strongly support updating CFIUS.

CFIUS needs broader authority to address new and evolving acquisition strategies and vehicles, including joint ventures. It cannot review new or greenfield investments, and its definition of national security is too narrow.

Some of the shortcomings in U.S. law are directly addressed by Representative Pittenger's Foreign Investment Risk Review Modernization Act and Senator Brown's Foreign Investment Review Act.

Reinvigorating the TPP would also be counterproductive. While pitched as a way to counter China, it would have allowed China to profit from the deal without changing anything about how it operates. The TPP did not have effective rules regarding labor, currency or rules of origin.

The AFL-CIO, however, opposes a go-it-alone approach and supports multilateral solutions. In fact, the biggest shortcoming of this administration's recent 232 and 301 announcements is its failure to work with allies to coordinate action in a strategic fashion.

We support both actions but also believe they would be more effective and less likely to invite retaliation if they were executed with our allies instead of aiming at them.

Multilateralism can help create growth opportunities for U.S.-based businesses and their employees. For instance, the U.S. government should have joined with other injured countries to address China's currency manipulation when such activity was at its peak.

In sum, U.S. tools to address China's predatory practices must evolve. By updating our policies to address reality rather than slavishly following an outdated theory of free trade, we will best protect America's national and economic security while promoting inclusive growth and shared prosperity for all.

I'll stop here and be happy to address any questions you may have. Thank you.

PREPARED STATEMENT OF CELESTE DRAKE, TRADE AND GLOBALIZATION POLICY SPECIALIST, AFL-CIO

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AMERICA'S UNIONS

Testimony before the U.S.-China Economic and Security Review Commission

On

"U.S. Tools to Address Chinese Market Distortions"

June 8, 2018

By

Celeste Drake
Trade & Globalization Policy Specialist
AFL-CIO

Contents

Introduction

The AFL-CIO is the umbrella federation for America's unions, with 55 unions representing more than 12 million working men and women in every sector and industry of the American economy. We aim to ensure that all people who work receive the rewards of that work—decent paychecks and benefits, safe jobs, respect, and fair treatment. We work to make the voices of working people heard in the White House, on Capitol Hill, and in state capitals, city councils, and corporate boardrooms across the country.

The AFL-CIO and its affiliate unions support trade and investment policies that create good jobs, which is why we welcome the opportunity to testify before the Commission. We appreciate your continuous work to address economic and security issues posed by the U.S. relationship with China and to seek better solutions to maintain peace, security, and shared prosperity for all. We believe that the U.S. economy is best served when our trade and investment rules are aimed toward creating good jobs and high wages rather than merely profits, when those rules are robustly enforced, and when our trading partner countries can share in our prosperity, creating a virtuous global cycle of rising demand and standards of living for all.

China's mercantilist approach to trade has had significant adverse effects on both U.S. and world markets. Its "beggar thy neighbor" approach is contrary to the principle of shared prosperity for all. China's unfair trade practices have been a drag on U.S. wage and job growth. These practices eliminated 3.4 million U.S. jobs between 2001 and 2015 alone.[1] Nearly three-fourths (74.3 percent) of the jobs lost were in manufacturing (2.6 million), including 1,238,300 jobs in computers and electronics.[2] The manipulation and misalignment of the renminbi during this period significantly limited U.S. exports to China while bolstering Chinese exports to the U.S., thereby contributing to a structural trade deficit. Rampant intellectual property theft and forced technology transfers in China have cost untold millions for U.S.-based creative artists and innovators. China's continuing limits on market access have coerced major investments by U.S. companies in China, with joint-venture partners chosen by the government, ostensibly to access Chinese consumers, even though such access does not always materialize. Instead, those investments are often directed at producing for the U.S. market under labor, environmental, and health and safety conditions that both fail to meet international standards and disadvantage U.S.-located producers.

China is not solely to blame for weaknesses in the U.S. economy. The inadequate U.S. response and ill-considered adoption of neoliberal economic recommendations have also had sizable opportunity costs for U.S. working families. For example, those who supported China's accession to the World Trade Organization (WTO) argued that China would become a market economy and that a worldwide level playing field would benefit America's firms and workers. At the time, Rep. John Linder (R) called it "a gift to America's workers" and Rep. Charles Rangel (D) opined that it was "an agreement in the interest of the American worker [that would] create more jobs, more growth, and more prosperity for America." These and other rosy

[1] Robert E. Scott, "Growth in U.S.–China trade deficit between 2001 and 2015 cost 3.4 million jobs: Here's how to rebalance trade and rebuild American manufacturing," Economic Policy Institute, Jan. 31, 2017, available at: http://www.epi.org/publication/growth-in-u-s-china-trade-deficit-between-2001-and-2015-cost-3-4-million-jobsheres-how-to-rebalance-trade-and-rebuild-american-manufacturing/.

[2] *Id.*

predictions never came to pass. In the years since, neither Congress nor succeeding administrations have done enough to stop China's unfair trade practices or to protect America's working families

Trade Deficit with China

In 2017, the U.S. goods trade deficit with China exceeded $375 billion.[3] While U.S. exports to China have grown more than fivefold in that time, evaluating the impact of China's WTO accession by looking only at exports is like trying to determine the health of one's bank account while only reviewing one's deposits.

Moreover, it is not just the value of trade that matters, but its composition. Today the U.S. runs a deficit in Advanced Technology Products with China of well over $100 billion. Among the top 15 U.S. exports to China over the past 5 years have been copper waste and scrap, aluminum waste and scrap, and paper waste and scrap. Even the top U.S. food exports to China over the last five years—soybeans and sorghum—are not the kind of value added products that provide large numbers of working people middle class jobs. China, in the case of soybeans, for example, has denied entry for U.S. crushed soybeans—which have a higher value-added than unprocessed soybeans and are therefore more important to creating good jobs. The U.S. trade deficit with China—in both size and quality—impacts the quality of jobs available to U.S. workers.

China's Unfair Intellectual Property Policies

The AFL-CIO has been at the forefront of efforts to protect American intellectual property. Our members know that strong intellectual property protections are key to ensuring the continuing vitality and competitiveness in both the manufacturing sector and the creative arts. Economic growth requires innovation. Continued threats to U.S.-developed intellectual property have a clear and direct impact on jobs and the U.S. standard of living.[4]

The Administration's announcement of Section 301 tariffs to combat Chinese policies and practices in this arena is long overdue. Since the early 1990s, China has engaged in illegal, predatory and protectionist actions to circumvent intellectual property protections. Unfortunately, previous administrations, Democratic and Republican, too often relied on behind-the-scenes diplomacy, which typically resulted in little more than ineffective statements of shared goals. As the years passed, China continued to acquire U.S. intellectual property that could be used to undermine U.S. production and the jobs and wages that go with it through a combination of legal, coercive, and illegal means.

China, including through its "Made in China 2025" initiative, has made clear it will continue its present course to dominate the industries of the future: robotics, autonomous and new energy vehicles, artificial intelligence, nanotechnology, biotechnology, 3D printing, and other cutting-edge technologies. China has made clear that it wishes to exclude foreign suppliers, promote indigenous development, and continue to promote its state-owned enterprises and national

[3] U.S. Census Bureau figures. *Available at:* https://www.census.gov/foreign-trade/balance/c5700.html (accessed June 1, 2018).

[4] Note that labor's strong support for intellectual property rights has always been accompanied by the recognition that intellectual property rules must not be employed as a means to deny working people affordable health care, including prescription medicines.

champions over competitors based outside China. These policies advance Chinese firms and interests to the detriment of U.S.-based working people, even where the stated policies contradict China's international commitments.

While U.S. and other non-Chinese businesses are often considered the victims of these policies, these companies have also often been complacent and even complicit in the transfer of intellectual property and related jobs to China. Many have bowed to pressure to share their technology with the Chinese partners because of their desire to harvest short-term profits even though their decisions may jeopardize the future of their companies and the U.S. economy as a whole. They have refused to stand up against overt Chinese protectionist policies due to fears they will lose favor with the leaders of the Chinese Communist Party and be subject to arbitrary restrictions.

It is painfully clear that the U.S. will continue to be at a competitive disadvantage if it solely relies on decisions made in corporate board rooms. America's working families need proactive trade policies that put the interests of the U.S. and its workers before those of multinational corporations and foreign competitors. However, revamping U.S. trade policies alone will not be enough. The U.S. will also need to finally develop and implement a set of comprehensive manufacturing policies that involve the public and private sectors. Without this commitment, the U.S. is likely to continue to fall behind China and other competitors in the race to build the products of the future.

State-Owned Enterprises

Upon WTO accession, China agreed that it would ensure that state-owned and state-supported enterprises (collectively, SOEs) would make purchases and sales decisions based solely on commercial considerations. It also agreed that it would not influence commercial decisions except in a WTO consistent manner. This promise, like so many others, has been broken. China's state-owned and state-supported enterprises receive raw materials and other inputs at below market rates, and have access to preferential debt and equity financing, including soft "loans" from state-owned banks that do not need to be repaid. Moreover, these firms are consistently operated in a manner that gains them market share—rather than profits. A private enterprise would not long remain in business if it failed to respond to the market, but, because state resources prop them up, Chinese SOEs not only can, but do. While losing money by selling goods at below market prices, they force U.S. competitors out of business. China is intentionally pursuing overcapacity in industries including solar panels, aluminum, glass, and steel. Once international competitors have folded, China's overcapacity will fill the gap, at which time prices should soar. The Rhodium Group reports that Chinese SOEs, rather than China's private firms, led new outbound investment announcements in 2017. China's latest five-year plan calls for greater Communist Party and state control over China's state-owned enterprises.[5]

[5] U.S.-China Economic and Security Review Commission Staff Research Report, "The 13th Five-Year Plan," Feb. 14, 2017. *Available at:* https://www.uscc.gov/sites/default/files/Research/The%2013th%20Five-Year%20Plan.pdf.

Subsidies, Offsets, National Treatment and Other Issues

Despite then-Rep. Nancy Johnson's promise that PNTR for China would "eliminate[ ] quotas and special licensing requirements, and prohibit[ ] conditioning investment on local content requirements, offsets, research in China or technology transfer," it did nothing of the kind. These practices remain commonplace across China, and many of them are employed either to induce investment in China or to give China's national champions an advantage over non-Chinese competitors.[6]

In its 2015 Report to Congress, the Commission concluded that China restricts foreign investment in sectors in which it does not have a competitive advantage. The Commission also concluded that restrictions of foreign investment are largely driven by China's economic and strategic goals rather than market forces.

China's state-supported shift to higher value-added manufacturing (which the U.S. could and should support through of WTO-consistent policies, but regrettably so far has not) must be carefully monitored. Over the past few years, several of the largest automobile manufacturers in the world, including U.S.-based companies, have announced significant investments to build electric and hybrid vehicles of the future in China. Gao Feng Advisory, a Beijing-based consulting firm, estimates that China will have spent about $15 billion by 2020 installing charging stations for electric cars. These and similar activities, if supported through WTO-inconsistent means, threaten the future of a broad array of U.S. industries with important good job opportunities.

In addition, and as we have mentioned before, though the WTO lacks specific disciplines regarding internationally recognized labor standards, China's systematic violations of freedom of association and collective bargaining and its use of forced and child labor constitute not only human rights violations, but act as unfair subsidies that artificially lower the cost of goods and services from China. Worker exploitation is not a natural endowment.

Theme One: Relative Merits of Existing U.S. Domestic Measures to Address China's Market Distortions

While there is some overlap between existing tools to address unfair trade practices (including Sections 201, 232, 301, and 337 of the Trade Act) each also has unique applications.

Section 232 is designed to address adverse effects of imports on our national security. It is not qualified by whether the underlying cause of those imports is due to unfair trade practices. The unlimited nature of 232 makes its use rare, perhaps overly so. In an era in which U.S. policy is nominally (if not in actual practice) based on "free trade," administrations have been reluctant to use this tool, concerned over possible backlash from both Congress (often representing the interests of global companies to the detriment of U.S. working families) and trading partners. Although we agree Section 232 should not be overused, nor should it be underused.

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[6] *See, e.g.*, Antonio Graceffo, "China's National Champions: State Support Makes Chinese Companies Dominant," Foreign Policy Journal, May 15, 2017. *Available at:* https://www.foreignpolicyjournal.com/2017/05/15/chinas-national-champions-state-support-makes-chinese-companies-dominant/.

For example, we support the implementation of Section 232 tariffs to address steel and aluminum imports; had the prior administration implemented such tariffs, many communities, firms and working people in these vital industries could have been better protected and our national security would have been at reduced risk. However, as we have repeatedly made clear, we believe China's overcapacity and overproduction of steel and aluminum is causing problems globally and requires a global solution. As such, the U.S. should be working with allies (including Canada and the European Union) instead of alienating them. The go-it-alone approach the U.S. is using with respect to the 232 case risks undermining this effort and could make it harder to achieve other trade goals. It is certainly not building relationships.

Section 301, alternatively, is applicable where there are practices that are unreasonable or unjustified or where there is a violation of a trade agreement. It is the chief U.S. tool to address unfair trade practices. Although Section 301 includes options for both mandatory and discretionary action, even the mandatory actions can be avoided, if for example, the United States Trade Representative (USTR) determines that a party is "taking satisfactory measures" to grant rights under a trade agreement—a vague standard that could be used to avoid action to the detriment of firms, jobs, and communities in the U.S. In addition, Section 301 has been woefully underused to address violations of labor and environmental obligations in trade agreements—the violation of which not only acts as an inducement to transfer production abroad, but also creates downward pressure on wages and standards in the United States. The AFL-CIO supports the current Administration's use of Section 301 to address China's unfair and in many cases illegal intellectual property practices, but has concerns about the on-again, off-again nature of the roll out and implementation. China's intellectual property practices have serious consequences. Tools to address them should not be used capriciously.

Section 201 is a safeguard measure and, accordingly, has a different set of "triggers" to determine whether it is available to address high levels or surging injurious imports. Section 201 does not require a finding of an unfair trade practice but requires that the injury or threatened injury be "serious" and that the increased imports must be a "substantial cause" (important and not less than any other cause) of the serious injury or threat of serious injury. These higher standards of proof make this section more difficult to use, particularly for less well-heeled entities seeking protection, and therefore less effective from the point of view of protecting U.S. economic and national security.

Section 337 is a statute that has much broader applications than have been successfully utilized by the private sector. The ITC has essentially limited its utility to addressing violations of intellectual property despite the expansive scope provided for in its authority. For example, a recent case filed by US Steel under 337 was undermined by the misreading of the statute to eliminate an antitrust claim. As a result, future Section 337 claims asserting that foreign companies are fixing prices at below-market prices and thereby undercutting the prices of domestic competitors are unlikely to be successful, which is contrary to Congressional intent. This Commission could help by making clear that the original intent of Congress under 337 should be restated and its broad authority reaffirmed.

While the AFL-CIO believes that the Administration has made a number of significant missteps in terms of executing action, we support of the robust use of our trade laws to promote the interests of U.S. workers and action to protect our economic and national security.

In general, we believe that U.S. tools to address unfair trade practices could be strengthened in a variety of ways, some of which have been previously recommended by this Commission. These opportunities for improvement include:

- Increase the use of self-initiated cases, to reduce the financial burden on firms already suffering from unfair trade
- Expand opportunities for municipalities and other local bodies to bring cases, as this would allow communities of workers and firms to band together to address injurious trade practices
- Create a sort of public trade prosecutor, who could bring cases that firms, communities and workers may not otherwise be able to bring
- Increase automaticity in enforcement, reducing discretion not to act even when a petitioner has made the required showing
- Ensure that the International Trade Commission has the authority to address "social dumping" by foreign countries and firms engaging in egregious labor and environmental practices (such an approach is contemplated in S.2566 - Level the Playing Field in Global Trade Act of 2018)
- Provide Congress an opportunity to officially recommend trade enforcement cases to the administration, and to require public reporting if referred cases are not pursued
- Strengthen and enhance opportunities to address predatory foreign investment that threatens our national economic security, including by addressing joint ventures that do not operate on U.S. soil (for example, S.1983 - United States Foreign Investment Review Act and H.R.4311 - Foreign Investment Risk Review Modernization Act (as introduced) would help in this regard; both incorporate prior recommendations of the Commission)
- Create channels through which predatory investments may be addressed through trade law, for example when a state-owned enterprise imports dumped, subsidized, or other unfairly traded goods from its foreign affiliate, such imports do not "enter commerce" by changing hands and thus may not be reachable with existing tools

Theme Two: Relative Merits of U.S. Multilateral Actions to Address Trade Challenges

Unfortunately, at present, U.S. multilateral trade efforts actions tend to exacerbate, rather than help address, the trade and investment challenges China poses. Beginning with North American Free Trade Agreement (NAFTA) and WTO and continuing with subsequent trade deals, U.S. trade agreements have facilitated higher volumes of trade, but contain no measures to ensure that increased trade flows will be reciprocal or that any gains are widely shared. Many of the provisions—including investor-to-state dispute settlement and limitations on financial services and food safety rules—actively hinder or deter domestic policies that would foster equitable development. The fundamental architecture of existing deals promotes broad investor rights while restricting governments' regulatory autonomy. On the whole, NAFTA-style agreements have proved to be primarily a vehicle to increase corporate profits at the expense of U.S.-located

manufacturers, workers, consumers, farmers, communities, the environment and even democracy itself.[7]

The chief problem in the U.S. approach to these bilateral, regional, and multilateral deals is that those who negotiate them have substituted the interests of global companies that use the United States as a flag of convenience for the interests of the American people and the U.S. economy writ large. As such, these agreements are filled with tools that address the corporate priority to minimize regulations and escape responsibilities imposed by democratic societies, but very little, if anything, to address trade balances, economic security, labor and human rights, environmental protections, consumer information, or other issues of importance to those outside the management of the world's largest firms.

Trade policy should never be a question of "free trade" versus "protectionism." U.S. trade agreements should adopt the frame, "How should the U.S. structure international trade rules so that they promote good, family-wage jobs, sustainable growth, dynamic economies, smart natural resource conservation, and the realization of human rights and dignity globally?" We believe that using this frame will lead to better trade policy choices and better outcomes for working families.

As Josh Bivens explains in his 2017 piece *Adding Insult to Injury*, this complex frame is what has been missing from U.S. trade policy, which seems to have been based on a misunderstanding of who benefits from trade. An extended excerpt is warranted:

> "When people say that economics teaches that expanded trade is a 'win-win' proposition, this means only that trade is 'win-win' for total national income in each partner country. But textbook economics does *not* predict that expanded trade will be a win-win for all groups within those countries. . . .
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> "Because it can be shown that the sum of capital's gains exceeds labor's losses, globalization remains "win-win" at the country level. *Within* the U.S., however, there is nothing "win-win" about it; labor loses not just in *relative* terms, but can suffer *absolute* income losses as well.
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> "Importantly, these losses are not the damage stemming from the adjustment cost of manufacturing workers' temporary unemployment spell[s] . . . . Rather, the big damage is the *permanent* wage loss resulting from America's new pattern of specialization that requires less labor and more capital. Further, this wage loss is not just suffered by workers in tradeable goods sectors who are displaced by imports; it's suffered by *all* workers who resemble these workers in terms of credentials and labor market characteristics. A simple way to say this is that while landscapers may not be displaced by imports, their wages suffer from having to

[7] For more detail, see "NAFTA at 20," AFL-CIO Report, March 2014. *Available at:* https://aflcio.org/reports/nafta-20.

compete with apparel (and auto, and steel) workers who have been displaced by imports."[8]

To address the shortcomings of the current U.S. approach, the AFL-CIO has made numerous recommendations for improvement. These recommendations are described at length in our submissions regarding the two most recent trade deals under negotiation, the NAFTA (a renegotiation)[9] and the Trans-Pacific Partnership.[10]

I will include here some of the key recommendations the Commission may wish to consider:

Add Enforceable Rules to Address Currency Manipulation and Misalignment

U.S. bilateral, regional, and multilateral trade deals must include enforceable currency disciplines subject to trade sanctions in the text of the agreement.[11] In addition, in bilateral and regional deal such as NAFTA, parties also should commit to coordinating enforcement efforts with respect to the currency manipulation and misalignment by non-party countries, including China. The goal of both provisions would be to reduce the unsustainable U.S. trade deficit by addressing issues of trade and exchange rates. Currency realignment would create 2.3 million to 5.8 million jobs over the next three years.[12]

Add Enforceable Rules to Ensure State-Owned Enterprises Do Not Operate to Harm the U.S.

It is important U.S. trade deals include appropriate rules to discipline non-commercial, anti-competitive behavior of SOEs that invest in the U.S.[13] These rules should require SOE transactions be based on commercial considerations and increase transparency and reporting to facilitate enforcement of such rules. In addition, and in conjunction with these trade rules, domestic laws should be updated to ensure that an effective domestic remedy is readily available to the private sector to fight for its interests when SOE behavior on U.S. soil injures U.S.

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[8] Bivens, Josh, "Adding Insult to Injury: How bad policy decisions have amplified globalization's costs for American workers," Economic Policy Institute, Jul. 11, 2017. *Available at:* http://www.epi.org/publication/adding-insult-to-injury-how-bad-policy-decisions-have-amplified-globalizations-costs-for-american-workers/.

[9] AFL-CIO, Making NAFTA Work for Working People, June 12, 2017. *Available at:* https://aflcio.org/sites/default/files/2017-06/NAFTA%20Negotiating%20Recommendations%20from%20AFL-CIO%20%28Witness%3DTLee%29%20Jun2017%20%28PDF%29_0.pdf.

[10] AFL-CIO, Testimony Regarding the Proposed Trans-Pacific Partnership Trade Agreement, January 25, 2010. *Available at:* https://www.citizen.org/sites/default/files/afl-cio-comments-on-proposed-tpp.pdf.

[11] There are many ways to establish such enforceable provisions against currency manipulation and misalignment. During the TPP negotiations, for example, two useful proposals included a test promoted by the American Automotive Policy Council and the incorporation of the International Monetary Fund's seven factor guidelines.

[12] Scott, Robert E., "Stop Currency Manipulation and Create Millions of Jobs, With Gains across States and Congressional Districts," EPI Briefing Paper #372, Economic Policy Institute, Feb. 26, 2014. *Available at:* www.epi.org/publication/stop-currency-manipulation-and-create-millions-of-jobs/

[13] To be clear, the AFL-CIO does not consider public service providers to be SOEs and would not apply SOE rules to such institutions as the postal service, public universities, public hospitals, public transit systems and the like.

businesses and their employees.[14] We also recommended the creation of a rebuttable presumption that an SOE is acting on its home country's behalf, not the interests of our workers, if it seeks to block action to protect an injured party in the U.S., and the consideration of a screening mechanism for SOE investments.

WTO Reforms to Address Gaps and Overreach

Since China acceded to the WTO, its shortcomings have become clear. It has no clear or effective rules to address the problems created by China's state capitalist model. Key among these are overcapacity, currency manipulation and misalignment, anti-trust type issues when one or a very small number of firms (or countries) essentially corner the global market, and the WTO's complete failure to address unfair trade created by the suppression of worker rights and environmental exploitation. If the WTO can be reformed to effectively address these issues, such changes would have a beneficial impact on jobs, wages, and workplace rights.

However, as it stands, America's working families have little faith that the WTO can work for them, instead of against them. To date, the WTO is better known for its overreach to impede U.S. domestic trade laws (primarily through its attack on zeroing) and U.S. consumer laws (country of origin labels for beef and pork and dolphin-safe tuna labels).

One proposed change to the WTO that should be strenuously opposed is an attempt to expand investor-to-state dispute settlement (ISDS) to that body, for example through an "investment court system," as proposed by the European Union. ISDS is a separate justice system for foreign investors. It discriminates against U.S.-located firms by providing extraordinary procedural and substantive rights to foreign-based firms. According to the Cato Institute, "It is effectively a subsidy that mitigates risk for U.S. multinational corporations and enables foreign MNCs [multinational corporations] to circumvent U.S. courts when lodging complaints about U.S. policies."[15] By offering additional legal protections beyond those that exist under U.S. law or other countries' national courts, ISDS makes it more attractive to send production, investment, and jobs overseas.

As one of the lawyers who brought a case against the United States on behalf of a Canadian company explained, "[The ISDS provision in] NAFTA does clearly create some rights for foreign investors that local citizens and companies don't have. But that's the whole purpose of it."[16] But rule of law requires that the law—including the system of justice—apply to everyone equally. ISDS violates this bedrock principle of democracy. ISDS also disadvantages U.S. companies that only produce in the United States (e.g., micro- and small- to medium-sized

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[14] As mentioned in the trade remedies section, a corresponding change to trade remedy law is critical. Otherwise, Chinese state-owned enterprises such as Tainjin Pipe can invest their way out of U.S. trade remedy law.

[15] Ikenson, Daniel J., "A Compromise to Advance the Trade Agenda: Purge Negotiations of Investor-State Dispute Settlement," Cato Institute's Free Trade Bulletin No. 57, March 4, 2014. *Available at:* www.cato.org/publications/free-trade-bulletin/compromise-advance-trade-agenda-purge-negotiations-investor-state.

[16] Greider, William, "The Right and US Trade Law: Invalidating the 20th Century: How the right is using trade law to overturn American democracy," The Nation, Nov. 17, 2001. *Available at:* www.thenation.com/article/right-and-us-trade-law-invalidating-20th-century#.

companies) because they have fewer rights than their foreign competitors. ISDS should be eliminated from U.S. bilateral and regional deals as well.

Strengthen Rules of Origin

In general, "rules of origin" in trade deals should be set such that domestic producers and workers in the signatory countries are the primary beneficiaries of market access commitments, not third-party countries that take on no trade obligations in the deal. Strengthening the auto regional value content and closing related loopholes, as the Administration has proposed for NAFTA, is important, but is not the only way to address this recommendation. The parties must also strengthen content requirements for steel, aluminum, textiles and apparel, and aerospace products, for example. Strong rules of origin will provide an incentive to produce in the U.S. and limit opportunities for leakage to non-party producers.

Protect Responsible Government Purchasing and Buy American Policies

U.S. trade deals should support domestic job creation efforts by eliminating procurement commitments and promoting responsible bidding standards.[17] Currently, NAFTA, the WTO's Government Procurement Agreement, and various smaller agreements give bidders from other countries expansive access to U.S. goods, services and construction contracts. These provisions can undermine not only domestic preferences, but also responsible bidding criteria (such as requirements that a bidder have no outstanding environmental cleanup obligations or the implementation of a system that awards bonus points for bidders with better safety records or that source from local farms).

Add Commitments to Address Combat Tax Dodging

NAFTA and subsequent trade and globalization rules have had a negative long-term impact on tax revenues and public investment. In addition, through a variety of legal and illegal tax avoidance schemes, tax revenues have fallen for jurisdictions around the world, regardless of tax rates. This troubling trend undermines the social contract and inhibits robust public investment in infrastructure and human capital. U.S. trade deals should combat base erosion and tax avoidance to help meet infrastructure needs and cultivate public support for international trade. Optimally, countries should also coordinate rates to avoid a race to the bottom in a competition for investment (Panama, for example, is known as a tax haven; the U.S.-Panama trade deal could have and should have addressed tax issues head on to help ensure U.S. working families had a chance to reap fair benefits from the deal). If done right, such tax coordination could help all trade partners build new schools, high speed communications networks, and transportation corridors. If trade is viewed as a vehicle to facilitate tax dodging by economic elites, public opposition to trade will only grow.

[17] Although there is room for additional study of the impacts of existing procurement deals (e.g., an analysis of the job and wage effects of the reciprocal agreement between the United States and Canada that was adopted for the expenditure of American Recovery and Reinvestment Act funds and an analysis of U.S. procurement contracts won by multinational versus domestic-only firms), to date, there is simply no evidence to support duplicating existing procurement commitments that require the U.S. government to treat foreign bidders with the same preferences as U.S.-based bidders.

Add Commitments to Invest in Infrastructure

Investing in infrastructure drives long-term, broadly shared growth, but is hard to do when global companies are driving a race to the bottom. Adding infrastructure commitments to bilateral and regional deals could help offset the incentives of prior trade deals that have arguably depressed public investment. This kind of coordinated investment (e.g., by creating target annual investments) could help create jobs to offset any lost through trade, while also improving economic efficiencies and providing public goods for the long term.

Include Internationally-Recognized Labor Rights with Swift and Certain Enforcement

Finally, the AFL-CIO strongly recommends that all bilateral, regional, and multilateral trade efforts require parties to ensure that all workers within their territory can exercise the fundamental labor rights established in a tri-partite manner by the International Labor Organization in its eight core conventions. This would ensure that competition is not based on human abuse and exploitation. To accomplish this, the U.S. must incorporate in both trade deals and domestic practice, effective monitoring and enforcement procedures. Otherwise the labor rules will become guidelines.[18]

Theme Three: Coalition Building Opportunities

Unfortunately, the United States has not optimized its opportunities to build effective coalitions to address trade and investment issues, particularly those posed by China. In fact, some in the Administration have engaged in rhetoric that is xenophobic and nationalistic. Such rhetoric is counterproductive and will make it more difficult to build the coalitions America's workers need to build a strong, inclusive global economy in which workers around the world can all prosper.

The TPP was touted as an opportunity to build an effective trade coalition to address threats from China, but any opportunity that existed was squandered. In fact, it is important to note that, with respect to the Trans-Pacific Partnership in particular, which was promoted to the public as a way to deal with the challenges China poses, its impact would have been the opposite. Important trade policy reforms needed to achieve shared prosperity and sustainable growth and development in the TPP were unfortunately non-existent (climate change and currency), inadequate to the challenge (labor and state-owned enterprises), or counterproductive (investment) in the TPP. The deal was unlikely to help workers organize, bargain and raise wages in Vietnam, Mexico, or the U.S., and it would not have prevented any trading partners from disadvantaging American manufacturing by manipulating their currency. The argument that it nevertheless somehow set a "high bar" for China is therefore unsupported.

When and if enacted, even in the absence of the United States as a party, the TPP would allow China to benefit from its provisions without even joining. Its weak rules of origin, lack of rules on currency manipulation, and benefits that would apply to Chinese companies operating in any of the TPP countries mean that China has very little incentive to change its mercantilist model that has been undercutting U.S. manufacturers and displacing millions of U.S. jobs for more than a decade. For example, if Chinese intermediate parts were exported to Malaysia for final

[18] For more information, see AFL-CIO, "A Gold Standard for Workers? The State of Labor Rights in Trans-Pacific Partnership Countries," 2016. Available at: https://aflcio.org/sites/default/files/2017-03/1628_TPPLaborRightsReport.pdf.

assembly and export to the U.S., those parts could be made far out of compliance with any TPP standards, but still receive TPP benefits in the finished product if the U.S. had remained in the deal. Accordingly, the AFL-CIO strongly supports the Administration's decision to withdraw from the TPP.

Rather than a go-it-alone approach, which the Administration seems to be pursuing vis a vis the China 301 tariffs to address intellectual property, and to some extent the 232 tariffs on steel and aluminum, the U.S. should work with like-minded allies to act in concert. The risk of not doing so is great: it could send our potential allies even more strongly toward capitulating to China's predatory practices. Canada and Europe should be amongst our strongest allies in addressing China's steel overcapacity, yet the U.S. approach to them regarding the 232 tariffs would seem to indicate otherwise.

Theme Four: Additional Recommendations

In addition to the recommendations already made, the AFL-CIO would like the Commission to consider:

Improve CFIUS

The AFL-CIO agrees with the Commission's prior recommendation to add a net economic benefits test to CFIUS. Already, trading partners including Australia and Canada require foreign investments to undergo a similar review. Such a review would consider not just strategic acquisitions that could turn advanced technologies against us, but also strategic acquisitions designed to strip high value-added production jobs from the U.S. Adding an economic benefits test could change an intended "acquire and run" acquisition into a longer-term investment and induce the investor to continue operating the U.S., creating more jobs opportunities for U.S. workers. Limiting CFIUS review to a narrow and outdated definition of national security leaves open the prospect of predatory acquisitions designed to weaken our economy—not just acquire strategic technology and know-how. A weakened economy has fewer jobs and lower wages and creates impediments to making the security investments necessary to keep working families safe.

The AFL-CIO also recommends expanding CFIUS's ability to review greenfield investments beyond those proximate to a military base or other strategic facility. Given the demonstrated ability of the Government of China to guide and manage foreign investments to achieve long-term goals, it would seem prudent to expand the scope of investments subject to CFIUS review, so that we do not, as a nation, face challenges that could have been prevented or mitigated with appropriate and timely action.

Should the U.S. adopt this recommendation, it would be well-advised to act to ensure that existing trade commitments could not be used to undermine enhanced investment reviews.

Complementary Industrial Policy

The U.S. must develop and implement a broad set of domestic industrial and economic policies to rebuild, repair and modernize U.S. infrastructure; support research, development and advanced manufacturing, including by identifying and affirmatively targeting the jobs and industries of the future; provide working people with state of the art education and skills; and

upgrade its support for both works and entrepreneurs to support risk taking. Absent these investments, trade policy seems poised to continue to leave workers behind. Certainly, trade deals alone will not help the United States maintain prosperity and security vis a vis China in the future.

Conclusion

In summary, it is time to act. Workers across the country are the real victims as their future, and U.S. economic and national security, are under attack. The U.S. cannot continue to trade away its economic strengths for empty promises.

OPENING STATEMENT OF JENNIFER A. HILLMAN, PROFESSOR FROM PRACTICE, GEORGETOWN LAW SCHOOL; FORMER MEMBER, WTO APPELLATE BODY

HEARING CO-CHAIR STIVERS: Thank you.

Ms. Hillman.

MS. HILLMAN: Thank you very much.

I want to start by agreeing with Commissioner Stivers. As a long-time Washington Capitals season ticket holder, and a hockey mom myself, I will say it was a late and wonderful night to watch the Caps host the Stanley Cup.

So with that I want to thank this Commission for giving me the opportunity to appear before you this morning to address the question of what U.S. tools would best be used to address the Chinese market distortions.

For me, the first tool that the U.S. should use is its membership in the WTO and its right as a WTO member to challenge China's practices. And I would recommend that the U.S. spearhead a coalition of like-minded countries to bring a big, bold case at the WTO. While I understand that the recent imposition of steel and aluminum tariffs on these likely coalition partners make may that task harder, many of these countries share the United States' substantive concerns over China, and we should prioritize the development of a coalition to push back on China over the imposition of tariffs.

So why is a big, bold WTO case the best option? First, I think a broad WTO case represents the best opportunity to bring together enough of the trading interests in the world to put sufficient pressure on China to make it clear that fundamental reform is required. The U.S. needs to use the power of collective action to impress upon both China and the WTO how significant the concerns really are.

Second, a comprehensive WTO case would restore confidence in the WTO and in the rules-based trading system.

Third, I think working with a coalition on such a case would, hopefully, make it less likely that the United States would accept a limited bilateral agreement that's connected only to the U.S. bilateral trade deficit.

The suggestion to bring a big, bold case against China now certainly begs the question: if it so clearly warranted, and the problems have persisted for so long, why hasn't it been brought before now?

First, I would say bringing a collective case, with multiple complainants, is never easy, and it requires tremendous coordination of both legal tasks and of the substantive arguments, since not everybody always agrees on those.

Second, many countries in the past have been reluctant to bring WTO disputes unless they were virtually assured of a victory. But in light of the depth and breadth of the concerns about China, now is the time to throw caution to the wind and bring a big case. Moreover, I think a number of the most likely applicable provisions have not yet been tested so there is no reason to believe that they can't be successful now.

Third, many countries would have been reluctant to take on China for fear of retaliation. While not a perfect shield, bringing a broad, coalition-based case would lessen the likelihood that China would or could effectively retaliate against all of the coalition partners.

Fourth, bringing cases against China has often presented very difficult evidentiary hurdles, as much of the evidence needed to support a claim, particularly a claim over unwritten

rules and practices, can be quite difficult. However, over the course of the last decade, through the work of this Commission, through the work of the USTR and other U.S. government agencies, a substantial amount of evidence has been collected both here in the United States and in the European Union and Canada and Japan and the OECD and others so that there is sufficient evidence now to demonstrate that China's economy is operating in ways that undermine the WTO's rules-based system.

Fifth, some would argue that WTO cases have already been tried with limited success, and it is true, China has been challenged in 40 disputes with 22 of those cases arising from complaints filed by the United States.

All of the cases that have been completed without a settlement have found against China. The problem is that the challenges were narrow or limited to a few Chinese measures or to a particular industry or set of producers. No panel has yet been requested to rule on the Chinese systems as a whole.

The essential thrust of any WTO case should be to hold China to the specific commitments that it made when it joined the WTO and to the overarching understanding that is embodied in the Marrakesh Declaration that WTO members participate, and I quote, "based upon open, market-oriented principles."

As such, I would start with a non-violation claim under Article XXIII of the GATT, focused on the myriad of ways in which China's economy fails to meet that "open, market-oriented" prerequisite. Article XXIII provides a legal cause of action against measures which do not violate the treaty but that nevertheless upset the reasonable expectation of the parties.

Non-violation claims have been rare and are considered an exceptional concept, but the widespread concerns with China's economy suggests that it is indeed time for an exceptional approach.

The United States and all other WTO members had legitimate expectations that China would increasingly behave as a market economy, but this has not happened, and lately China appears to be going backward. It is in this collective failure by China, rather than any specific violation of individual provisions, that should form the core of this big WTO case.

But in addition to such a non-violation claim, I would recommend the inclusion of a dozen specific claims which are spelled out in more detail in my written testimony, but I'll touch on just four quickly this morning.

Technology transfer--a claim that China's continuing practice that forces or coerces technology transfer is a violation of China's WTO commitment that investment would, and I will quote, "not be subject to secondary conditions covering, for example, the transfer of technology." China made that specific commitment and we need to hold them to it.

Second, China's licensing regulations discriminate against foreign technology and impose additional technology restrictions and rights with respect to the use of intellectual property solely because the technology is of foreign origin. This violates China's commitment to provide national treatment.

Third, China has conducted or supported cyber intrusions into the United States' commercial networks targeting confidential business information held by U.S. firms.

This behavior is a violation of the WTO's TRIPS Agreement. Engaging in or permitting the theft, whether through cyber intrusion or not, is a violation of the basic requirement that China effectively enforce intellectual property rights.

Fourth is subsidies. Many would argue that the WTO has great difficulty in regulating subsidies, and that is among its greatest weaknesses. Part of the difficulty stems from the

interpretation of who provides a subsidy. It must be a government or a public body, and "public body" has been interpreted recently to mean entities that exercise governmental function, which effectively takes Chinese SOEs out of the definition.

In addition, the WTO subsidy rules allow countries to take one of two totally different actions when they're trying to discipline subsidies. One is a countervailing duty action and the other is what is referred to as an adverse effects case in the WTO.

The problem with countervailing duties is that they simply push the subsidized goods out of our market and into third-country markets but still suppress prices.

The problem with adverse effects cases is that the remedies in the WTO are prospective only. So the requirement to "remove the adverse effects of the subsidy" often does little to dismantle the capacity that China has already put in place as a result of those subsidies that acted in the first place.

The hope is that in bringing a challenge to subsidies, it would force a long overdue discussion about what the WTO can do to change its approach to disciplining subsidies.

But if this what I think is best option outlined proves impossible, then it's clear that the United States does have other domestic law options available, many of them that have been discussed by my colleagues on this panel. My contention to you, though, is all of them are inferior choices to a coalition-based WTO case because they all involve unilateral action by the United States, and to me unilateral action is the most likely to attract retaliation from China and the least likely to get at the heart of the problem.

Most of the unilateral responses would result in measures that violate the United States' WTO obligations, thereby giving China both standing and potentially the moral high ground to complain. Most of the measures are only applicable to goods imported into the United States market so they do nothing to address the problems with U.S. exports to China or U.S. investments to China or with Chinese investment bound into the United States.

Finally, unilateral actions by the United States I think are the most susceptible to the lure of a tradeoff of a short-term economic gain for additional sales of U.S. goods, agriculture or services to China, again without dealing with the heart of the problem.

But if nonetheless the perception is to go down this U.S. domestic law road, I think we've heard a lot about some of the options. Obviously, antidumping and countervailing duty actions. We currently have 162 orders currently in place against Chinese goods, but certainly more antidumping or countervailing duty actions could be brought whether by the domestic industry or filed by the administration, and again we have seen for the first time in a case involving aluminum the administration self-initiate a case against China.

Second option is safeguards. Again, we've seen, after a long hiatus in their use, safeguard measures were recently used to impose tariffs on solar panels and large residential washers. The downside of using safeguards to address problems in China is that they're not targeted. Safeguards are supposed to be applied to imports from the entire world, with no exceptions.

Third would be Section 337 under which imports of the U.S. can be banned if those imports either violate U.S. intellectual property rights or involve, quote, "unfair methods of competition and unfair acts" that cause harm to a U.S. industry.

I do believe that additional Section 337 cases and the idea of pushing this envelope beyond patents, which has been largely where 337 cases have been based into these unfair methods of competition kind of cases, could be a useful tool. The problem again is that they're only focused on goods that are coming into our market.

Fourth, we've heard a lot about Section 232, again the national security exceptions. Again, it does give the president pretty broad authority to impose tariffs or quotas if a product coming into our market threatens our national security. Again, unlike safeguards, it can be targeted just at China and not at the whole world, but again it has that effect of only affecting goods coming into our market and potentially diverting exports to third-country markets.

Fourth--fifth--I'm sorry--would be Section 301, again which we've heard about, and the other two that I'll mention very quickly would be IEEPA, the International Economic Emergency Powers Act, which is again very broad in allowing not only actions against terrorists but also seizures of assets and financial assets, and the Trading with the Enemy Act.

So, again, a broad array of tools, but my conclusion would be to urge the United States to pull together a coalition of the concerned to bring a big, bold and comprehensive case to the WTO.

PREPARED STATEMENT OF JENNIFER A. HILLMAN, PROFESSOR FROM PRACTICE, GEORGETOWN LAW SCHOOL; FORMER MEMBER, WTO APPELLATE BODY

TESTIMONY
OF
JENNIFER HILLMAN

PROFESSOR FROM PRACTICE,
GEORGETOWN UNIVERSITY LAW CENTER

BEFORE THE U.S.-CHINA ECONOMIC AND REVIEW SECURITY COMMISSION

HEARING ON
U.S. TOOLS TO ADDRESS CHINESE MARKET DISTORTIONS

FRIDAY, JUNE 8, 2018
DIRKSEN SENATE OFFICE BUILDING, ROOM 562
WASHINGTON, DC 20002

THE BEST WAY TO ADDRESS CHINA'S UNFAIR POLICIES AND PRACTICES IS THROUGH A BIG, BOLD MULTILATERAL CASE AT THE WTO

TESTIMONY OF JENNIFER HILLMAN*

A. Introduction

Concerns in the United States and around the world with China's practices and policies have been growing with each passing year. These concerns were recently succinctly summarized in the statement made by U.S. Ambassador to the WTO Dennis Shea in a May 8, 2018 statement to the WTO General Council:

> China . . . is consistently acting in ways that undermine the global system of open and fair trade. Market access barriers too numerous to mention; forced technology transfers; intellectual property theft on an unprecedented scale; indigenous innovation policies and the Made in China 2025 program; discriminatory use of technical standards; massive government subsidies that have led to chronic overcapacity in key industrial sectors; and a highly restrictive foreign investment regime.[1]

The concerns are further laid out in two recent documents that this Commission is no doubt well aware of:

(1) the Section 301 report, issued by USTR on March 2, 2018,[2] which raises four core concerns:

First, China uses foreign ownership restrictions, such as joint venture requirements and foreign equity limitations, and various administrative review and licensing processes, to require or pressure technology transfer from foreign companies.

Second, China's regime of technology regulations forces U.S. companies seeking to license technologies to Chinese entities to do so on non-market-based terms that favor Chinese recipients and that violates China's national treatment requirements to treat foreign investors no less favorably than it treats domestic investors.

Third, China directs and unfairly facilitates the systematic investment in, and acquisition of, foreign companies and assets by Chinese companies to obtain cutting-edge technologies and intellectual property and generate the transfer of technology to Chinese companies. The role of the state in directing and supporting this outbound investment strategy is pervasive, and evident at multiple levels of government – central, regional, and local.

Fourth, China conducts and supports unauthorized intrusions into, and theft from, the computer networks of foreign companies to access their sensitive commercial information and trade secrets.

(2) the 2017 report to Congress on China's WTO compliance, issued by USTR January 2018, which is the sixteenth such report and examines nine categories of WTO commitments undertaken by China (trading rights, import regulation, export regulation, internal policies affecting trade, investment,

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[1] Statement as delivered by Ambassador Dennis Shea, Deputy U.S. Trade Representative and U.S. permanent Representative to the WTO, WTO General Council, Geneva, May 8, 2018.

[2] Findings of the Investigation Into China's Acts, Policies, And Practices Related to Technology Transfer, Intellectual Property, And Innovation Under Section 301 of the Trade Act Of 1974, Office of the United States Trade Representative, March 22, 2018, https://ustr.gov/sites/default/files/Section%20301%20FINAL.PDF.

agriculture, intellectual property right, services and legal framework), with this year's report concluding that "the United States erred in supporting China's entry into the WTO on terms that have proven to be ineffective in securing China's embrace of an open, market-oriented trade regime."[3]

Both reports raise the obvious question of what is the most effective tool or set of tools to address this myriad of interwoven and overlapping concerns?

My answer is that the best approach would be a big, bold, comprehensive case at the WTO filed by a broad coalition of countries that share the United States' substantive concerns about China—even if they strongly oppose the Trump Administration's unilateral tactics or the sequencing of actions that began with putting tariffs on steel and aluminum imports from those same countries that the United States needs to be working with on such an action at the WTO.

B. A Big, Bold WTO Case is the Best Tool to Address the Deep, Systemic China Problems

Why?

First, a broad and deep WTO case represents the best opportunity to bring together enough of the trading interests in the world to put sufficient pressure on China make it clear that fundamental reform is required if China is to remain a member in good standing in the WTO. The U.S. needs to use the power of collective action to impress upon both China and the WTO how significant the concerns really are. The United States simply cannot bring about the kind of change that is needed using a go-it-alone strategy. A coalition case also has the potential to shield its members from direct and immediate retaliation by China.

Second, a comprehensive WTO case would restore confidence in the WTO and its ability to address fundamental flaws in the rules of the trading system. As U.S. Ambassador Dennis Shea put it, "If the WTO wishes to remain relevant, it must – with urgency – confront the havoc created by China's state capitalism."[4] If the WTO can be seen to be able to either bend or amend its rules to take on the challenges presented by China's "socialist market economy" framework, then faith in the institution and its rules-based system can be enhanced, for the good of the United States and the world.

Third, the work to put together a coalition, to research and agree upon the Chinese measures to be challenged and the claims to be made, and to litigate in a coordinated way at the WTO would (hopefully) make it less likely that the United States would accept a limited agreement connected to the U.S.-China bilateral trade deficit. Certainly the United States' partners in such a coalition would raise strong objection to the U.S. accepting an agreement under which China simply agreed to shift its purchases of soybeans from Brazil to the U.S. or its sourcing of energy products from Russia and Central Asia to the United States. Given that the Trump Administration has expended considerable political energy and clout in threatening the imposition of Section 301 tariffs on China, it is essential that they emerge from the process with measures to address the many real problems with China rather than simply addressing bilateral goods trade deficit.[5] A coalition may be the best way to avoid a narrow, deficit-focused bilateral deal.

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[3] 2017 Report to Congress on China's WTO Compliance, Office of the United States Trade Representative, January 2018, p. 2, https://ustr.gov/sites/default/files/files/Press/Reports/China%202017%20WTO%20Report.pdf.

[4] Statement of Ambassador Dennis Shea, WTO General Council, May 8, 2018.

[5] In Beijing on May 3-4, at its first high-level meeting with China following the release of the Section 301 report, the United States presented it draft framework (attached as Appendix A) for balancing the trade relationship with China, noting that "there is an immediate need for the United States and China to reduce the U.S. trade deficit with China," and listing as the first of eight issues the request for a commitment by China to reduce the US-China trade deficit by $200 billion.

C. The WTO Case Against China

The essential thrust of any WTO case should be to hold China to the specific commitments it made when it joined the WTO in 2001 and to the overarching understanding embodied in the Marrakesh Declaration that WTO members participate "based upon open, market-oriented policies." The specific commitments China made are found in the texts of the WTO Agreements, China's Protocol of Accession to the WTO, certain designated paragraphs of the accompanying Working Party Report, and China's schedules of commitments.[6] The schedules cover tariffs and non-tariff measures applicable to agricultural trade and industrial goods (commitments under the General Agreement on Tariffs and Trade, or GATT) and services (commitments under the General Agreement on Trade in Services, or GATS). The Protocol and Working Party Report also set out how China promises to fulfill its WTO obligations.

Every WTO case must be based on government measures (i.e., laws, regulations, rulings or practices), whether written or not, that violate one or more specific commitments or that "nullify or impair" a benefit provided to members of the WTO.[7] It is this combination of both actual violations and the non-violation impairment of benefits that should be the focus of the case at the WTO.

Among the things that could be included in such a big, bold case are the following, understanding that this is not an exhaustive list:

1. Technology Transfer

One of the key findings of the Section 301 report is that the Chinese government uses both foreign ownership restrictions and administrative licensing and approvals processes to force technology transfer in exchange for either the investment approval itself or for the numerous administrative approvals needed to establish or operate a business in China.

However, China clearly committed (in one of the legally binding paragraphs of its Working Party report) that it would not condition investments on the transfer of technology:

> The allocation, permission or rights for importation and investment would not be conditional upon performance requirements set by national or sub-national authorities, or subject to secondary conditions covering, for example, the conduct of research, the provision of offsets or other forms of industrial compensation including specified types or volumes of business opportunities, the use of local inputs **or the transfer of technology**. (emphasis added).[8]

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[6] Paragraph 342 of the Working Party report sets forth the specific paragraphs of the Working Party report that are considered to be incorporated into the Protocol itself. These paragraphs are therefore considered to be equally legally binding on China as the provisions in its Protocol or the text of the WTO Agreements.

[7] The WTO Appellate Body, in *EC-Asbestos* described nullification and impairment: "Article XXIII:1(a) sets forth a cause of action for a claim that a Member has failed to carry out one or more of its obligations under the GATT 1994. A claim under Article XXIII:1(a), therefore, lies when a Member is alleged to have acted inconsistently with a provision of the GATT 1994. Article XXIII:1(b) sets forth a separate cause of action for a claim that, through the application of a measure, a Member has 'nullified or impaired' 'benefits' accruing to another Member, 'whether or not that measure conflicts with the provisions' of the GATT 1994. Thus, it is not necessary, under Article XXIII:1(b), to establish that the measure involved is inconsistent with, or violates, a provision of the GATT 1994. Cases under Article XXIII:1(b) are, for this reason, sometimes described as 'non-violation' cases." Appellate Body Report, *EC – Asbestos*, para. 185.

[8] Paragraph 203, Report of the Working Party on the Accession of China, WT/ACC/CHN/49, 1 October 2001. See also Section 7.3 of China's Protocol of Accession.

While the Section 301 report clearly notes the difficulty in proving the technology transfer mandates, given that many of them are unwritten, and that others are done in the course of a negotiation between two ostensibly private parties (even though the Chinese entity may be either state-owned or have Communist Party members on its board), recent decisions of the WTO Appellate Body have made it clear that unwritten measures can be challenged.[9] Given the clear commitment made by China and the WTO's Agreement on Trade Related Investments' (TRIMs) prohibition on treating foreign investment less favorably than Chinese investment, China's practices resulting in the forced or coerced transfer of technology should be challenged.

2. Discriminatory Licensing Restrictions

The second key finding of the Section 301 report is that China's regime of technology regulations does not allow U.S. (or other foreign firms) to license their technology (or choose not to license it) under the conditions and terms that they would like or that would prevail in a market economy. The Chinese regulations, among other things, discriminate against foreign technology, putting foreign technology importers at a disadvantage relative to Chinese companies and imposing additional restrictions on the use and enjoyment of technology and intellectual property rights simply because the technology is of foreign origin. This violates China's commitment to provide national treatment.

Unlike the concerns for the unwritten and under-the-table nature of the forced technology transfer practices, these measures are formal laws and regulations that are well-known to the United States and others. Indeed, Japan, the US and the EU have been raising concerns about these rules in the TRIPS Council and other WTO forums. Some of these same laws and regulations are the source of the United States' and the EU's May 2018 requests for consultations with China.

China's commitments here are clear: China ensured "national and MFN treatment to foreign right-holders regarding all intellectual property rights across the board in compliance with the TRIPS Agreement."[10] In enacting laws and imposing regulations which discriminate against foreign holders of intellectual property rights and which restrict foreign right holders' ability to protect certain intellectual property rights, China has broken those commitments and violated its WTO obligations.

3. Outbound Investment and Made in China 2025

The third major finding of the Section 301 report is that China has engaged in a wide-ranging, well-funded effort to direct and support the systematic investment in, and acquisition of, U.S. companies and assets to obtain cutting-edge technology, in service of China's industrial policy. The report also notes that the role of the state in directing and supporting this outbound investment strategy is pervasive, and evident at multiple levels of government – central, regional, and local. The government has devoted massive amounts of financing to encourage and facilitate outbound investment in areas it deems strategic. In support of this goal, China has enlisted a broad range of actors to support this effort, including SOEs, state-backed funds, government policy banks, and private companies.

Concerns about these policies were heightened by the release by China's State Council in 2015 of its Made in China 2025 initiative, a "comprehensive blueprint aimed at transforming China into an advanced manufacturing leader [through] preferential access to capital to domestic companies in order to

[9] See, for example, Appellate Body Reports, *Argentina-Measures Affecting the Importation of Goods*, WT/DS438/AB/R / WT/DS444/AB/R / WT/DS445/AB/R, adopted 26 January 2015.
[10] Paragraph 256, Working Party Report, one of the legally binding paragraphs of China's Working Party report.

promote their indigenous research and development capabilities, support their ability to acquire technology from abroad, and enhance their overall competitiveness."[11]

Because much of the outward investment regimes and the Made in China 2025 plan are formal laws, regulations or program of the Chinese government, basic documentation for a WTO claim is relatively straightforward. However, the WTO rules have much less say over outward investment, making the nature of a WTO claim in this area more complicated. Nonetheless, there are some commitments that could form the basis for a violation claim, including a lack of reciprocity. For example, China stated that its IPR laws will provide that "any foreigner would be treated . . . on the basis of the principle of reciprocity."[12] Yet as the Section 301 report amply documents, the Chinese administrative approval regime imposes substantially more restrictive requirements than that of the United States. U.S. firms face numerous barriers, such as sectoral restrictions, joint venture requirements, equity caps, and technology transfer requirements when they seek access to the Chinese market. Chinese firms do not face anything remotely approaching these types of restrictions when investing in the United States.

In addition, China's outward investment regime and programs like Made in China 2025 could be challenged under the WTO's GATT Article XXIII "non violation" given the non-market nature of China's outward investment scheme. As the Section 301 report notes: "Market-based considerations. . . do not appear to be the primary driver of much of China's outbound investment and acquisition activity in areas targeted by its industrial policies. Instead, China directs and supports its firms to seek technologies that enhance China's development goals in each strategic sector."[13] Yet China, in joining the WTO, was becoming part of an organization calling for the "participation of . . . economies in the world trading system, based upon open, market-oriented policies and the commitments set out in the Uruguay Round Agreements and Decisions."[14]

4. Theft of Trade Secrets and Other Intellectual Property

The fourth area identified by the Section 301 report are cyber intrusions into U.S. commercial networks targeting confidential business information held by U.S. firms, conducted and supported by the government of China. These cyber intrusions have allowed the Chinese government to gain unauthorized access to a wide range of commercially-valuable business information, including trade secrets, technical data, negotiating positions, and sensitive and proprietary internal communications.

The Section 301 report and the numerous documents and studies it reference, along with the Department of Justice indictment of Chinese government hackers for cyber intrusions and economic espionage,[15] leave little doubt that China has engaged in serial theft of U.S. intellectual property rights, trade secrets in particular.

The clear claim under the WTO is a violation of the WTO's Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS). TRIPS covers the broad array of intellectual property rights (i.e., patents, copyrights, trademarks, trade secrets, industrial designs, geographical indications, integrated circuits) and provides both minimum standards of protection and a broad based requirement for enforcement. For example, Article 39 of the TRIPS Agreement provides that people and companies "shall have the possibility of preventing information lawfully within their control from being disclosed to,

[11] U.S. Chamber of Commerce, "Made in China 2025: Global Ambitions Built on Local Protections."
[12] Paragraph 256 of China's Working Party Report (one of the paragraphs that is legally binding).
[13] Section 301 report, p. 148.
[14] Marrakesh Declaration of 15 April 1994.
[15] US. v. Wang Dong et al., (W. D. Pa., May 1, 2014).

acquired by, or used by others without their consent . . ," while TRIPs Article 41 imposes an affirmative obligation on all WTO Members: "Members shall ensure that enforcement procedures… are available under their law so as to permit effective action against any act of infringement of intellectual property rights covered by this Agreement, including expeditious remedies to prevent infringements and remedies which constitute a deterrent to further infringements." Engaging in and permitting the theft, whether through cyber intrusions or not, is a violation of the basic requirement that China's laws and its efforts to enforce intellectual property rights "must have real force in the real world of commerce."[16]

5. Investment Restrictions

As noted above, Chinese government officials at times use China's current foreign investment approval process to restrict or unreasonably delay market entry for foreign companies, to require foreign companies to take on a Chinese partner, or to extract valuable, deal-specific commercial concessions as a price for market entry.[17] Foreign companies are often told that they will have to transfer technology, conduct research and development in China or satisfy performance requirements relating to exportation or the use of local content if they want their investments approved.[18]

In addition, in the name of security, a number of additional restrictions have been placed on foreign investment. The *National Security Law* includes a more restrictive national security review process and other significant restrictions on foreign investment, such as restrictions on the purchase, sale and use of foreign ICT products and services, cross-border data flow restrictions and data localization requirements.[19]

The *Catalogue Guiding Foreign Investment in Industry* (*Foreign Investment Catalogue*), imposes significant restrictions in key services sectors, extractive industries, agriculture and certain manufacturing industries.

A number of the provisions in these laws and catalogues violate the commitment China made in its Protocol of Accession: "China shall ensure that . . . the right of importation or investment by national and sub-national authorities, is not conditioned on: whether competing domestic suppliers of such products exist; or performance requirements of any kind, such as local content, offsets, the transfer of technology, export performance or the conduct of research and development in China." (Protocol, Section 7.3) These also violate China's basic commitment to national treatment, requiring that China treat foreign companies no less favorably than it treats Chinese companies.[20]

6. Subsidies

Many regard the WTO's difficulty in regulating subsidies as among its greatest weaknesses, particularly when it comes to the size and the nature of the subsidies being provided in China. For example, subsidization and the resultant overcapacity have been problems in China, particularly with State-Owned-

[16] James Bacchus, "How the World Trade Organization Can Curb China's Intellectual Property Transgressions," CATO, March 22, 2018.
[17] 2017 Report to Congress on China's WTO Compliance, USTR, January 2018, pp. 83-95.
[18] For example, in October 2012, MOF, MIIT and MOST issued two new measures establishing a fiscal support fund for manufacturers of New Energy Vehicles (NEVs) and NEV batteries. As foreign automobile manufacturers are required to form 50-percent joint ventures with Chinese partners, these requirements could effectively require them to transfer core NEV technology to their Chinese joint-venture partners in order to receive the available government funding.
[19] The recently enacted *Cybersecurity Law* adds additional restrictions to those in the *National Security Law.*
[20] China's basic national treatment commitment is underscored in Paragraph 18 of the Working Party report (one of the legally binding paragraphs): "The representative of China further confirmed that China would provide the same treatment to Chinese enterprises, including foreign-funded enterprises, and foreign enterprises and individuals in China."

Enterprises (SOEs) which are provided with a variety of free or below-cost resources (such as land and raw materials), raising questions as to whether inputs provided by such SOEs to downstream manufacturers should be treated as government subsidies. The provisions of the WTO's Agreement on Subsidies and Countervailing Measures (ASCM) makes proving the existence of such subsidies difficult. Specifically, the agreement defines a subsidy as a "financial contribution by a government or any public body."[21] The WTO Appellate Body has interpreted "public body" to mean government or governmental entities that exercise governmental functions[22] – i.e., that the entity must possess, exercise, or be vested with "governmental authority" and be performing a "governmental function." This interpretation effectively takes Chinese SOEs out of the definition of subsidy and renders the WTO framework ineffective in addressing these cases.

Second, demonstrating the existence of a subsidy also requires showing that a benefit was provided to the subsidy recipient, with "benefit" being defined as making the recipient better off than they would have been absent the subsidy. Such a demonstration requires a comparison to a market benchmark to determine whether the terms of a loan or the price of a government purchase were more favorable than market-based terms. Because of the nature of China's economy, benchmarks are often hard to prove.

Moreover, remedies available under the WTO subsidy rules are perceived to be inadequate in addressing concerns about China. The ASCM does not provide an outright ban on subsidies but rather allows countries to take one of two actions when faced with subsidized goods: 1) countervailing duty actions if the subsidized goods are coming into their markets and causing injury to their domestic producers, with the amount of the duty equal to the portion of the cost of production that has been covered by the subsidy, or 2) adverse effects cases at the WTO, if the damage from trade in the subsidized product is causing harm in third-country markets. The problem with countervailing duties is that they may simply push the subsidized goods into other markets, thus suppressing prices. The problem with adverse effects cases is that remedies in the WTO are prospective only so the requirement to "remove the adverse effects of the subsidy" often does little to dismantle the capacity that China has built to produce those goods in the first place.

In recent years, it appears that China has begun to tie subsidies to lists of qualified manufacturers located in China. For example, the central government and certain local governments provide subsidies in connection with the purchase of NEVs, but they only make these subsidies available when certain Chinese-made NEVs, not imported NEVs, are purchased. China appears to pursue similar policies involving NEV batteries, leading to lost sales by U.S.-based manufacturers.

China made two basic commitments with respect to subsidies when it joined the WTO: 1) to notify the WTO of all the subsidies it granted or maintained, and 2) to eliminate all export contingent and import substitution subsidies. It also made general national treatment commitments not to discriminate against foreigners. It appears that China is violating all three commitments. The hope in bringing a broad challenge would be to force a long-overdue discussion about what the WTO can do to change its approach to disciplining subsidies.

7. Export Restraints

In some situations, China has used its border taxes to encourage the export of certain finished products over other finished products within a particular sector. For example, in the past, China has targeted value-added steel products, particularly wire products and steel pipe and tube products, causing a surge in

[21] See Article I of the SCM Agreement. Assuming that a measure is a subsidy within the meaning of the SCM Agreement, it nevertheless is not subject to the SCM Agreement unless it has been specifically provided to an enterprise or industry or group of enterprises or industries.

[22] See *United States – Definitive Anti-Dumping and Countervailing Duties on Certain Products from China*, WT/DS379/AB/R.

exports of these products, many of which ended up in the U.S. market. Furthermore, despite its commitments to the contrary, China has taken no steps to abandon its use of trade-distortive VAT export rebates. Export taxes on any products other than those specific in Annex 6 to China's Protocol of Accession are prohibited and ripe for challenge.[23]

8. Standards

China seems to be actively pursuing the development of unique requirements, despite the existence of well-established international standards, as a means for protecting domestic companies from competing foreign standards and technologies. Indeed, China has already adopted unique standards for digital televisions, and it is trying to develop unique standards and technical regulations in a number of other sectors, including, for example, autos, telecommunications equipment, Internet protocols, wireless local area networks, radio frequency identification tag technology, audio and video coding and fertilizer as well as software encryption and mobile phone batteries. This strategy has the potential to create significant barriers to entry into China's market, as the cost of compliance will be high for foreign companies, while China will also be placing its own companies at a disadvantage in its export markets, where international standards prevail. There are also concerns that integrating its domestic standards requirements into its certification or accreditation schemes would make them de facto mandatory.[24]

China's standards are subject to the WTO requirements on standards, both those contained in the Agreement on Sanitary and Phytosanitary Standards (SPS Agreement) (relating to food, animal and plant standards) and the Agreement on Technical Barriers to Trade (TBT). Both Agreements contain basic national treatment requirements, preferences for the harmonization of standards with those set by recognized international standards organizations and a basic requirement that standards not be more trade restrictive than necessary to fulfill a legitimate objective. To the extent that China's standards can be shown to have effectively created unnecessary obstacles to trade or to have unreasonably departed from international standards, they can be challenged at the WTO.

9. Services

China's commitments with respect to services are those found in its GATS (General Agreement on Trade in Services) schedules and in more recent commitments China has made to improve on those initial commitments. The problem is that in a number of sectors, China has not followed through previously agreed upon changes. For example:

Insurance: While China allows wholly foreign-owned subsidiaries in the non-life (i.e., property and casualty) insurance sector, the market share of foreign-invested companies in this sector is only about two percent. Some U.S. insurance companies established in China sometimes encounter difficulties in getting the Chinese regulatory authorities to issue timely approvals of their requests to open up new internal branches to expand their operations. In November 2017, China announced that it would be easing certain of its foreign equity restrictions in the insurance services sector, but to date it has not done so.

Securities and management services: China only permits foreign companies to establish as Chinese-foreign joint ventures, with foreign equity capped at 49 percent. In November 2017, China

[23] "China shall eliminate all taxes and charges applied to exports unless specifically provided for in Annex 6 of this Protocol or applied in conformity with the provisions of Article VIII of the GATT 1994." Section 11.3, China's Protocol of Accession.
[24] 2017 Report to Congress on China's WTO Compliance, USTR, January 2018, pp. 60-61.

announced that it would be easing certain of its foreign equity restrictions in the securities and asset management services sectors, but to date it has not done so.

Legal services: China has issued measures intended to implement the legal services commitments that it made upon joining the WTO. However, these measures restrict the types of legal services that can be provided by foreign law firms, including through a prohibition on foreign law firms hiring lawyers qualified to practice Chinese law, and impose lengthy delays for the establishment of new offices.

The WTO case should work to hold China to all of the commitments it has made to open ups its services sector.

10. Agriculture

U.S. exporters continued to be confronted with non-transparent application of sanitary and phytosanitary (SPS) measures, many of which have appeared to lack scientific bases and have impeded market access for many U.S. agricultural products. China's seemingly unnecessary and arbitrary inspection-related import requirements also continued to impose burdens and regulatory uncertainty on U.S. agricultural producers exporting to China, as did the registration and certification requirements that China imposes, or proposes to impose, on U.S. food manufacturers.[25]

Any SPS measures adopted without a sound scientific basis or without a risk assessment or without being based on certain international standards are clearly subject to challenge at the WTO, with past cases indicating a high likelihood that any such measures would be struck down. The inspection-related requirements may also violate the WTO's Agreement on Preshipment Inspection, which contains both non-discrimination and transparency requirements.

11. Transparency

The issue of transparency and access to China's laws, regulations and rules was of key concern to WTO members when China joined in 2001. China's Protocol of Accession and five paragraphs of its Working Party clearly commit China to making all laws, regulations and other measures pertaining to trade readily available and, upon request, available prior to their implementation or enforcement, along with making them available in one or more of the official languages of the WTO (English, French and Spanish). As the following examples show, China has not lived up to these commitments and can be challenged on these (and other) transparency failures at the WTO:

Publication of laws: While trade-related administrative regulations and departmental rules are more commonly (but still not regularly) published in the journal, it is less common for other measures such as opinions, circulars, orders, directives and notices to be published, even though they are in fact all binding legal measures. In addition, China does not normally publish in the journal certain types of trade-related measures, such as subsidy measures, nor does it normally publish sub-central government trade-related measures in the journal.

Notice and comment procedures: At the May 2011 S&ED meeting, China committed to issue a measure implementing the requirement to publish all proposed trade and economic related administrative regulations and departmental rules on the website of the State Council's Legislative Affairs Office (SCLAO) for a public comment period of not less than 30 days. In April 2012, the SCLAO issued two measures that appear to address this requirement. Since then, despite continuing U.S. engagement, little noticeable improvement in the publication of departmental rules for public comment appears to have taken

[25] 2017 Report to Congress on China's WTO Compliance, USTR, January 2018, p. 96.

place, even though China confirmed that those two SCLAO measures are binding on central government ministries.

12. Non-violation

Last, but certainly not least, a broad and deep case at the WTO should include a non-violation claim under Article XXIII of the GATT, focused on the myriad of ways in which China's economy fails to meet the Marrakesh Declaration that the WTO was designed as a world trading system "based upon open, market-oriented policies." The non-violation clause of Article XXIII represents a real-world attempt to solve the broader problem of contractual incompleteness. It provides a legal cause of action against measures that do not violate the treaty but that nevertheless upset the reasonable expectations of the parties and can be aimed at policies that might otherwise be beyond the reach of the GATT/WTO agreements.[26] Non-violation claims have been rare.[27] WTO members generally agree that "the non-violation nullification or impairment remedy should be approached with caution and treated as an exceptional concept. The reason for this caution is straightforward. Members negotiate the rules that they agree to follow and only exceptionally would expect to be challenged for actions not in contravention of those rules."[28]

However, the wide-spread concerns with China's economy and the difficulties it has raised for WTO members suggests that this is indeed time for an exceptional approach. As made clear in Harvard Law Professor Mark Wu's "China Inc." analysis, China's economy is structured differently from any other major economy and is different in ways that were not anticipated by WTO negotiators.[29] It is the complex web of overlapping networks and relationships, both formal and informal, between the state, the Communist Party, SOEs, private enterprises, financial institutions, investors and others with Chinese government oversight over state assets (SASAC), financial sector organization (Central Huijin Investment Ltd.), heavy state planning, placement of Communist party officials in key positions, specific forms of corporate networks and state-private sector linkages that make China's economy so unique and so hard for the trading rules to deal with.[30]

It is exactly for this type of situation that the non-violation nullification and impairment clause was drafted. The United States and all other WTO members had legitimate expectations that China would increasingly behave as a market economy—that it would achieve a discernable separation between its government and its private sector, that private property rights and an understanding of who controls and

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[26] Article XXIII provides:

Nullification or Impairment

1. If any contracting party should consider that any benefit accruing to it directly or indirectly under this Agreement is being nullified or impaired or that the attainment of any objective of the Agreement is being impeded as the result of

(*a*) the failure of another contracting party to carry out its obligations under this Agreement, or

(*b*) the application by another contracting party of any measure, whether or not it conflicts with the provisions of this Agreement, or

(*c*) the existence of any other situation,

the contracting party may, with a view to the satisfactory adjustment of the matter, make written representations or proposals to the other contracting party or parties which it considers to be concerned. Any contracting party thus approached shall give sympathetic consideration to the representations or proposals made to it.

[27] "Although the non-violation remedy is an important and accepted tool of WTO/GATT dispute settlement and has been 'on the books' for almost 50 years, we note that there have only been eight cases in which panels or working parties have substantively considered Article XXIII:1(b) claims." Panel Report, *Japan – Film*, para. 10.36.

[28] Panel Report, *Japan – Film*, para. 10.36.

[29] Mark Wu, "The 'China, Inc.' Challenge to Global Trade Governance," Harvard International Law Journal, Vol. 57, Spring 2016, pp. 261-324.

[30] Mark Wu at 284.

makes decisions in major enterprises would be clear, that subsidies would be curtailed, that theft of IP rights would be punished and diminished in amount, that SOEs would make purchases based on commercial considerations, that the Communist Party would not, by fiat, occupy critical seats within major "private" enterprises and that standards and regulations would be published for all to see. It is this collective failure by China, rather than any specific violation of individual provisions, that should form of the core of a big, bold WTO case. Because addressing these cross-cutting, systemic problems is the only way to correct for the collective failures of both the rules-based trading system and China.

D. The Time is Ripe for a WTO Case Now

The suggestion to bring a bold WTO case against China now certainly begs the question: if such a case is so clearly warranted and the problems have persisted for so long, why hasn't it been brought before now?

Among the reasons may be the following:

First, bringing a collective case, with multiple complainants, is never easy, as it requires tremendous coordination of both the legal tasks of drafting and pleading and of the substantive arguments to be made, which may favor one country more than others or raise concerns for some but not all of the coalition. Only a handful of the 547 WTO complaints brought to date have been brought by a coalition of countries, but for this case to be most effective, a coalition is needed. And many of the potential coalition partners have been working with the U.S. in other fora, including the OECD, the G-7, and the Global Forum on Steel Excess Capacity. The need to pool together both the evidence and the political power of as large a coalition as can be mustered will be important to achieving sustained pressure at the highest levels on China.

Second, many countries in the past have been reluctant to bring WTO disputes unless they were virtually assured of a victory. No one wanted to lose, given the diplomatic and political fallout that can occur from one country accusing another foreign sovereign of being a rules scofflaw. But in light of the depth and breadth of the concerns about China, now is the time to throw caution to the wind and bring a big case that challenges a number of both specific measures and systemic matters, assuming there is sound evidence to ensure that each claim has been brought in the good faith required by the WTO's Dispute Settlement Understanding (DSU).[31] Moreover, a number of the most likely applicable provisions have not yet been tested, against China or any other country. In the past when tried for the first time, WTO rules have generally been found to work.

Third, many countries (and the companies within those countries) have been reluctant to take on China for fear of retaliation by China, in ways both obvious and hidden.[32] Countries fear that China will

[31] Article 10 of the DSU provides: "It is understood that requests for conciliation and the use of the dispute settlement procedures should not be intended or considered as contentious acts and that, if a dispute arises, all Members will engage in these procedures in good faith in an effort to resolve the dispute."

[32] As stated in the Section 301 report (at 9): U.S. companies "fear that they will face retaliation or the loss of business opportunities if they come forward to complain about China's unfair trade practices. . . . Multiple submissions noted the great reluctance of U.S. companies to share information on China's technology transfer regime, given the importance of the China market to their businesses and the fact that Chinese government officials are 'not shy about retaliating against critics.' For example, a representative of the Commission on the Theft of American Intellectual Property testified at the hearing: 'American companies are intimidated and reticent over the issue, especially in China. There they risk punishment by a powerful and opaque Chinese regulatory system.' In addition, according to the U.S. China Business Council, their member companies do not presently have 'reliable channel[s] to report abuses and to appeal adverse decisions…without fear of retaliation.'"

impose trade remedies or other measures on their exports or deny needed permits to their companies or file WTO challenges, all in direct response to claims of unfair trade practices, forced technology transfers or intellectual property theft. While not a perfect shield, bringing a broad, coalition-based case would lessen the likelihood that China would or could effectively retaliate against all of the coalition partners, much less the many industries and companies that would be standing behind the case.

Fourth, bringing cases against China has often presented very difficult evidentiary hurdles, as much of the information and evidence needed to support a claim, particularly a claim based on unwritten rules or practices, can be quite difficult to obtain. As noted above, one of the ongoing complaints of the United States and others is the lack of transparency in China, particularly around the issue of granting licenses or permits. As stated in the Section 301 report: "The fact that China systematically implements its technology transfer regime in informal and indirect ways makes it 'just as effective [as written requirements], but almost impossible to prosecute.' . . . Nevertheless . . . confidential industry surveys, where companies may report their experiences anonymously, make clear that they are receiving such pressure. The lack of transparency in the regulatory environment, the complex relationship between the State and the private sector, and concerns about retaliation have enabled China's technology transfer regime to persist for more than a decade."[33] However, it is clear that over the course of the last decade or more, through the work of this Commission, USTR and other U.S. government agencies, along with numerous business and industry groups, that a substantial amount of evidence has been collected here in the United States. The combination of the extraordinarily comprehensive and well-documented Section 301 Report, the annual reports of this Commission, and the annual USTR report to Congress on China's WTO compliance already contain ample evidence to support all of the potential claims noted above. Add to that the work done in the EU, Japan, Canada and others, and at the OECD along with other multilateral institutions, and it becomes clear that there is more than sufficient evidence to demonstrate that China's economy is operating in ways that undermine the WTO's rules-based, market-based system. Indeed, one of the many benefits of bringing a case as a coalition is that each member of the coalition can contribute the evidence that they have collected and the experience of their companies.

Fifth, some would argue that WTO cases have already been tried, with some success and some failure. It is true that China has been challenged in 40 disputes brought to the WTO's dispute settlement system, with 22 of those cases arising from complaints filed by the United States, eight coming from the EU, four from Mexico, three from Canada, with Japan and Guatemala also bringing claims against China.[34] And a number of them (at least 15) have found against China. While the actual extent of Chinese compliance with WTO rulings can be questioned, in a number of cases, China has removed or amended its offending measures and in five others, China has reached a settlement agreement with the complaining party. The problem with many of these cases is that the challenges were relatively narrow, limited to a few Chinese measures, or to a particular industry or set of producers. While some of the more recent cases, including in particular the case on subsidies for aluminum and the Section 301-related case on IPR violations, have attempted to bring a specific case to showcase the underlying and more systemic problems, no panel has yet been requested in those cases and it remains to be seen whether a single case can provoke a more systemic response from China.

[33] Section 301 report at 22.

[34] See the attached Appendix B for a full list of the cases brought against China and their outcomes. Note that for eight of the cases, no panel has been requested, for two of the cases the panel is working on the case, and for two others, the DSB has agreed to establish the panel but the actual panelists to hear the case have not yet been appointed.

As a result, some have come to believe that the WTO, as the 2017 USTR report to Congress states, "is not effective in addressing a trade regime that broadly conflicts with the fundamental underpinning of the WTO system."[35] I disagree. I do not believe that the kind of broad case, with claims across sectors and across legal regimes, has been tried. No one, for example, has challenged the Chinese system of intellectual property rights or technology transfers *as a whole*. The WTO, therefore, has not been given the opportunity to show what can be done to save its core provisions. Yet it is just such a systemic case that could provide the basis and the incentive to craft a legal remedy that could be beneficial to all sides.

E. Objectives of Such a WTO Case

Most WTO disputes have as their goal a ruling by the Dispute Settlement Body that the measures complained about violate one or more provisions of the WTO Agreements, after which the responding party brings its measures into compliance, often by removing or amending the offending measures. Here, while one of the goals would indeed be to seek certain specific rulings of that type, the goals would be much broader—

> 1) to seek a common understanding of where the current set of rules are failing and need to be changed (with disciplines on subsidies at the top of that list);
>
> 2) to begin the process of scoping out exactly what those rule changes would look like to accommodate the views of the broader WTO membership;
>
> 3) to seek recognition from China of where and to what degree its economic structure can or cannot fit within a fair, transparent and market-based trading system; and
>
> 4) to give China the opportunity to make a choice that is its sovereign right to make – whether it wants to change its system to one that does fit within the parameters of the WTO or not.

As former USTR official Harry Broadman put it, "There's no right or wrong here. If China's choice results in conduct that does not square with the rules of the WTO . . . so be it. Beijing should then exit the WTO gracefully or be shown the door."[36] The hope would be that both China and the coalition of parties to the dispute would appreciate that the trading system is better off with China as part of it, that the WTO rules are in some places and in some ways part of the problem and need to be changed, but that tinkering at the margins for China will not suffice.

F. The U.S. Unilateral Alternatives

If the best option outlined above proves impossible, then the United States has other options for action. All of these are much inferior choices to a coalition-based WTO case because all of them involve unilateral action by the United States. As we have seen already, unilateral action is most likely to attract retaliation from China and least likely to get at the heart of the problem. Moreover, other than trade remedies, most of these unilateral responses would likely result in measures that violate the United States' WTO obligations, thereby giving China both standing and potentially the moral high ground to complain. And the trade remedy measures (including Section 337), along with actions under Section 301 and 232, are only applicable goods imported into the U.S. market, so they do nothing to address problems with U.S. exports to or investments in China or with Chinese investment bound for the U.S. Finally, such unilateral actions by the United States are most susceptible to the lure of a trade-off for the short-term economic gain

[35] 2017 USTR Report to Congress on China's WTO Compliance at 5.
[36] Harry G. Broadman, "The Coalition-Based Trade Strategy Trump Should Pursue Toward China," Forbes, April 9, 2018.

of additional sales of U.S. goods, agriculture and services to China in exchange for backing away from insisting on the kinds of fundamental and systemic changes that are most needed.

Among the actions against imports the United States could take:

1. Anti-dumping and countervailing duty actions – price discrimination and subsidies

There are currently 162 anti-dumping (AD) or countervailing duty (CVD) orders in place for imports of various products from China (113 AD and 49 CVD). In addition to the 162 orders already in place, there are a dozen cases pending, including one case on aluminum sheet that was initiated by the Commerce Department, rather than the domestic industry.

Anti-dumping orders result in additional duties being applied to all future imports of the particular product involved in the investigation to compensate for the amount of "dumping", determined by comparing the "normal value" (usually the home market price) of the goods to the export price for the same goods. Countervailing duties, on the other hand, are designed to compensate for the portion of production costs that have been effectively paid by a government subsidy. Up until March of 2007, the U.S. (and a number of other countries) did not apply the CVD laws to China, on the theory that in China, a non-market economy, pervasive state control made it impossible to establish an effective benchmark against which the Department of Commerce could measure whether a particular government action created a countervailable subsidy. But since the reversal of that presumption, most complaints against China have involved allegations of and ultimately the application of both AD and CVD duties. Given the level of subsidies being provided to many Chinese producers, a number of the CVDs are set at very high rates—rates high enough to preclude most imports.

The benefit of AD and CVD cases is, assuming correct procedures, they are permitted under the WTO rules and more tailored to the express concerns of U.S. producers about imports of a particular product. The downside is that they do not address the more systemic concerns and often have the effect of simply pushing imports out of the U.S. market and into third-country markets, thereby creating additional problems for our trading partners.

2. Safeguards

Safeguards are also permitted under the rules of the WTO and allow the imposition of tariffs or quotas on imports if there is evidence that a surge in imports has caused serious injury to the U.S. domestic industry making the same product. The downside of using safeguards to address problems in China is that they are not targeted—safeguards are supposed to be applied to imports from the entire world, with no exceptions. So safeguards are likely to harm our allies more than China and, like AD and CVD duties, are only applicable to goods being imported into the U.S.

3. Section 337 – intellectual property rights

Under Section 337 of the Tariff Act of 1930, imports into the U.S. can be banned if those imports either violate U.S. intellectual property (IP) rights or involve "unfair methods of competition and unfair acts" that cause harm to a U.S. industry. The vast majority of all cases heard to date involve claims of patent infringement. Like AD and CVD cases, Section 337 cases normally involve a petition by the U.S. holder of patent (or other IP right) contending that imports are infringing those IP rights. The quasi-judicial independent agency, the U.S. International Trade Commission (USITC), hears the cases, determining both whether the IP right is valid and whether the imports infringe it and if so, the USITC recommends a remedy to the President, which can include cease and desist orders and a ban on future imports.

Additional Section 337 cases may be one viable option to combat Chinese IP theft, provided the IP is embedded in goods destined for the U.S. market. Likely targets are Chinese imports that infringe U.S. IP rights, particularly trademarks and higher-tech patented items. The benefit of such actions is that they are enforced by U.S. Customs and Border Patrol (Customs), so are designed to have the effect of stopping goods at the border. The downside for trade mark infringement may be the difficulty of enforcing orders for goods shipped in by mail or in small lots that are not routinely scrutinized by Customs. The downside for patents may be the time and expense of proving patent validity and patent infringement in the fast moving high-tech space.

4. Section 232 – National security

As we have seen from the recent decision by the Trump Administration to impose 25% tariffs on steel imports and 10% on aluminum (and to open an investigation into imports of cars, SUVS and parts), Section 232 of the Trade Expansion Act of 1962 gives the President the power to impose tariffs or quotas on imports if he concurs with a determination by the Commerce Department that imports of a given product are a threat to the national security of the United States. The idea behind Section 232 is to give the president broad power to ensure that the U.S. is not overly dependent on imports for critical defense needs, particularly when those imports are coming from countries we don't trust to supply us in times of war. U.S. law also includes a nod to the impact of foreign competition on the economic welfare of U.S. industries.

The problems with reliance on Section 232 are myriad. First, it too only applies to imported goods coming in to the U.S. market, so while it can be used to stop goods from China, it won't address the more systemic problems or those of concern to U.S. investors in China. Second, given that the definition of national security under 232 is broad while the definition under WTO law is limited to trade in nuclear materials, or arms and ammunition or actions taken during a time of war, there is a high likelihood that any U.S. actions taken under Section 232 will violate the WTO and give ground for our trading partners to retaliate against any U.S. tariffs or quotas. Unlike safeguards, however, actions under Section 232 could be targeted at just goods from China and not others, narrowing the scope for retaliation. Like AD and CVD actions, Section 232 duties will have the side-effect of diverting exports from the U.S. market to third-country markets.

5. Section 301 – violations or unreasonable or discriminatory actions

Section 301 of the Trade Act of 1974 allows USTR to determine that a foreign country is denying the United States its rights under a trade agreement or is carrying out practices that are unjustifiable, unreasonable or discriminatory and burden or restrict U.S. commerce. Once USTR makes such a determination, the President can take various retaliatory actions, including the imposition of duties or other import restrictions. The actions can be taken against whatever imports from whatever sources are subject to the USTR determination. As with the other actions noted above, the remedies under Section 301 are limited to actions against imports coming into the U.S. market. In addition, as a result of a successful challenge by the EU at the WTO, the U.S. agreed not to unilaterally invoke Section 301 unless the WTO dispute settlement system had determined that the United States' rights had indeed been violated.

As discussed above, in August of 2017, an investigation was initiated into the policies and practices of China relating to technology transfer, intellectual property and innovation. This is the first time since the establishment of the WTO that unilateral action under this provision has been taken. As a result of the USTR determination, President Trump has indicated: a) an intention to imposed tariffs on $50 billion of Chinese imports, with the definitive list of the products to be subjected to the tariffs announced on June 15, 2018; b) an intention to impose investment restrictions on investments from China, with the specifics of such restrictions to be announced soon; and c) the filing on March 26 of a new WTO case claiming

violations of the national treatment and certain patent provisions of the TRIPs Agreement. In this Section 301 investigation, the U.S. did not first complain about these particular Chinese policies at the WTO or receive WTO authorization to impose these measures. China has challenged the possible 301 tariffs as a violation of the United States' tariffs commitments, its MFN commitment and the rules of the dispute settlement system. The U.S. maintains that generally, the policies under investigation are not covered by WTO agreements and therefore the United States is not required to litigate these issues at the WTO.

In addition to these five actions against imports into the U.S. market, there are two broader actions that also could be taken:

1. International Emergency Economic Powers Act (IEEPA)

The International Emergency Economic Powers Act of 1977 authorizes the President to regulate commerce after declaring a national emergency in response to any foreign-sourced unusual and extraordinary threat to the United States.

Under IEEPA, the President can "regulate" all forms of international commerce, with "regulate" having been determined to include raising tariffs. IEEPA also authorizes the President to block transactions and freeze assets. In the event of an actual attack on the United States, the President can also confiscate property connected with a country, group, or person that aided in the attack.

2. Trading with the Enemy Act (TWEA)

The broadest of all presidential powers over international trade and investment is the Trading with Enemy Act of 1917. It delegates to the President broad powers to regulate all forms of international commerce and to freeze and seize foreign assets if such actions are taken "during the time of war." While there is no specific authorization to raise tariffs or impose quotas, the U.S. Court of Customs and Patent Appeals held that President Richard Nixon's 10% surcharge on all imports fell within the parameters of "regulating" commerce. It is not clear whether TWEA would give the President the authority to take action against China, given the absence of a war. However, other actions have been taken many decades after the end of a given war.

Finally, beyond the realm of actions against imports, there are a few specific actions affecting investments and exports controls:

1. Committee on Foreign Investment in the United States (CFIUS)

CFIUS is an interagency group established by executive order in 1975 that is responsible for advising the president on how foreign investment affects the U.S. It consists of the heads of 16 departments and agencies and is chaired by the Secretary of the Treasury. Among other things, it is responsible for ensuring that foreign direct investment does not negatively impact U.S. national security.

The latest use of CFIUS was to halt Broadcom Ltd.'s (a Singapore company's) $117 billion hostile bid for Qualcomm Inc., a U.S. producer of mobile telecommunications equipment. The concern was that Broadcom would stymie research and development at Qualcomm. CFIUS indicated that such a move could weaken Qualcomm – and thereby the U.S. – against foreign rivals racing to develop next-generation wireless technology known as 5G, such as China's Huawei Technologies Co.

The Congress has been considering legislation to expand the reach and scope of CFIUS, with proposals to potentially include joint ventures (which would mean review of outbound U.S. investment in China), but at their markups last week, both the Senate Banking Committee and the House Financial Services Committee removed the joint venture language. The CFIUS reforms would likely particularly

affect mergers and acquisitions along with early investment by Chinese entities in high-tech, telecommunications and big data industries.

2. Export controls

The final area for potential action affecting China is export controls. The U.S. Departments of State, Commerce, Homeland Security, Treasury, Defense, and Energy each play a critical role in export control and nonproliferation activities both within the United States and outside its borders. Limiting the ability of U.S. companies to export sensitive technology to China is one additional tool in the tool-box for addressing the concerns about too much sensitive technology being transferred to China.

G. Conclusion

The answer to the question embedded in the title of this hearing – U.S. tools to address Chinese Market Distortions – is that the single best tool that the United States has is its membership in the WTO and its ability to bring together like-minded countries to challenge China's commitments to and membership in the WTO. I urge this Commission to recommend that the United States pick up that tool and pull together a coalition-of-the-concerned to bring a bold and comprehensive challenge to China's economic system and its persistent violations of its WTO. Such a case should include the many specific claims of violation that I have outlined in my testimony, but should also include the "exceptional" claim of a non-violation nullification and impairment of the legitimate expectations that the United States and others had when China joined the WTO. It should have as its goal both specific rulings with which China will need to comply but also sparking negotiations to improve the rules of the WTO where they have failed.

While the United States has other domestic tools at its disposal, all of them suffer by comparison. All involve unilateral action that will not be big enough to bring about the kind of real systemic change that is needed. Virtually all of them would also violate the United States' WTO obligations and would invite retaliation. All would be focused on Chinese imports to the United States rather than on practices in China.

The concerns with China are global concerns. The tools used to address the concerns and the solution sought should be global as well.

DISCLAIMER: The U.S. delegation is providing the below draft framework solely to help facilitate candid and constructive exchanges between the two sides. The current text is not a proposed international agreement and remains subject to ongoing review. In the interest of time and out of respect for the seriousness of the issues that the two sides will discuss, this document is being provided in advance of the visit and while this review is ongoing.

The U.S. delegation looks forward to discussing this draft and related issues later this week in Beijing.

BALANCING THE TRADE RELATIONSHIP

between

THE UNITED STATES OF AMERICA AND THE PEOPLE'S REPUBLIC OF CHINA

The Government of the United States of America ("United States") and the Government of the People's Republic of China ("China") have strong overlapping interests as the world's two largest economies and the major drivers of global growth. At present, the United States-China trade relationship is significantly imbalanced. United States investment and the sale of services into China remain severely constrained. China's industrial policies now targeting U.S. technologies and intellectual property pose significant economic and security concerns to the United States.

There is an immediate need for the United States and China to reduce the U.S. trade deficit with China by ensuring that China's market is open to United States traders and investors on a fair and non-discriminatory basis. China therefore undertakes to (a) eliminate improper tariff and non-tariff barriers to United States exports to China, (b) address China's policies and practices related to technology transfer and intellectual property, (c) treat United States service providers in China on terms equal to those provided to Chinese service providers in the United States, and (d) record China's agreement not to target United States farmers and agricultural products. To address these issues and restore balance in the United States–China trade relationship, there is an immediate need for the United States and China to agree on a set of concrete and verifiable actions.

SECTION 1

TRADE DEFICIT REDUCTION

China commits to work with Chinese importers to engage in trade transactions to achieve targets to which the Parties agree. These transactions are specifically designed to reduce the United States-China trade deficit by $100 billion in the twelve (12) months beginning June 1, 2018, and an additional $100 billion in the twelve (12) months beginning June 1, 2019, such that the U.S. trade deficit with China will have decreased compared to 2018 by at least $200 billion by the end of 2020. China's purchase of U.S. goods will represent at least 75% of China's commitment to a $100 billion increase in purchases of U.S. exports for the twelve months beginning June 1, 2018, and at least 50% of China's commitment to an additional $100 billion increase in purchases of U.S. exports in the twelve (12) months beginning June 1, 2019.

SECTION 2

PROTECTION OF AMERICAN TECHNOLOGY AND INTELLECTUAL PROPERTY

In order to address China's policies, laws, regulations, practices and actions that are harming United States intellectual property rights, innovation and technology development, China commits as follows:

(a) China immediately will cease providing market-distorting subsidies and other types of government support that can contribute to the creation or maintenance of excess capacity in the industries targeted by the Made in China 2025 industrial plan;

(b) by January 1, 2019, China will eliminate specified policies and practices with respect to technology transfer;

(c) China will take immediate, verifiable steps to ensure the cessation of Chinese government-conducted, Chinese government-sponsored, and Chinese government-tolerated cyber intrusions into U.S. commercial networks and cyber-enabled theft targeting intellectual property, trade secrets and confidential business information held by U.S. companies;

(d) China will strengthen specified intellectual property rights protection and enforcement;

(e) by January 1, 2019, China will eliminate the provisions of the Regulations on the Administration of the Import and Export of Technologies and the Regulations on the Implementation of the Law on Chinese-Foreign Equity Joint Ventures identified in the U.S. request for WTO consultations in *China – Certain Measures Concerning the Protection of Intellectual Property Rights* (DS542); and

(f) by July 1, 2018, China will withdraw its request for WTO consultations in *United States – Tariff Measures on Certain Goods from China* (DS543) and will take no further action related to this matter under the WTO Understanding on Rules and Procedures Governing the Settlement of Disputes ("DSU").

In addition, China will not take any retaliatory action, whether in the form of tariffs on imports of U.S. products or in any other form, including unwarranted sanitary and phytosanitary ("SPS") measures, unwarranted technical barriers to trade ("TBT") measures, antidumpting and countervailing duties, and discriminatory inspection, quarantine and testing practices directed at imports of U.S. agricultural products, in response to actions taken or to be taken by the United States, including any new U.S. restrictions on investments or imports. China immediately will cease all retaliatory actions currently being pursued.

China agrees to immediately cease the targeting of American technology and intellectual property through cyber operations, economic espionage, counterfeiting, and piracy. China also agrees to abide by U.S. export control laws.

SECTION 3

RESTRICTIONS ON INVESTMENT IN SENSITIVE TECHNOLOGY

In light of China's prevailing investment restrictions and state-directed investment in sensitive U.S. technology sectors, including industrial plans such as Made in China 2025, China confirms that it will not oppose, challenge, or otherwise retaliate against the United States' imposition of restrictions on investments from China in sensitive U.S. technology sectors or sectors critical to U.S. national security.

SECTION 4

UNITED STATES INVESTMENT IN CHINA

China recognizes that China should not distort trade through investment restrictions, and that any investment restrictions or conditions imposed by China must be narrow and transparent. U.S. investors in China must be afforded fair, effective and non-discriminatory market access and treatment, including removal of the application of foreign investment restrictions and foreign ownership/shareholding requirements. In furtherance of these principles, China will issue an improved nationwide negative list for foreign investment by July 1, 2018. Within ninety (90) days of the date on which China issues this negative list, the United States will identify existing investment restrictions that deny U.S. investors fair, effective and non-discriminatory market access and treatment. Following receipt of the U.S. list of identified restrictions, China is to act expeditiously to remove all identified investment restrictions on a timetable to be decided by the United States and China.

SECTION 5

TARIFF AND NON-TARIFF BARRIERS

China's tariffs and non-tariff barriers are significantly higher than those of the United States for most tradable goods. China commits to address U.S. concerns relating to tariffs and non-tariff barriers as follows:

(a) by July 1, 2020, China will reduce its tariffs on all products in non-critical sectors to levels that are no higher than the levels of the United States' corresponding tariffs; and

(b) China will remove specified non-tariff barriers.

China also recognizes that the United States may impose import restrictions and tariffs on products in critical sectors, including sectors identified in the Made in China 2025 industrial plan.

SECTION 6

UNITED STATES SERVICES AND SERVICES SUPPLIERS

In order to achieve fair treatment with respect to U.S. services and services suppliers, China commits to improve access to its market in specified ways.

SECTION 7

UNITED STATES AGRICULTURAL PRODUCTS

In order to achieve fair treatment with respect to U.S. agricultural products, China commits to improve access to its market in specified ways.

SECTION 8

IMPLEMENTATION

China and the United States will meet quarterly to review progress in meeting agreed targets and reforms.

In the event that the United States considers that China fails to comply with any of China's commitments in this Framework, including deficit targets, China acknowledges the likelihood that the United States will impose additional tariffs or other import restrictions on Chinese products, or on the supply of services or investment, to such extent as the United States deems appropriate. China also understands that it will not oppose, challenge or take any form of action against the United States' imposition of additional tariffs or restrictions pursuant to this paragraph, including action pursuant to the DSU.

China will withdraw its WTO complaints regarding designations of China as a non-market economy by the United States and European Union (*United States – Measures Related to Price Comparison Methodologies* (DS515), *European Union – Measures Related to Price Comparison Methodologies* (DS516)) and will refrain from challenging the treatment of China as a non-market economy under the DSU in the future.

Additionally, within 15 days of receiving written notice of a prohibited product that may have been transshipped through one or more countries, with or without modification, China will provide full details of every such shipment to the suspected destination or destinations. If China fails to do so, or the information reveals that transshipping is occuring, the United States will impose tariffs equal to the amount of suspected transshipments.

China understands that if it fails to uphold any commitment under this Framework for Discussion, it is likely that the United States will impose tariffs on imports from China, and, where appropriate in the case of China's commitments under subsection (c) of Section 2 or the last paragraph in Section 2, U.S. Customs and Border Protection will confiscate counterfeit and pirated goods or levy tariffs to compensate the United States for its lost technologies and intellectual property. China commits to not take any retaliatory action in response to the imposition of tariffs or confiscations by the United States pursuant to this Section.

PANEL I QUESTION AND ANSWER

HEARING CO-CHAIR STIVERS: Thank you all.

Commissioner Wessel.

COMMISSIONER WESSEL: Thank you. Thank you to the co-chairs for putting together a great panel. Since all of you practice or participate in some way in the current debates, thank you for being here.

I'm a Pelosi appointee so let me make clear that I did not support the president's election, but I think we can all agree that his actions have actually gotten attention on these issues like no president before.

I'll paraphrase former President Johnson, who said when you have somebody by the ear, don't let go to try and get a better grip. I'll leave it to your imagination what he said.

[Laughter.]

COMMISSIONER WESSEL: You know I fear, clearly understand that a multilateral solution, an approach that resolves the rules and charts a better path forward would be the best option.

But we have tried it. You mentioned, Dr. Bown, on steel. We had the OECD Steel Committee for seven, eight years, I believe it was. We had the Global Forum on Steel that yielded nothing. When it came to the case on cyber security from the five PLA hackers, the USTR sought to engage multilateral partners in bringing a case on cyber espionage and were largely unable to get the kind of support they needed.

We could go through a number of other practices and issues where the international community has not responded. We've worked closely as a Commission with members of the business community, and, Ms. Dempsey, appreciate all that you and your organization have done. Many of your members have been fearful of coming forward for fear of retaliation--a very real concern as it relates to China.

So we're in a position now where the president has gotten everyone's attention and, in fact, I think there are some positive outcomes that have already started. Canada announced two or three weeks ago significant changes to their transshipment and circumvention provisions. The EU similarly has done that for fear of the squeeze effect, as you talked about, Dr. Bown, and the fact that they don't want Chinese exports that may have been destined for the U.S. or other markets to go to flood their market.

But we can't let go to have a better grip. A WTO case could take two to five years. It is prospective in relief. A non-violation nullification and impairment case is exceptionally difficult, as you well know, Ms. Hillman, from past history.

What do we do now to use existing tools to redirect attention and action to get China to change immediately rather than waiting to use these tools two to five years for adjudication? We've already waited 17 years since China's accession to the WTO to get action. It took 12 years, as I recall, for the USTR even to do a counter notification on subsidies.

You know, the president has gotten everyone's attention. Now is the time to capitalize on that, not to say wait, you know, he's gone too far. China is, you know, at the table with the administration--good or bad. How do we bring our partners in and how do we capitalize now?

Ms. Hillman, do you want to start?

MS. HILLMAN: Well, no, I appreciate very much the question, and I appreciate a lot of the premise of what you've said.

I guess my view is sort of all of the above, but my own view is I don't think we should be held back by the amount of time that it would take for a WTO case. I think it would be--we could--again, as I said, we have all of the evidence. We have a lot of the information. If we could persuade these key trading partners to join us and file now, I mean literally now, this kind of a big, bold case, it doesn't necessarily have to go through all of the litigation.

Part of my hope is that by doing this big, bold case that has both a non-violation claim and this dirty dozen, if you will, of other very specific claims, you are pushing for the use of both the consultation process that has to happen as part of the WTO case and potentially the other sort of good offices of the Director General and others to really get everybody into the room at the same time to say very directly what we have right now is not working, and that China needs to make some serious decisions about whether it really wants to remain a member of the WTO, I mean whether its economy is prepared to fit within the rules of the WTO. So it's more both to use that as an impetus to seek change clearly both in China and in the rules of the WTO.

So I think that is to me the best way to go. That does not suggest that you shouldn't also be doing a lot of these domestic tools at the same time. The problem I have is I don't think any single domestic tool has enough power behind it even with the strength and might of the United States to push China as far as it needs to be pushed alone.

COMMISSIONER WESSEL: So would you withhold on further use of 232 and 301 tariffs doing a case or would you continue the present course until we have a case and a proper adjudication?

MS. HILLMAN: Well, again, my recommendation would be that we make it very clear to Europe, to all of our trading partners, that we are prepared to lift immediately the tariffs on steel and aluminum as part of their joining this big, bold case.

I mean putting steel tariffs against our allies is the absolute worst thing that we can do if we want to see collective action against China, and the notion that we sequenced it this way, in which we first shoot all of our friends and allies with these tariffs and then turn around and say please join us in a coalition with China, is sort of ridiculous.

So I think immediately we ought to be saying all we're asking for is that you join us in this large effort against China in exchange for which we will drop tomorrow the steel and the aluminum tariffs.

COMMISSIONER WESSEL: Ms. Drake. But Ms. Hillman, I think we've given them seven years and they haven't taken it, but understand we have their attention.

Ms. Drake.

MS. DRAKE: I would say we should pursue both unilateral action and multilateral action. I agree with the point that it would take years to mount a WTO case, and from the perspective of working people, we have doubts that that would work anyway. The rules at the WTO seem to have a particular bent, and they have not been used really to protect working people or good jobs and good wages.

Then you have the issue of firms that have actually been reluctant to go along with cases against China. Would they participate and help gather the data necessary?

You have other opportunities where there could have and should have been multilateral action at the WTO. Brazil was looking for a case on currency that the U.S. and others refused to join. So there are a lot of doubts, but if it worked, it would be fantastic.

In the meantime, unilateral actions are quicker. You know they also risk retaliation, but I think that the idea is correct, that the U.S. should say here's where we're going, here's what we want to do, to address state-owned enterprises, overcapacity, whichever thing that we're

choosing, and instead of doing, as happened with the 232s, bring along the allies with us. Don't you also want to address state-owned enterprises, forced technology transfer, intellectual property theft, overcapacity, quite frankly, you know, antitrust issues and cornering the market, all these kinds of things that the WTO doesn't address accurately?

Bring them along so they could start by doing their own unilateral action in a concerted cooperative way, and then we could talk about what we could do together at the WTO if the first step is effective.

COMMISSIONER WESSEL: Thank you.

I leave it to the chairs as to whether--okay. Please, Ms. Dempsey.

MS. DEMPSEY: Thank you and thank you, commissioner, because I very much agree with you.

This administration has brought everybody's attention to these very deep severe issues. You've heard it from all the panelists today--I'm sure in many of your other hearings as well. How do we get to the right solution and how do we get there quickly, but I would also argue comprehensively and strategically?

Yes, WTO cases, as Ms. Hillman outlined, you know, need to be exploring all of those. What is China committed to? What can we hold them fully accountable to? The trade remedy actions, the IP, the Section 337 that I discussed, all of that really important, but at the end of the day, I think what we really need, as I've outlined in the testimony, we've got to get China to a clearer, deeper set of rules that they have agreed to with binding, enforceable, neutral dispute settlements there.

And this doesn't have to--you know, I've heard some people say, well, that's going to take too long. Well, maybe we should have started this five, seven years ago. We've got them interested right now. Our administration is in negotiations with the Chinese government. They're very focused on these issues. Right? They wrote a 400-page report on all the intellectual property and tech transfer issues.

Some of the tools we've seen in other trade agreements are certainly important ones to bring to bear--obviously, on tariffs or technical barriers to trade. Dr. Bown talked about the TPP's state-owned enterprise provisions. I think those need to be improved if they were to apply to China. They only apply at the central level, as negotiated in the TPP. Those are really important things.

We've got provisions in our investment chapters as well on technology transfer. If part of the problem here is joint venture requirements, that's exactly what our investment chapters deal with in the non-discrimination national treatment clauses, and they have this very arcane sounding performance requirement obligation that prohibits technology transfer, prohibits the requirement to invest, to transfer technology, to use local labor, to, you know, give over intellectual property, and it's an actually little, I think, talked about provision. It wouldn't just apply bilaterally between the United States and China. It would prohibit China from doing that with respect to anyone; right?

And it could be brought through either a state-to-state or an investor state provision, which is absolutely critical if you want that serious type of enforcement.

But we need to think broader as well. Ambassador Hillman talked about the public bodies issue in the WTO. A trade agreement should be bringing subsidies into this as well. Some of the issues we've heard on intellectual property are that China has improved its intellectual property laws, but when companies are bringing cases, they get removed to a jurisdiction that's quite favorable to their domestic competitor and the case is lost.

Maybe we need to think about domestic or more neutral dispute settlement when it comes to certain of these types of claims as well. So I think there's a lot of work there that can be done. Some of it can be done quickly. It doesn't have to have a single undertaking, using the WTO word. It doesn't have to have everything done at the same time.

The administration with the attention, with the focus, clearly with the desire of the Chinese government to do something, you know, let's get at those systemic underlying issues and have them fully enforceable in a clearer, deeper way.

Thank you.

DR. BOWN: I'd like to just make maybe two economic points. First, building off of Ms. Hillman's comments, which she mentioned, I think, a lot of the politics and the legal elements that would be costly to going at this unilaterally, but I want to really focus on the economics here in two important dimensions.

So both when the United States imposes tariffs on China and when China imposes tariffs on the United States, that creates discriminatory preferential market access conditions for everybody else in the world that makes it more difficult for them to actually want to see those things removed. So we're actually hurting our ability to get allies on our side once we go at it alone.

Once China starts retaliating against the United States preventing U.S. exporters from being able to access their market, whether it's manufactured goods or agriculture, that creates opportunities for the Europeans, for the Australians, Canadians, Japanese; right? They don't necessarily want to see these frictions go away. That's why it's important to not act unilaterally first, to get with our coalition economic allies and do this together because the economic conditions will change.

The second main economic point is we have to remember when we're thinking about U.S. manufacturing, and service providers especially, that when we shut ourselves off from either China because we're trying to just think about domestic tools or we expand this comprehensively, as we've done in the 201 cases, in the 232 cases, to our economic allies, we're hurting the competitiveness of American-based manufacturing to be able to compete all over the world outside of the market.

95 percent of the world's consumers are outside of the U.S. market. If we want U.S.-based production to be able to be competitive outside of the U.S. market, we have to give them access to low-priced inputs. And the problem with the path of the current administration with all of these tariffs, it's really hurting the competitiveness of American companies to be able to compete with their European, Japanese, Chinese even, competitors out there in the rest of the world as well.

HEARING CO-CHAIR STIVERS: Thank you.

Commissioner Hubbard.

HEARING CO-CHAIR HUBBARD: Yeah, I'm not sure whose ear the president has grabbed, and that's why I wanted to build on something you just said, Dr. Bown, and all of you highlighted in answering my colleague's question. I want to return to the multilateral/unilateral discussion with three, three-part question.

First, in a multilateral approach, and I think generally whether it's an economist speaking--I happen to be an economist--or a business person, we usually think in negotiation of keeping our friends together and dividing our enemies. What would be the steps toward a practical multilateral resolution? Question one.

Question two. Are there any of the challenges we face that actually do lend themselves to a unilateral solution?

And the third, building on something Ambassador Hillman had said, is, is there a circumstance under which a threat of China not being in the WTO is appropriate? For any member of the panel.

MS. HILLMAN: Well, thank you very much for the question.

Maybe let me start with the issue of any--with the last, which is any circumstance in which China is not a member? I mean clearly that is sort of underlying my thought of trying to bring this sort of a big, bold case is, is to say to China, to me what you're saying is here's what we understand the rules to be. If you fundamentally cannot, if your economy fundamentally doesn't fit within those parameters.

And this may come to a head over this issue of whether China is a market economy or non-market economy. So at some level that debate is coming.

Again, it's China's choice, and I would argue there is no necessarily right or wrong. In other words, if China decides we actually wish to remain this so-called socialist market economy, that's their choice. And it would be the question for the WTO to say whether or not that means you can fit in the WTO's framework or not, and if the answer is not, I think there needs to be a recognition that is both China's choice that it doesn't wish to be in these rules, and there ought to be then either a graceful way for China to decide that it does not want to abide by these rules or some way in which the WTO, in essence, says if you cannot do the following, then no, you are no longer, if you will, a member in good standing of the WTO.

We're not there yet, and I think it would take, again, this sort of a very big comprehensive action by the rest of the world, and I do think there is some urgency about it. As for example, the Belt and Road Initiative keeps going, you start to see even individual members of the European Union start to say, umm, maybe we're not so sure whether we want to take this kind of a big, bold action so I do think there is some, some real urgency to it.

And then let me just respond really quickly to your first question, which is sort of what's the process; I mean how does this happen? Part of the reason why I think trying to put together a big, bold case is it would start with everybody getting together and agreeing, you know, in essence, is what I've laid out the kind of a case that everybody else could agree upon? Do we all agree that these are the right claims, these are the right measures, who's got what evidence where?

Just the act of putting that coalition together I think would really help everybody crystallize their thinking about what are the most important things to achieve from this case. So you would start by that sort of interworking process to come up with what is the strategy for this case?

The second thing obviously is then to file it and begin the consultation process, and that consultation process must take at least 60 days but could go for a long time if there is a perception that there's a real willingness by the Chinese to engage, and, yes, we have the Chinese attention, and the concern that I think a lot of us have is that we ought not to lose it, let go if the ear, if you will, by getting a small bilateral trade deficit deal that affects only the United States and has the double whammy of alienating all of our trading partners because if we take a deal where the agreement is China is going to buy more U.S. soybeans, it just means they're buying less Brazilian soybeans, and so now the Brazilians are not any longer part of that coalition.

So that's the other thing that would really happen if you put that coalition together. And then I do think you push very hard in all of the fora in the WTO so it's not just the dispute

settlement mechanism. You use every committee of the WTO to start really examining. There's a committee on subsidies. There's a committee on trade in goods. There's a committee on intellectual property. There's committees across the WTO that are still functioning and doing good work, and you put them to work as part of this problem as well.

MS. DRAKE: So I would just add I think the third part of your question is the most important part in terms of is there a circumstance in which China is not a member?

I think there are U.S.-based firms, European-based firms, Japanese-based firms that would oppose that strongly, and that's sort of the problem, and it gets back to that first question: what are the steps to a multilateral solution?

I think the governments that represent the societies that are being hurt by this sort of predatory trade have to decide who they represent. Do they represent the companies that are using their home base as a flag of convenience to really profit off of lots of this predatory-type behavior, whether it's the abuse of labor rights or the currency misalignment and mis--you know--manipulation--excuse me--and these other things, or do they represent the domestic manufacturers, the domestic workers, the other folks, because where you go with these things really depends on whose interests you're representing.

And so that's been sort of the dilemma. So I think the first step would be for the multilateral countries that are interested to decide we're going to do this. It quite frankly is not going to please all of the companies that call us home, and they will complain about potentially more expensive inputs or, you know, tariffs and things, but we're going to go ahead and do it because in the long-run the pain of a tariff is designed to be short-term to achieve the goal that you want and then to be lifted.

And I think in terms of the unilateral solutions that can work, that's really tough, but I do think this administration, as Commissioner Wessel said, has focused the mind by saying we're going to do a 232, and we're going to use that as a starting point, and I think that's the place that you start, and then you, instead of, again, aiming it at your allies, work with them to say what can we each do unilaterally that won't have this sort of squeezing the balloon effect that Dr. Bown talked about.

Thank you.

MS. DEMPSEY: Thank you.

It's a really important question. For manufacturers, our top interest in the international order is to see a rules-based global trading system that every country adheres to, and so I've been very supportive of the creation of the GATT and the WTO and bringing new members on on strong terms.

We have a lot of WTO members say in India or Brazil that came into the WTO at its origination back in the GATT that have very different terms on tariffs and things like that that we're still dealing with.

China came on on stronger terms, and, you know, as Ambassador Hillman I think talked about, has agreed to a number of things that they've not been held accountable for. But it's also not clear to us that all the types of activities we're seeing are fully binding in the WTO rules.

And so we've got to pursue both approaches, as well as the unilateral ones that are under our WTO-approved remedies that we in the United States here approve.

The concern, the only concern I have on the multilateral side is we tried to get better, stronger rules in the Doha Round although those, many of the issues we were talking about in the Doha Round were not the ones that would fundamentally get at some of the issues that we're concerned about with China.

We weren't talking about state-owned enterprises back then. We weren't talking about some of these technology transfer type issues as well as the other localization and broader transparency, right, which is fundamental to our manufacturers' ability to compete in China or understand what they're doing to help their local industries compete unfairly around the world.

And that's why I think we've come to the view that pursuing a bilateral trade agreement obviously is something this president is particularly interested in, right, is very interested in pursuing bilateral negotiations where the United States believes it has a stronger hand at the table, not weighed down by the others.

That doesn't mean we can't be pursuing several of these things simultaneously--WTO cases, perhaps the consideration of a plurilateral on state-owned enterprises, if others are there. But we should not be held back if our trading partners don't want to pursue this; right?

We need to--China has negotiated a number of bilateral trade agreements with New Zealand and a few others. They're the traditional sort of model. They haven't gotten at some of these core issues. It needs to be a lot more innovative than what we've seen before.

DR. BOWN: Two quick points maybe. And so I agree, again, with Ambassador Hillman that a major, major benefit of pursuing a big and bold WTO dispute is that it shines the spotlight on where we want it shined, which is China and what China is doing. It's an incredible transparency exercise. It focuses the world's attention on the heart of the underlying issues. It opens up a big conversation, and that's exactly the conversation that we want to be having and that we want to have negotiators be focused on. So I think that's incredibly important and definitely the first step.

If the dispute fails, it also reveals useful information about what's wrong with the underlying system and why we need new rules, and so in terms of the sequencing question, I think we should start negotiations right away on state-owned enterprises, a plurilateral deal. Eventually you bring China in and maybe you get China to come to the table because you win this big, bold dispute against China. You can then hold their feet to the fire collectively by the world, saying you get authorized retaliation against China.

And the way you get out of that, China, is you negotiate new disciplines on state-owned enterprises that are enforceable that you agree to and that the rest of the WTO system is going to have fit into them.

So I think that there's actually a perfect alignment of the incentives and the sequencing of these things, and we shouldn't be put off by the fact that these things do take time because we have to do it, we have no choice. I can't think of a unilateral solution that would solve any of these problems. And I would argue that part of our problem is we have tried to rely on unilateral solutions, trade remedies and such, and all they have done is kick the can down the road.

They shift the exports into third markets, and eventually the exports still come into the United States market, not directly from China but from other countries. It just puts the problem off down the line. And we need to begin to deal with it as quickly as possible.

HEARING CO-CHAIR STIVERS: Senator Talent.

COMMISSIONER TALENT: Thank you all. I have a question. I'll aim it at Ms. Dempsey--two questions--and Professor Hillman, but, please, anyone on the panel comment on either of the questions.

So, Ms. Dempsey, the thrust of your testimony is that we ought to, we ought to negotiate a new system with the Chinese to take into account because--and deal with these consistent abuses. So my question is why should the Chinese agree to a new system if they're so successfully and comprehensively exploiting the old?

MS. DEMPSEY: I think right now and the attention and pressure that this administration and this president has brought to this relationship has been very clear for the Chinese government that the status quo is not one that is going to continue, and that their ability to continue to export and participate in the U.S. market and even the global market is under threat, and there's been a real willingness--right--of the Chinese to get to the negotiating table with the U.S. government.

The question is what is going to be negotiated there, and that's where we come back again and again. We've got to get at those systematic underlying issues. You know, China has benefited greatly from being part of the global system, but it also, as an outbound exporter, cares deeply some of the improvements I think that would be good for China as well.

But if this, if nothing is done to solve these systemic issues, right, the challenges, the tariffs, the unilateralism that we see in the United States, we're seeing it, you know, in other countries as well, that pressure continues to build, and their relationship with the United States and frankly with the globe suffers. So--

COMMISSIONER TALENT: So what I hear you telling me that it's exactly the unilateral actions that you're criticizing that are creating the incentive for the Chinese to agree to the systematic change that you want?

MS. DEMPSEY: It is the focus of this administration and their willingness to consider all tools on the table that certainly has brought that attention to the table.

COMMISSIONER TALENT: See, I agree with that, and that's--I mean I've been on this Commission I think six years now, and there's been--they've been exploiting the international system--and I didn't know that before I came here--I voted to put them in the WTO. And nobody has been able to do anything, and now we do have some movement.

Anybody else want to comment on it, they can, but let me give Professor Hillman my question. So I like your big, bold WTO action approach. I really like it. I think it's something we ought to consider as a recommendation.

You said, though, we have to line up a number of other countries, and you said the worst thing to do in order to get them is to put tariffs on them. But then you said we could go to them and say, look, we'll drop the tariffs if you'll join our big, bold WTO action. So that seemed a little contradictory to me.

MS. HILLMAN: Well, I'll just say I obviously am not a fan of these 232 tariffs. So I wish they had not been imposed in the first place because I do think they have had the effect of driving away our allies in this case, and there's no question that what is Europe and Canada and Mexico now focused on--entirely focused on--is the United States' tariffs.

And sort of pushed out of the conversation is a lot of the very good work that had been started. As you know, there was this trilateral commission started during the course of the MC11, the Ministerial Conference in Buenos Aires between the United States, Japan and Europe, to get together to talk about what to do about China.

And so in Argentina, a very good trilateral statement came out. There have been two subsequent meetings of that trilateral commission that were really trying to be the beginning of this effort, and then along comes to the 232 tariffs, and it crowds out all of that good work by these complaints.

So I guess my only view is I wish we hadn't done it in the first place, and if we are going to try to resurrect anything to come out of it, I would view--the view is again for very little other than a commitment by everybody to get together and work on this case to drop them. I don't think these tariffs are helping us--at all--in dealing with China.

And my concern is they are sort of underscoring this notion that the United States will always sell its coalition partners down the river as soon as there's a good bilateral deal for the United States to be had. We're prepared to sort of leave aside these core issues and take issues that are only helping the United States in the short term without getting at the long term.

COMMISSIONER TALENT: Well, doesn't that depend on context? Because if the broader message to them is, look, if we're all going to work together to make this international system work, we're in, and I think our history has shown that under a number of different administrations; okay.

But if we're not going to work together to make the international system work, then we're going to do what you guys have been doing, which is we're going to look out for our own interests. Now maybe--Dr. Bown, I thought you made a great point-- maybe these things are hurting us more than they're helping us by undermining them. That's a tactical question.

But it seems to me that the point of all of this is to get everybody thinking outside the box that we've been trapped in for the last 15 years, and I just don't know how we could make progress until we do that.

MS. HILLMAN: For what it's worth, I mean I think your underlying point is correct. I think literally all of these trading partners completely share the United States' substantive concerns and completely disagree with the United States on tactics.

And so the question is whether you can marry together the notion that everybody agrees with us on substance? I mean to a country everyone agrees with these problems with China, and so the question is whether we can be smarter tactically about how to get there. And I think this idea of putting the 232 tariffs on was tactically about the worst thing that we could have done.

COMMISSIONER TALENT: Thank you.

By the way, you quoted our colleague--

MS. HILLMAN: I did.

COMMISSIONER TALENT: --Ambassador Shea in your testimony.

MS. HILLMAN: And again I do think--

COMMISSIONER TALENT: I'm sure that got all of our attention.

MS. HILLMAN: I do think his, his statement at the General Council was in literally one sentence a complete summary of sort of all of the difficulties with China and very succinctly said.

COMMISSIONER TALENT: Okay. Dr. Bown, did you want to say something?

DR. BOWN: I just wanted to address one small point related to your first question, which is why it's not, in my view, worth it for the United States to go at it alone in negotiating a free trade agreement with China, and the argument is it's a wasted opportunity. And it's basically because we would be doing all of the work. China would be providing benefits to the rest of the world that we should be getting the rest of the world on board for; right?

So the good example of this is what China agreed to do a couple of weeks ago by lowering their automobile tariffs. That doesn't just benefit U.S.-based producers; right? This benefits the Japanese and the Europeans, but we hadn't done this collectively with the Japanese and Europeans where we could have gotten something out of Japan and Europe for the fact that we did this.

The same thing is going to happen if we get reform on state-owned enterprises. China is not going to be able to reform SOEs in a way that just benefits the United States. It's going to provide benefits for the world. So let's bring the world with us so that we can extract things from the world as well for doing this hard work.

Get the Europeans to lower that automobile tariff that President Trump is interested in from ten percent to whatever the lower level is. To my mind, if we do it by ourselves, it's going to be a wasted opportunity.

COMMISSIONER TALENT: Thank you.

HEARING CO-CHAIR STIVERS: Commissioner Tobin.

COMMISSIONER TOBIN: Thank you all. Thank you in particular for pushing for big, bold action, and I think we will make sure that Ambassador Shea gets some of your written testimony, and he'll be pleased.

I want to follow up. To some extent you've begun to address my questions. I am also fully supportive of this big, bold action, but I want to start with Dr. Bown's idea of the two-pronged approach in which you suggested filing an SOE suit, a SOE-oriented suit, and to create new and enforceable rules and to bring China into that.

You started to address that just now. But how would you really step by step get China involved? That's my question for you.

And then I'm going to come back to Professor Hillman. You in response to Commissioner Hubbard's remarks started to explain how it would work, and I want to go a little bit further on that. Who would lead that? What various parties beyond our trade leaders would lead that? Is there a component that's content oriented and another component that's diplomatic oriented? How long might that take or how quickly might it be done? And how--you mentioned the super committees as well.

So my question would be for Dr. Bown, if we were to be pushing for the type of multilateral approach you suggest, how would you get that second piece of your approach underway?

And then, Professor Hillman, I'd like to hear a little bit more detail. I also have for Ms. Dempsey and Drake questions, but maybe we'll get to those in a second round.

Thank you.

Dr. Bown.

DR. BOWN: So very quickly on the tactics, I think I envision this much the same way that Ambassador Hillman did for her big, bold dispute that would be on, you know, more intellectual property, forced tech transfer, investment, have a separate complementary big, bold dispute on state-owned enterprises.

If we don't think the disciplines are there sufficiently within the agreement on subsidies and countervailing measures, again, there is this--as she indicated--this non-violation nullification and impairment clause of the Article XXIII, which basically says if China is doing things that are not allowing for normally expected benefits to materialize within the system, you can have a case there.

And so I think you bring that first. You bring our allies on board. You do all of the work to kind of lay the groundwork. Hopefully you win that case, but again it's going to take a couple of years to get down the line.

In the meantime, you've started negotiations, and if China is not willing to come to the table on this plurilateral set of negotiations for state-owned enterprises, then you just begin it with the United States, Europe, like-minded countries, Japan, Canada, Australia.

These countries have written down trade agreement texts and signed them that have state-owned enterprise chapters in them. I agree they may not be enough. We may need to do more if we're thinking about designing this with respect to China, but you get those countries there first.

Eventually you're going to want China to be part of this thing because you're going to want it to be enforceable on China, but if you win these big, bold cases against China at the WTO, there you have leverage with respect to China.

You have WTO authorizable retaliation from the system, not just the United States, but all these other partners as well, to hold China's feet to the fire and to say your only way out of this politically is to negotiate a solution on rules that you're willing to adhere to and willing to live by and that will be enforceable under these new sets of agreements.

And so just strategically I think that's how the best way it is that I would see it play out.

COMMISSIONER TOBIN: Thank you.

MS. HILLMAN: So just in terms of how a process would work to try to put together a coalition case, I mean as I said these are not done very often because having lived it as the general counsel at USTR, when we brought a collective case on bananas, I will tell you right off the bat it's difficult because an argument that the United States really wants to make or a claim that the United States really wants to make, one of the other coalition partners will say absolutely not for whatever political reasons at home or whatever.

But the idea is, first, you start by putting together the coalition that's interested, and you start framing out what exactly would be in the case and see whether or not you have agreement that there will be a non-violation claim, and this will be what it is, and there will be the following other 12 very specific claims where you see if you can get general agreement among this group.

Who is the group? Again, I would say it's going to start with the European Union, Canada, Japan, are already there in this trilateral commission, and then I do think you've got a lot of others who are equally interested. So you would pull in probably the Brazilians, potentially the Argen--I mean there's a good enough coalition that you could put together that would represent the major sort of trading countries.

You then frame out what this case is, and then start, again, collectively pooling all of the evidence to support each of these claims because you would want to go in with a case well prepared, but again the evidence is there. You have been collecting it. Others have been collecting it.

So the evidence I think is there in terms of what exactly is going on in China, and it's a matter of measuring. Again, all WTO cases have to start with what's the Chinese measure, and then what's the claim under WTO law that you allege that they're violating? So you work out this mapping, if you will, of here's the Chinese measures that we're complaining about, here's the WTO provisions that they violate.

And the good news is that there's a lot of them for China because what is legally binding on China is (a) all of the terms of the actual WTO Agreements, plus everything in their Protocol of Accession, plus hundreds of paragraphs of their Working Party report, which are specifically identified, and those become legally operative texts equally binding as the actual text of the WTO Agreement.

So there are a lot of actual provisions that you can marry up these measures with these claims to. So now you have your case. You file it. The first thing that happens then is it is considered a request for consultations. At that point, China has to look at this and say look how big it is, look how much it covers of their economy, and look how many countries are behind it.

COMMISSIONER TOBIN: Right.

MS. HILLMAN: Then these consultations become very serious, and they likely start to bring in potentially even, as they call it, the good offices of the Director General of the WTO.

Then you start to sort of put the larger panoply of the WTO system sort of at work thinking about it, and clearly, if you wanted it to, the Director General could help these various committees start taking on various pieces of it to figure out how you could get to a solution that at the end of the day you hope is an agreed upon solution where everybody agrees these rules in the WTO are going to change and these practices in China are going to change.

COMMISSIONER TOBIN: And, in effect, the "emperor has no clothes" so as we get them by the ear, you know, part of this is to showcase how bad it is, isn't it, collectively?

MS. HILLMAN: Well, clearly one of the--as I think Dr. Bown said, is one of the other advantages of doing this case is it exposes the holes in the rules.

COMMISSIONER TOBIN: Yep.

MS. HILLMAN: It will make it very clear to people where do the WTO rules need to change. There's clearly holes in the rules that have to get changed, and this case would help spotlight that.

COMMISSIONER TOBIN: Thank you.

HEARING CO-CHAIR STIVERS: Thank you.

Commissioner Cleveland.

CHAIRMAN CLEVELAND: I have a very simple question. In reading Wu's article on "China, Inc.," he says at the heart of the matter is the following question: what proves that a commercial entity is part of the state?

We keep talking about getting allies together and building this coalition. I'm not sure that that fundamental question, that there's clarity or concurrence on. So could you answer Mr. Wu's question of what proves a commercial entity is part of the state?

MS. HILLMAN: Well, as I mentioned, I mean this is one of the hardest things about dealing with China and one of the strong weaknesses of the subsidies agreement because the reason why you care whether or not an entity is a private entity or whether or not it is the state is because it is only technically the state that can provide a subsidy and that therefore can be subject to subsidy disciplines.

And so a lot of the rules of the WTO clearly presume that you can draw that line between the government and the private sector, and what Mark Wu's article and what lots of others are indicating is that the reason why China is so difficult is because for most entities in China, you can't draw that line or it's very, very difficult.

And why can you not draw it? It's because, yes, if you go to China, if you see it, you see all this vibrancy and all this everything that will look very much like a market economy. And China has been able to show in many ways and in many places that their economy operates under very market principles, and yet as that piece points out, underneath it all and above it all and in the middle of it all is the state, and it's the state in the fact that you have this SASAC, this holding company that holds over 50 percent of the manufacturing entities in China and can put people on those boards and can move resources from one entity to another and can direct land and water and power and everything else going among all those SASAC-controlled entities.

And then you have the Central Huijin Investment Ltd., which it does the same thing over the financial sector. So the four largest banks in China are all under this one Central Huijin Investment Ltd. I mean that's like having literally 40 percent of all of the financial assets in the United States held by one holding company that can control it.

All right. But yet you look at that individual bank, and you say it's a market operator, it's making private decisions; it's not. And many of the corporations, individual corporations,

including a lot of the joint venture investments, the Communist Party says this is the person you will have on your board.

All right. So the company itself still looks like a private entity, but sitting on its board is someone that the Communist Party has put there.

So, yes, I mean this is the fundamental question, and so, again, this is where you have to go to much more expanded disciplines on SOEs and a much broader definition of who is granting a subsidy, that it cannot be, we cannot accept this definition that it has to be a government or somebody that lives with a governmental function.

The out in the WTO right now is to say that if it's a private entity that has been directed or entrusted by the government to do the same thing, to grant the subsidy, you can still bring disciplines on them. That's where the evidence is almost impossible to get.

And that's the other place where there may be a way to change the disciplines to make it easier to show directment and entrustment so that when the government puts a Communist Party member on the board, now that board becomes directed and entrusted in a way that you can now apply subsidies disciplines to that entity that you would not have been able to before.

MS. DEMPSEY: This was a big topic in previous trade agreements. We first saw it in the U.S.-Singapore Free Trade Agreement where they dealt with some of this, and then in the TPP, there was an outcome, but, you know, some of the issues that Ambassador Hillman was talking about were not fully, you know, China wasn't at the table although it was clearly being thought of as a template going forward for China.

The definition of what is a state-owned enterprise in that SOE chapter is, is still quite limited and really needs to be looked at again if that's the type of model that we're looking at for China to get at those state-influenced, not just state-owned, enterprises, and in ways that can't be, easily create a loophole that the Chinese government could easily walk through.

And so that's one of the issues there, as well as making sure that the application of these disciplines are not just at the central level because a lot of this activity, right, is at the provincial level, and we've got to get at that as well.

DR. BOWN: I appreciate the question. It's fantastic and if anybody hasn't read it, I highly recommend reading Professor Wu's work on this because it's really fantastic.

I want to basically address I think two, two points that your question raises. The first I think is--and while I agree with you this is a really grey and murky area, and it's very, very difficult to think that we'll ever be able to draw a bright red line as to, you know, where control starts and stops--I think by highlighting it, what it does is it actually shows China itself this is what the underlying area of friction is, and if you want to constantly be living in this world of suspicion and potential conflict, then keep going with the status quo, but this is where our current problems are with your corporate governance system, and if you want to help dispel some of that, these are the kind of things that you could do.

And I think just explaining that more clearly to the Chinese system may have some benefits.

But the second, I think it also raises the question for us as the outside is it's not clear that we should always care. In small instances, it may be okay; right. So we have to prioritize for ourselves what are the economic consequences in which we should actually care about that and begin to think through that.

So, you know--and I lay some of this out in my written testimony as I would begin to think about this an economist--we care when this leads to, you know, perhaps concentration of the industry, which gives Chinese firms market power, which then can lead to more predatory

actions. If it's going to be small firms that aren't engaged, then we shouldn't pay too much attention to it. Looking at when it has the potential to impose injury or adverse effects, in WTO-speak language, I think.

So in any case, but it does raise the question, shine the light on China and put it on them. Show them why we care. But then also have us think for ourselves, if we can't always draw the red line, when economically should we care and pay more attention to it than others?

HEARING CO-CHAIR STIVERS: Commissioner Wortzel.

COMMISSIONER WORTZEL: Professor Hillman, in your oral testimony, you made a point that I frankly didn't quite catch. But in your written testimony I didn't find it. And if I'm--I made a note at the time, and you said something about our own definitions of government influence, and I don't know if it was in law or regulation, prevent us from acting against state-owned enterprises.

That's what I heard. So I wonder if you could explain what element of U.S. law or regulation or policy needs to be revised so that we can address state-owned enterprises?

MS. HILLMAN: Commissioner, if I said that, then I misspoke. What I was referring to was WTO law. So under U.S. law, under our countervailing duty laws, in the past, it had always been our definition of how did we decide. Again, the question is not really about state ownership under U.S. law. The question is whether or not it is a, the provision of a subsidy has been granted, and the issue for subsidies is always who's granting them because it's not considered a subsidy unless it's been granted by the government.

I mean that's really the whole idea behind the discipline of a subsidy. So under our countervailing duty laws, we've typically looked at the issue of control or ownership. So our countervailing duty laws are very focused on whether or not you can show that whatever is the entity that is allegedly providing the subsidy, even if the subsidy is in the form of input materials, is the entity wholly owned or at least 51 percent owned or controlled by the government?

And if that's the case, under our countervailing duty laws, you could count that as a government subsidy.

The WTO rules are different. Under the WTO rules, the term is whether or not it is a government or public body, and again there was a very controversial decision by the Appellate Body that defined further that term "public body" to mean whether or not the entity exercises a governmental function.

So the Appellate Body walked away from this notion of control or meaningful control or ownership to say that in order for a public body, meaning a state-owned enterprise, to be considered within the definition, it had to exercise a governmental function.

And again that has raised more questions than it's answered in terms of what exactly does that mean? Again it's not something that the Appellate Body has really addressed, but that's where the law stands.

COMMISSIONER WORTZEL: Was that part of the WTO regulation made before the Party exercised this overwhelming influence over SOEs?

MS. HILLMAN: No, it was made in the context of reviewing specific countervailing duty actions that the United States had taken, and in those countervailing duty actions, the United States had treated these entities, and they were providing steel and rubber and other--so these were manufacturing companies in China that were providing input materials, again, presumably at below cost or at a low cost or certainly at a subsidized level, to the entities that were then shipping goods to the United States.

And so the question is whether that Chinese steel company, that Chinese rubber company, should be considered a public body for purposes of the countervailing duty law?

And the United States had treated them as such because they were 100 percent owned by the government of China. And the United States said that's entirely permissible, and the Appellate Body said no, it is not permissible. You must show that that steel or rubber company exercises a governmental function, which it does not. So therefore now all of a sudden this huge swath of state-owned enterprises, even if they are 100 percent Chinese owned, 100 percent controlled by the government, fall out of the definition of a subsidy under this interpretation by the Appellate Body.

COMMISSIONER WORTZEL: Thank you.

HEARING CO-CHAIR STIVERS: Commissioner Bartholomew.

VICE CHAIRMAN BARTHOLOMEW: Thank you very much. Thank you to all of our witnesses.

This is very interesting testimony. I keep thinking, I wanted to say this is my problem, but I think I've reached the stage where these are my problems.

You guys have presented a range of possible actions the U.S. government can take, but I keep hearing the words "comprehensive" and "allies" and "multilateralism."

The president is heading off to the G-7, which the G-7 members are calling a G-6 Plus 1, and according to headlines one of the issues he wants to raise is bringing Russia into it. So it's like we're having a discussion here and what's happening is over here. That's one set of issues and concerns.

Ms. Dempsey, I thought that I heard you say, so correct me if I'm wrong, that we need to get China into a rules-based system. Now, that's what the WTO was supposed to be, and for those of us who lived through the 1990s here in Washington and the MFN debates, there were a lot of questions about was China going to--would the WTO change China or was China going to change the WTO? And it's been a mix of both.

What is supposed to be a dispute resolution system has turned into it's a hostile action if you raise a case against the Chinese government, and I think that they exert influence inside the system that makes it harder for the system to function the way that it's supposed to, though again we're very proud of Ambassador Shea and know that he understands what's going on here.

And another frustration is we've had 17 years of this, and the Chinese have flaunted the system for 17 years, and they've been enormously successful at doing that. I mean there hasn't been a cost to flaunting the system. They've built a very strong economy. The strength of their economy allows them to throw their weight around in a way that they weren't able to 17 years ago.

So I'm just really struggling with sort of the in-the-box these are great ideas. Our responsibility is to make recommendations to Congress. So again I raise questions when I hear "comprehensive." Congress seems currently unable to deal with anything comprehensively.

Senator Corker has legislation that he wants to do on tariffs, and that's not going to be brought up. What, what can we recommend or suggest that sort of addresses the situation the way it is rather than the way that we really would like it to be? Maybe that's my best question.

MS. DEMPSEY: If I could, Vice Chairman, clarify, yes, China is obviously part of the WTO rules-based system. I think, you know, that system now is 24 years old. Obviously there has been some smaller sectoral agreements that have updated it--the information technology, financial services, telecom, things like that--that have done some of the rules. But there's been no fundamental relook at the WTO.

We had tried during the Doha Development Agenda talks, and that unfortunately failed, and so we're now 24 years in. Those are largely the rules that China agreed to with--to Ambassador Hillman's point, there's also the Protocol of Accession and the Working Party Report that dealt with some more of these issues, but that was all the way back in 2001.

And so what I'm talking about is bringing China, is deepening and clarifying those rules, expanding those rules, and that's what a lot of U.S. free trade agreements had tried to do subsequent to the WTO, tried to have deeper, clearer rules on things like intellectual property protection; right?

We have a bio-pharmaceutical industry in this country that didn't exist when we were writing the TRIPS agreement as part of the WTO in terms of the major ways it's changed.

We have, you know, a digital sector that was only sort of at its beginnings, right, back in the 1990s when the WTO was conceived, and we've done some on the tariff cuts on information technology products, but not some of the digital trade protectionism, let alone any of the cyber security issues. And so we've got to continually I think as a country, as a world trading system, when we can as a world trading system, improve and update and modernize those rules.

And the concern has been that we went through the discussions on the Doha Development Agenda that we're going to deal with some of these issues, not all of these issues, and then those negotiations were unable to be completed for a lot of reasons in a few countries like India that put the brakes on something that would have brought a better agreement, we think, for all, and so with that, I think our view is we need to get China to agree to some of these deeper, stronger rules that we've been negotiating with other countries, but we've also got to be clear-sighted that the challenges with China are much greater.

We have won cases in the WTO against China where they have stopped on raw material export bans and Rare Earths and auto parts and some of those. Some of the bigger broader cases have been more challenging, and obviously they've brought cases against us, as Ambassador Hillman was talking about, on subsidies in public bodies.

We've got to be innovative and think about what really we, what is most important, but bring all those issues together. I think, you know, a lot of this is for the administration. They're in negotiations with China right now. They have the opportunity to start these discussions. They have the opportunity. They have brought a WTO case on technology transfer as part of the Section 301 investigation. That puts additional leverage on the Chinese, and I think you've heard from the panelists here today some other ideas of how to pursue that.

VICE CHAIRMAN BARTHOLOMEW: A comment and then we'll get--and that's just, again, Ms. Dempsey, what I'm really struggling with is since China hasn't complied with the rules that it has already agreed to over and over and over again, whether you talk about MOUs on intellectual property going back to the 1990s or the accession to the WTO, I personally am not convinced that making more rules is going to make them any more compliant. What costs have they had to pay?

We have a lot of other things. One more point, and that is I'm just going to put my personal concern out there, that in these discussions that the administration is having with the Chinese government, that they will buy, accept a promise to just purchase more American goods, promises that we have seen repeatedly made and repeatedly broken, and that they will not go for mechanisms or something that will address the underlying concerns.

We will be no better off a year. There are some sectors that will be better off. We will be no better off a year or two down the road if that's what the administration decides to do.

Ms. Drake.

MS. DRAKE: Thank you.

I'll try to be brief. You know, how do we address the system as it is and not as it should be? I would say the first thing we should do is get our own house in order so look at what we can do domestically and unilaterally, and in this case, I would say, you know, there's one thing we can do to follow the China model. China has invested in its own economy and invested in its allies' economies so it's making friends as it's getting state-of-the-art airports, rail, water ports, everything, schools, universities.

That's actually great for China's workers. It's creating public goods. It's making their economy more efficient, and in the meantime, U.S. infrastructure is still getting a D from the American Society of Civil Engineers. And we are not doing that. So that's one thing we can do.

We can also take some of these, the advice that I gave in my testimony. We can establish a social dumping model at the ITC to give us an additional tool. We can continue to use the tools that we have, whether it's 232, 301, 201, antidumping/countervailing duty.

My second point was going to be exactly what you said. We have to understand that you can't just get China to agree to something and think the problem is solved. We have learned that that's not the case. So that's one of the reasons that I have serious doubts about a BIT with China but also a comprehensive agreement with China, and even if you had one in place, we'd face the same problems and we'd face the same sort of trepidation about how hard do you go after them; when do you bring a case? Are the firms that operate in China really willing to provide the evidence necessary to stand up to them, or are they going to say, oh, China is going to discriminate against us or revoke our license or do whatever it does if we participate?

So, and third, I would say beware from our perspective of just the comments of we've got to have a rules-based trading system because that sort of doesn't ask the question about what are the rules because the rules that we have, as we've talked about, they're not always sufficient and neither are they always exactly the rules that we want to have if we want to say we want to be able to build and protect our own economy and our national security and not just have rules that are essentially often deregulatory in nature and actually trying to get the government out of the way when we're here talking about what can the government do that's effective.

So let's not just have any old rules. But let's focus on those rules, and as we're doing our homework at home and as this administration seems to be very focused on the unilateral, we can also recommend that it focus on the multilateral and be thinking ahead. That's one of the things that China does better than we do, is they think several steps ahead, and we're focused on the next quarter.

So I would say let's think ahead to get all of those solutions in place.

DR. BOWN: I want to just build upon a couple of those comments of which I agree. So I think, one, let's step back for just a moment to think a little bit more broadly about what these state-owned enterprises, for example, in China actually do.

And so, yes, there's elements of them, they're big, there are some predatory, but what they also do is they're shock absorbers for China in the sense that, yeah, they're these big, bloated firms, but they also prevent bankruptcies. They prevent layoffs; right? They absorb negative economic shocks that we don't allow firms and industries in the United States, for example, to actually absorb, right, because we are a market-based economy.

One way that we could address that in-house, I think, would be to build off of what Ms. Drake has already indicated, and this is, I guess, I'll take back what I said before, there are unilateral things that we could be doing in the United States to improve the environment, but they're purely on the domestic policy front.

We should have better labor mobility adjustment policies, and I'm not just talking about throwing more money at TAA. We should have better labor mobility adjustment policies for all workers that lose their jobs, regardless of the source of that job loss--whether it's trade, technology, consumers just changing what they want, bad weather, bad managerial decisions. Workers need portability of health insurance, retirement, all of these things; right? We need to be doing better. Retraining, infrastructure.

So to that extent I think there are some elements that we can take away and we can actually learn from the Chinese model when we think about what SOEs do that are actually a little bit positive in terms of the social coherence of China's society where we have actually fallen short for our workers and I think our communities.

MS. HILLMAN: I'd only add two things because your question framed, used the word "comprehensive" on a number of occasions, and only to say that way back when the Doha Round and some of the other rounds were being started, there was this notion that you could figure out a way to add in two concepts: one antitrust, or competition law, and, secondly, bankruptcy law.

And, again, I do think there is a huge element of what's going on in China is that companies that in any other economy would go bankrupt and other companies that in other economy would be viewed as too monopolistic to allow to be grown that big exist and continue to exist in China.

So a comprehensive approach with how do you deal with the SOEs might need to include in some way to bring better international disciplines around both bankruptcy and antitrust or competition law.

VICE CHAIRMAN BARTHOLOMEW: Thank you.

I am on the board of an American manufacturing company. You know, we have, we have the best workers in the world here, and so to me I always take this into what do we need to do? You know these workers on the plant floor are focusing on efficiency every single day. What do we need to do to make sure that they have a competitive advantage, that they're working on sort of a level playing field? I hate using that phrase because it turns out playing fields actually aren't level. They taper off a little bit at the edges.

[Laughter.]

VICE CHAIRMAN BARTHOLOMEW: But, you know, what do we do to make sure that our workers have the chance to go out there and demonstrate the effectiveness of their efficiency and their skills?

MS. DEMPSEY: Can I just have a--just one moment--

HEARING CO-CHAIR STIVERS: There's more people.

MS. DEMPSEY: --just because we got into these domestic policy issues like infrastructure. We couldn't agree more from the manufacturing sector.

But also the workforce issue, you know, a lot of good ideas presented here, but the other big issue that manufacturers are facing everyday is 491,000 openings in manufacturing, the highest level ever, and skills are really important. Our work, you know, we're working across a number of lines. There's policies and legislation, apprenticeships, other things at the federal level, the state level, the local level.

But this is really important to try to attract new workers to it, bringing in veterans and other skilled people, but is also really important because these are good jobs and we are proud of our manufacturing workers.

HEARING CO-CHAIR STIVERS: Thank you.

Commissioner Kamphausen.

COMMISSIONER KAMPHAUSEN: Thank you to our panel. This has been a very dynamic process and thank you for your thoughts and analysis and response to our questions.

A quick point and then a question for Professor Hillman. Ms. Dempsey, I'd like to particularly call out your written testimony, pages three and four, that highlight some of the macro level benefits that both the United States and China have realized as a result of our trading relationship over the last 16 or 17 years, and we are focused on the real and unacceptable problems of today, but I think it's also--your data there, at least at a macro level, makes some important points that we don't want to lose sight of.

But my question really is for Professor Hillman. I too am a fan of the notion of a big, bold case, but there's two things I'd like, two implicit points that emerge from that analysis I'd like to invite your comment on.

The first is that I take it, and this really is--this is kind of a leading question for you to respond to--isn't it the case that the assembling of this large coalition, that aren't you essentially arguing that during the consultation process that this mighty monolithic force facing the Chinese will compel them to think of significant ways in which they might change their behavior or their policy, their law and their regulation?

And if that is the case--I'm asking you to comment on that--is there a potential other path it might go? I mean might they resist that approach? And what would the implications there be? That's the first.

The second is you talk, you cite Ambassador Shea's statement from May 8 at the WTO, and it's my great privilege to have been appointed to fill his uncompleted term, and so took note of your citing his statement. He goes on to say, quote, "It's amazing to watch a country that is the world's most protectionist, mercantilist economy position itself as the self-proclaimed defender of free trade and the global trading system. White is black; up is down."

And I, as I read the tenor of his comments, the implicit point I draw from that is the system is at a breaking point unless fundamental change is not undertaken, and so the second notion to ask you to respond to is the chance that a big, bold case a WTO breaker if it doesn't work?

MS. HILLMAN: Thank you very much.

Two very good, very good questions. Maybe let me start with the second one first. You know the comment about China saying they are the defender of free trade is a little bit of what I've said in terms of what my concern is about unilateral action because my fear is if the United States does take unilateral actions that are a violation of our WTO obligations, it does give China both, if you will, the standing to challenge and, if you will, the moral high ground.

And to me we ought not to be in any way conceding moral high ground on that front, which is why my own view is we're better off trying to work within the rules system.

Is the system at the breaking point where this case could break it? It's possible. Clearly the system is not working in terms of bringing the kind of disciplines that it needs to bring to China, but my own view has been that in the past, again, in smaller ways, but when we think about a number of bigger cases that have been brought, I was there at the Appellate Body when the cases with respect to both Boeing and Airbus were brought, and everyone said this is going to break the system, you know, this many billions of dollars of subsidies, this much trade in effect, the system can't take it, and the system did.

Now, again, we can argue about whether it took it well, but nonetheless the system functioned. A lot of things were learned in the process. Again, it wasn't as quick as it should have been, and we're still not through that, but the system got through it, and my point would be

if, if the system cannot respond to this, then it does suggest that either we need really fundamental changes in the rules or, again, China needs to no longer be a part of that system. And I do think in that sense we are at this kind of inflection point.

Going back to your sort of what happens when you sort of try to compel a response, what could China do, I think again with any case the first thing China is going to do is say let's let the litigation proceed. I mean, in other words, show me. I want to wait until a panel has decided. I want to wait until the Appellate Body has ruled. I China am not going to do anything in the interim, and that very well may be the case, and that we simply have to proceed down the litigation road, and my own view would be on a significant number of these counts, the United States and its coalition will win.

In other words, I think there is enough there in terms of both the disciplines, the claims, if you will, and the measures that China has engaged in that we will win on the majority of these counts, maybe not all of them, but we will win in the main.

So it may be that China says let's stay the course. All right. Yes, that is two years down the road before you're going to get a panel, maybe even a little more, and another I don't know how long for an Appellate Body report given that we're down a number of Appellate Body members that are sitting because the United States has blocked the reappointments of anyone, but nonetheless you will ultimately get these kind of rulings, and then you start into the very serious negotiations of what is China going to do to come into compliance?

And again you have to remember under the WTO rules, the first and foremost obligation is to come into compliance. So, again, that then begins a very big conversation about what exactly does that mean? If China refuses to do that, then, if you will, all of the coalition partners do have, as a last resort, the ability to retaliate against China, and at that point, you really are talking about a global trade war, if you will, where again the hope is that this focuses the discipline and this really pushes China.

I don't believe China wants to leave the WTO. I don't believe that China wants to be forever branded sort of a non-market economy that isn't obeying by the rules. So my hope is that by being very focused in exactly what is our complaint, again I would second a lot of what Professor Bown has said, which is some of this is making sure China understands exactly what the concerns are and making that very clear about then not only what are the concerns, what will it take to satisfy those concerns.

If that gets elucidated very clearly in this kind of a case, I at least think we are far better off than we are right now with much more of a unilateral approach.

HEARING CO-CHAIR STIVERS: Thank you.

Looks like I get the last word. Common themes today that I've heard from you all, and also from the commissioners, is that China's economic and trade practices are distorting the market economy and must be addressed proactively in some manner. I think that's pretty much a consensus: the status quo with China on the global economy is not a sustainable situation right now.

And the second thing is that a global coalition in some either in conjunction with unilateral action or instead of is important to address these challenges.

I happen to believe that any issue with China needs to have a multilateral facet to it. I think the U.S. is not as strong relative to China as we were 20 years ago when they first entered the WTO and we did have leverage on some of these trade issues.

So whether it's human rights, trade, security issues, if you don't have a multilateral coalition together trying to persuade China to make a change, it's probably not going to work by the U.S. doing it domestically.

In the Obama administration there were-- and in the Bush administration--a number of Strategic Economic Dialogues, and we tried to persuade China to make changes. I think was mostly what we did. And we found that China doesn't feel like it's in their interest to make the necessary domestic reforms that frankly we believe as the United States would help China in terms of long-term, in terms of having a more competitive economy in the future.

For whatever reasons domestically China has not made those reforms and is not moving in the direction of making those reforms as a general, as a general order.

So if that's the case, it seems to me that you have to have both a multilateral facet, whether it's a big, bold WTO case with all the challenges that it has in terms of time, takes a skilled diplomacy, which I'm not sure frankly speaking for myself, I'm not sure this president has exhibited to this point, to take these strong unilateral actions and turn those into more of a coalition, and certainly we're not seeing that with some of the comments at the G-7 or Plus 1 or whatever we're calling it now.

And so that's my last comment. We're out of time. And so that wasn't really a question.

Thank you all for your testimonies. I thought this was an absolutely fantastic panel, and we will reconvene--

COMMISSIONER WESSEL: Could I simply ask that I have some additional questions--this has been great--if we could submit some to the witnesses, that would be very helpful and have them respond in writing?

HEARING CO-CHAIR STIVERS: Absolutely. Okay. We will convene in ten minutes at 11:10 for the next panel.

Thank you.

[Whereupon, a short recess was taken.]

PANEL II INTRODUCTION BY COMMISSIONER R. GLENN HUBBARD

HEARING CO-CHAIR HUBBARD: Good morning. Welcome back. I thought the first panel discussion was very interesting and informative. I told my colleagues I thought I appreciated how hard all this is. I now know I didn't appreciate half how hard it was.

In our second panel, we welcome another group of distinguished experts. We'll begin with Professor Lee Branstetter, who is a Professor of Economics and Public Policy at Carnegie Mellon and a non-resident senior fellow at the Peterson Institute.

His research interests include the economics of technological innovation, industrial organization, economic growth in Japan and China, and he'll focus on a topic that had come up a little bit in the first panel on technology transfer.

Next, we'll hear from Mark Cohen, who is Director and Senior Fellow at the Asia IP Project at Berkeley Center for Law and Technology. He recently served as senior counsel at the U.S. Patent and Trademark Office, where he oversaw a China team of 21 staff in D.C., Beijing, Shanghai and Guangzhou.

He's the author of the blog China IPR and has trained and lectured and debated Chinese IP and competition law issues.

He will address concerns of the Section 301 case, IP improvements and some challenges requiring government attention.

We'll then hear from Dr. Willy Shih, who is a Professor of Management Practice in Business Administration at the Harvard Business School. His research focuses on science and technology-intensive industries and global production systems.

He has authored numerous publications on the role of advanced manufacturing and technological innovation in competitiveness, most recently an MIT Sloan article on high-tech commoditization.

He'll address some concerns about various forms of Chinese IP acquisition and consider some strategies on the U.S. side.

And finally we will hear from Graham Webster, who is a Senior Fellow at the Paul Tsai China Center at Yale Law School and a China Digital Economy fellow at New America.

From 2012 to 2017, he was responsible for the center's Track 2 and Track 1.5 dialogues on a range of economic and security issues. He will review China’s digital regulatory environment and its effect on international companies.

Thanks, again, to all of you for agreeing to testify. Please try to keep your oral remarks to around seven minutes so we'll have plenty of time for Q&A.

Lee, we begin with you.

OPENING STATEMENT OF LEE BRANSTETTER, PH.D., PROFESSOR OF ECONOMICS AND PUBLIC POLICY, CARNEGIE MELLON UNIVERSITY; FORMER SENIOR ECONOMIST FOR INTERNATIONAL TRADE AND INVESTMENT, PRESIDENT'S COUNCIL OF ECONOMIC ADVISORS

DR. BRANSTETTER: Well, I'd like to thank the ladies and gentlemen of the Commission for the opportunity to talk to you today.

In the limited time I have, I wish to focus on a specific challenge posed by China's techno-nationalism.

Experts acknowledge China's efforts to force foreign multinationals to transfer strategically sensitive technologies to indigenous Chinese firms on firms favorable to the Chinese.

In my written testimony, I describe how this pressure is applied, how these actions can distort global trade, how they can actually depress the global rate of innovation, and the ways in which these actions violate China's WTO obligations.

We need a policy response that can change this behavior without stirring up a trade war that causes more damage to all parties than the behavior we seek to deter.

In my view, such a policy response can only be effective if it's closely coordinated with our allies. The appropriate response will therefore be multilateral but narrowly focused on the kinds of behaviors we seek to change.

Unfortunately, multinationals are often extremely reluctant to publicly disclose the ways in which they are being pressured to transfer technology to China out of fear of retribution from the Chinese state or its state-owned enterprises. To overcome that problem, we need a mechanism that enables and requires multinationals to disclose these details.

In 2017, Senator John Cornyn and Congressman Robert Pittenger introduced legislation designed to give the Committee on Foreign Investment in the United States the power to limit outbound foreign direct investment and technology transfer.

In my written testimony, I proposed a number of changes to the original architecture of this bill that would correct what I believe to be some of its most important flaws and make it a more effective instrument in combatting forced technology transfer.

First, let me emphasize my belief that America benefits when U.S. multinationals are permitted the freedom to invest in and operate their affiliates when, where and how they see fit. The original Cornyn-Pittenger bill awarded the chief executive dangerously broad discretion--in my view--to curtail the activity of U.S.-based multinationals outside the United States, powers an injudicious or protectionist chief executive might be sorely tempted to abuse.

I therefore propose that the broad discretion granted to the chief executive in the original bill to define so-called "critical technologies" be replaced by a well-defined interagency process that engages federal science agencies in the task of drawing up a far more circumscribed set of technologies whose transfer to indigenous Chinese entities could pose a meaningful threat to U.S. national security.

I also propose that the discretion granted to the chief executive in the original bill to define so-called "countries of special concern" be replaced by a second interagency investigative process defined in statute that would set clear criteria for the designation of a country as a country of special concern with respect to these issues.

The process would leverage the exercise of subpoena power and the resources of our intelligence agencies to prove that any nation suspected of engagement in forced technology

transfer or a large-scale misappropriation of American technology was, in fact, engaging in this behavior on a scale and to a degree that posed a meaningful threat to U.S. national security.

In my view, a well-designed process with an appropriately high evidentiary standard would wind up including only a handful of countries in the set of "countries of special concern" and perhaps the only economically large members of this set would be China and Russia.

Finally, I strongly opposed granting CFIUS or any other agency new or enhanced authority to block outbound foreign direct investment by U.S. multinationals even in countries of special concern. Instead new policies should focus solely on technology licensing or transfer of critical technologies to unaffiliated indigenous parties that can be reasonably viewed as operating under the influence of the governments of countries of special concern.

These changes significantly narrow the new authorities that would be granted to the federal government to regulate U.S.-based multinational activity.

Under my proposal, U.S. multinationals that wish to transfer technologies in specifically designated critical domains to indigenous Chinese entities would have to disclose their plans in advance to CFIUS or to a CFIUS-like interagency power with subpoena power--interagency panel with subpoena power and access to the global resources of the U.S. intelligence community.

If firms were transferring technology to Chinese entities in ways or under terms that deviated sharply from their commercial practice elsewhere in the world, they would be required to explain the discrepancy. In essence, they would need to reassure the reviewing panel that the technology transfer was not being forced in order to receive government approval.

Now the point of this is not to empower the federal government to intervene in the actions of private firms. It's my hope that, you know, this power would be exercised very, very rarely. Instead the key benefit of this procedure is the information it will bring to light.

Multinationals that might otherwise be pressured into silence will now tell their Chinese interlocutors that they have no choice but to disclose their true circumstances since silence or partial disclosures could be met with a subpoena or contradicted by the findings of intelligence agencies. And the information disclosed through this process could enable the federal government to identify the specific Chinese entities that benefit from forced technology transfer, the top executives of those Chinese entities, and the Chinese government officials involved in brokering the transfer.

These entities and individuals could be sanctioned using existing authorities provided by the International Emergency Economic Powers Act, and these sanctions could involve travel bans, foreign asset freezes, and financial and trade penalties on the firms and products benefiting from forced technology transfer.

America's allies possess similar statutes to IEEPA and can participate in enforcing multilateral sanctions against these entities. The devastating impact of the recent sanctions imposed on ZTE illustrate what we can do when we really want to sanction a foreign enterprise.

If we play our cards right, we can substantially raise the costs and lower the benefits of forced tech transfer for the Chinese entities currently benefiting from it, potentially changing their strategic calculus in helpful ways.

And these actions are not without risks or costs, but the very focused nature of the sanctions and restrictions we would apply suggest that any Chinese retaliation would be similarly focused and targeted, limiting the downside risk and preserving the benefits we get from the dimensions of the U.S.-China economic relationship that work well.

The Trump administration's current approach to U.S.-China trade frictions is, in my opinion, all but certain to fail to address the problem of forced technology transfer, but there is still time to move toward a better approach. For the sake of our nation's economic future, let us not only hope that this happens but do everything in our power to ensure that it does.

Congress can help through legislative action that builds on a proposal that is already garnering bipartisan support even in these hyper-partisan times.

Thank you very much for your attention.

PREPARED STATEMENT OF LEE BRANSTETTER, PH.D., PROFESSOR OF ECONOMICS AND PUBLIC POLICY, CARNEGIE MELLON UNIVERSITY; FORMER SENIOR ECONOMIST FOR INTERNATIONAL TRADE AND INVESTMENT, PRESIDENT'S COUNCIL OF ECONOMIC ADVISORS

China's "Forced" Technology Transfer Problem -- And What to Do About It

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NOTE: The arguments and data presented here are taking from a forthcoming Peterson Institute Policy Brief.

The Trump Administration's trade confrontation with China is occurring on several fronts, none more crucial than the dispute over China's alleged misappropriation of foreign technology. In a report issued March 22, the United States Trade Representative (USTR) issued a lengthy bill of particulars citing instances of "forced" technology transfer and failure to protect U.S. intellectual property from infringement or theft. Following this report, the administration announced plans to impose tariffs on up to $60 billion worth of Chinese exports to the U.S. and tighten the rules governing Chinese investment in the U.S. China countered with tariff threats of its own, and President Trump then threatened more tariff actions against up to $150 billion worth of Chinese exports. At the time of this writing, both sides appear to be backing away from the imposition of these tariffs, but the details of any final agreement are still uncertain.

A broad range of experts and market observers agree that China has repeatedly forced foreign multinationals to transfer technology to indigenous firms as a condition for them getting Chinese market access and that China has persistently failed to protect the intellectual property of foreign firms doing business (Wei, 2018; Dollar and Hass, 2017; Cambell and Ratner, 2018; Economist, 2018a,b). At the same time, stock markets, American industry, and farm sectors dependent on exports to China have been worried in recent weeks by the prospect of a U.S.-China trade war. The Trump Administration has repeatedly threatened a strategy of broad-based "retaliation" that will arguably cause U.S. firms and workers more economic pain than the Chinese behavior the Administration's trade negotiators are seeking to change.[1] The indiscriminate nature of its proposed tariffs – and the rhetoric that accompanies them -- cedes the moral high ground to China and undermines the international and corporate support Mr. Trump needs to solve the real problem.

Fortunately, there is a better way. The key idea is to replace the indiscriminant tariffs proposed by the Trump Administration with carefully targeted sanctions imposed on the Chinese entities directly involved in technology misappropriation. Implementation of this strategy has been hampered in the past by the lack of detailed data, and data have been hard to find because U.S. multinationals have been – justifiably – reluctant to voluntarily disclose their complaints. This policy brief proposes a new structure, based on a current bill with bipartisan support in Congress, that can equip policymakers with the data they need, and outlines existing policy tools they can use, to take this more targeted approach.

[1] Lovely (2018) shows that the retaliatory tariffs proposed by the Trump Administration will hit multinational supply chains serving U.S. firms and companies far harder than Chinese entities potentially benefitting from technology misappropriation.

Forced Technology Transfer: Ways and Means

In many respects, the USTR report released in March breaks little new ground. Earlier studies undertaken by the International Trade Commission (2011) and the bipartisan Commission on the Theft of American Intellectual Property (2013, 2017) had already noted the ways in which Chinese firms misappropriate foreign technology, and had even made efforts to quantify the losses imposed on U.S. innovators and owners of intellectual property by these practices. These earlier studies indicated that these losses could be an annual flow measured in the tens of billions – perhaps even the hundreds of billions – of dollars. The wide-ranging estimates mostly reflect the value of American intellectual property believed to be stolen or infringed by Chinese entities, and an impressive body of evidence points to significant weaknesses in the enforcement of intellectual property rights in China.[2]

However, inadequate IP enforcement is only part of the problem. China has also adopted a set of policies deliberately designed to *force* foreign multinationals to transfer strategically sensitive technologies to indigenous Chinese firms. These policies are a key component of China's longstanding ambition to replace Western firms currently at the forefront of key technologies with Chinese national champions. In many cases, technology transfers are effectively required by China's FDI regime, which closes off important sectors of the economy to foreign firms, unless they enter into joint ventures with Chinese entities they do not control (Lardy, 2014; Hufbauer and Lu, 2017). This is true in the auto industry, where foreign ownership restrictions (and high tariffs) force foreign firms to serve the booming Chinese auto market – now the world's largest – through joint ventures in which they are prevented from holding a controlling interest. China's well-publicized drive to become a leader in electric vehicles has resulted in complaints by European auto firms that they are being pressured to turn over sensitive technology, including proprietary software code, to joint venture partners who may later compete with them in China and beyond (Clover, 2017). In China, the Great Firewall effectively prevents U.S. digital services companies from operating freely in the Chinese market, and the telecommunications services industry is generally closed to wholly-owned foreign firms. [3] As the world of computing migrates to cloud-based services, the global IT industry is increasingly forced to access Chinese customers through a gauntlet of JV partners that may someday pose a competitive threat (Dollar and Hass, 2017). Even in officially open sectors, foreign firms must obtain approval from relevant regulators in a process that lacks transparency and is subject to political influence – foreign firms can often be quietly pressured to transfer technology to local firms in order to obtain these necessary approvals.

Given the prominent role of state-owned enterprises (SOEs) in key sectors of the Chinese economy, these firms often function as another mechanism through which foreign firms are forced to transfer

[2] For evidence on the weaknesses of China's IP system, see MacGregor (2010), Kennedy (2017), Branstetter, Conti, and Zhang (2018), and Rassenfosse and Raiteri (2016), among many other sources. Nicholas Lardy (2018) notes that Chinese payments for the use of foreign intellectual property have risen significantly since the early 2000s, and China now ranks fourth globally in terms of the dollar value of these aggregate payments. This is true, but it reflects, in part, China's emergence as the world's largest manufacturer and exporter of goods, and the fact that China's exports these goods to advanced industrial nations with strong patent systems and trade laws that allow for the impounding of patent-infringing goods at the border. These aggregate statistics do not disprove the existence of forced technology transfer or widespread IP infringement within China itself.

[3] These investment restrictions in telecommunications were negotiated as part of China's accession to the WTO; they can be downloaded from the WTO website at https://www.wto.org/english/thewto_e/acc_e/completeacc_e.htm.

technology in order to gain market access. A well-known example occurred in the early 2000s, when China was building out its energy grid to meet booming demand (Kranhold, 2004). Power generation in China is dominated by state-owned enterprises, a position perpetuated by the regulatory structure of the industry. The top executives of these firms are effectively appointed by the Chinese Communist Party, as are all top executives of major nationally owned Chinese SOEs, and their appointment is driven, in part, by the extent to which their management of their firms contributes to the Party's objectives. If the Party wants to create an indigenous Chinese manufacturing industry capable of producing high-tech products for energy plants, like advanced turbines, that can compete with GE and Siemens, then the head of a Chinese power company –sensitive to this objective – can insist that any supplier of turbines transfer valuable technology to indigenous Chinese suppliers, even if this condition raises prices for his own firm, reduces product availability and reliability, and limits the options for his customers. GE and its multinational competitors all realize the Chinese market is too big to ignore, and that the short-term costs of refusing to play by Chinese rules are quite high – since, if one firm refuses to play, the other is likely to acquiesce.

According to China's critics, this dynamic is playing out in industry after industry, enabling state-owned enterprises (SOEs) to function as "gatekeepers," determining which products and services will be incorporated into China's energy, communications, transportation, and health care systems.[4] China's enormous size gives these SOEs real power, which is being exercised in service to Chinese government plans to replace the world's leading companies with Chinese companies. In recent years, concerns about forced technology transfer have been heard in industries from wind turbines to medical devices (European Chamber of Commerce in China, 2017).

The Global Welfare Implications of Forced Technology Transfer

It has long been recognized that efficient international business practices *require* technology transfer across national and firm boundaries (Vernon, 1967). If U.S. multinationals were *voluntarily* transferring technology to Chinese entities over which they have no control, then any proposal to regulate or limit that transfer would need to be viewed with skepticism. As the previous section makes clear, however, some of the technology transfers taking place in China today are only "voluntary" in the sense that the business transactions engaged in by the business partners of the fictional gangster of the *Godfather* series, Vito Corleone, were voluntary. China is effectively making offers multinationals cannot refuse.

The fact that firms "voluntarily" trade with parties that possess monopoly power on the supplier side or monopsony power on the demand side does not obviate the reality of economic harm. One way to view the forced technology transfer problem is to see it as a cartel, organized by the Chinese party-state, in which Chinese purchasers collude to expropriate key technologies from a foreign supplier or group of suppliers. If a Chinese firm "licenses" an extremely valuable technology at a price that is a small fraction of its commercial value, and is able to do through the exercise of monopsony power, this is conceptually quite close to intellectual property theft.

To the extent that China's forced technology transfer practices (or the expectation of the intellectual property theft) deter multinationals from investing or operating there, it can harm both China and the broader global economy. A series of formal models (Lai, 1998; Branstetter and Saggi, 2011; Gustafsson and Segerstrom, 2010) shows how fear of losing control of key technologies could prevent multinational

[4] See Massie (2011), Atkinson (2017), Kranhold (2004), Branstetter and Lardy (2008), and the *Economist* (2018a,b).

corporations (MNCs) shifting production to lower cost countries. This outcome prevents low-cost countries from fully realizing their comparative advantage in production of established products; it also prevents advanced countries from fully realizing their comparative advantage in developing new goods. As a consequence, production costs are higher, efficiency is lower, and the rate of innovation in the global economy is slower than it would be in an equilibrium in which multinationals are able to retain control over their technology.[5]

When forced technology transfer enables a Chinese firms to displace the Western enterprises from which technology was extracted, the global economy can be harmed in a different way. The forced technology transfers described here amount to a subsidy of a less domestic innovative firm, and a *de facto* tax on the foreign enterprise that created the valuable technology in the first instance. If Chinese government intervention succeeds in tilting the playing field in favor of less innovative (but heavily subsidized) Chinese firms, and thereby limits the resources flowing to the world's most innovative firms, then, in the long run, the rate of innovation can slow, and consumers around the world could suffer a welfare loss.[6]

Finally, China's misappropriation of foreign technology violates WTO principles and China's obligations under its accession agreement to the WTO. The Trade Related Investment Measures (TRIMs) Agreement, which is part of the WTO charter, forbids a signatory state from requiring technology transfers in return for market access. China also agreed, in its WTO accession protocol, that the procurement of its state-owned enterprises should be undertaken according to commercial concerns, and not in response to state industrial policy goals. As a signatory of the TRIPs Agreement, China committed to protect the intellectual property – patents, trademarks, copyrights, and trade secrets – of foreign firms operating in its territory, providing them the same degree of protection it provides to its own firms, *and* providing all inventors with a degree of protection that meets the high minimum standard prescribed under WTO rules. Unfortunately, past efforts to resolve these issues through bilateral negotiation have failed to address the underlying problems, and the realities of the WTO dispute resolution process make it extremely difficult to sanction China's behavior through WTO litigation. China's requirements for technology transfer are not stipulated in law, and are imposed through extralegal means; few firms are willing to make their complaints public. China's patent statutes are in *de jure* compliance with WTO standards, although the *de facto* level of protection falls far short of what the law appears to promise. It has proven difficult for the U.S. to seek WTO remedies against violations of the TRIPs Agreement that are shortcomings of enforcement rather that statutory deficiencies. Nevertheless, rules that are routinely violated without sanction quickly cease to be rules. For all of these reasons, inaction in the face of China's current behavior is not an appropriate response.

What Is To Be Done?

China has become quite adept at playing off different Western governments and Western firms against one another, and there are few important technical domains in which U.S. firms retain a monopoly on technological leadership. Therefore, any successful strategy will need to be multilateral, relying on joint action by the U.S. and its traditional European and Asian allies. Fortunately, America's trading partners

[5] See Branstetter, Fisman, Foley, and Saggi (2011).

[6] One of the most influential trade and growth papers of the early 1990s, coauthored by leading trade and growth theorists Gene Grossman and Elhanan Helpman (1990), showed how this scenario could actually come to pass. Chinese innovative capability is growing (Wei, Xie, and Zhang, 2017), but still arguably lags behind that of the industrial West (Kennedy, 2017; Branstetter, Li, and Veloso, 2015).

in Western Europe and East Asia are increasingly cognizant of China's technology misappropriation and increasingly resolved to respond in some way (Atkinson, Cory, and Ezell, 2017).

Efforts to change China's behavior should also be limited and well-targeted. To the extent possible, any sanctions designed to limit forced technology transfer should be applied solely to those firms and individuals responsible for pressuring foreign multinationals and to those firms and individuals who benefit from the transfer. This would raise the costs and limit the benefits of the behavior the West is seeking to constrain in a targeted fashion, without inviting the sort of broad-based trade retaliation that could generate far more harm than good. Unfortunately, multinationals are often extremely reluctant to publicly disclose the details that could enable such targeted sanctions, out of fear of retribution from China. This silence has served China's interests for decades and severely constrained the ability of Western governments to undertake the kinds of targeted sanctions this brief will endorse. To overcome that problem, the Administration must create a monitoring mechanism that enables – and requires – multinationals to disclose when they are being subject to forced technology transfers. Fortunately, a bill currently advancing through Congress with bipartisan support may provide the foundation upon which this kind of monitoring mechanism could be built.

CFIUS As An Instrument To Limit Forced Technology Transfers to China

In 2017, Senator Jon Cornyn (R-TX) and Congressman Robert Pittenger (R-NC) introduced legislation designed to revamp the Committee on Foreign Investment in the United States (CFIUS) in a way that would empower this committee to limit or block outbound foreign direct investment and technology transactions.[7] This proposal, originally known as the Foreign Investment Risk Review Modernization Act (FIRRMA) of 2017, or H.R. 4311, was inspired, in part, by the concerns outlined in the previous section.

The original Cornyn-Pittenger proposal significantly broadened the range of transactions over which CFIUS could exercise scrutiny and, through the President, blocking authority. CFIUS would be directed and authorized to scrutinize nearly every inbound and outbound investment and technology transaction with "countries of special concern," which are not named or defined in the draft legislation, that might result in important technologies diffusing to these adversarial nations in a way that undermines national security. The proposal also left broad discretion to the executive branch in terms of defining both "countries of concern" and "critical technologies," and that discretion could lead to significant economic harm if wielded by an incompetent or injudicious chief executive. For instance, a president who sought to punish companies that shifted production abroad could, in principle, invoke the new powers of CFIUS under the original proposal to prevent such shifts indefinitely. At the time of this writing, the original proposal is being substantially amended in ways that could address some of these concerns, but it is not yet clear what will emerge from the legislative process.[8] Instead of attempting to forecast the outcome of ongoing Congressional debates, this brief proposes a number of changes to the original architecture that could make it an effective instrument in combatting forced technology transfer.

[7] CFIUS is a cabinet level interagency committee charged with reviewing foreign merger and acquisition bids to acquire U.S. companies, with the goal of determining whether any such acquisitions threaten national security. For an extensive review of CFIUS, its history, and administrative processes, see Jackson (2018). See also Moran (2009) and Moran and Oldenski (2013) for a critical review of CFIUS actions, especially with respect to China.

[8] In its review of the proposal, the Senate Banking Committee eliminated the review of outward joint venture deals from the draft legislation, but kept control over outward technology transfers.

Improving the Cornyn-Pittenger Proposal

First, CFIUS should ***not*** be given authority to review or block the outbound FDI of U.S. multinationals, even when they involve "countries of concern." The decision by a multinational to shift production or operations abroad through greenfield investment or acquisition may raise the risks of an accidental transfer or the possibilities of industrial espionage, but firms are in a better position than the government to judge these risks and balance them against potential returns.[9] Any potential expansion of CFIUS review of outbound transactions should focus solely on technology licensing or transfer of critical technologies to unaffiliated indigenous parties that can reasonably be viewed as operating under the influence of the governments of countries of special concern.[10] By exempting outbound FDI and technology transfers within MNCs from additional CFIUS scrutiny, the revised proposal would encourage China to allow U.S. multinationals to retain formal ownership and control of their technology, while effectively penalizing China for forcing transfer to unaffiliated entities. Limiting the expanded jurisdiction of CFIUS in this manner would limit the set of new transactions under review sufficiently that CFIUS could retain something close to its current structure and scale. The proposed limitation has the added advantage of conforming closely to a review process China recently imposed on its own firms when transferring technology abroad, with China's recent implementation of the *Measures on the Transfer of Intellectual Property Rights to Foreign Parties.* The U.S. government would not be doing anything China is not already effectively doing (Ross and Zhao, 2018). On the other hand, by subjecting potentially "forced" technology transfer to scrutiny within the context of a government investigative process that possesses CFIUS' subpoena power, multinationals that might otherwise be pressured into silence by the threat of future Chinese sanctions can now tell their Chinese interlocutors that they have no choice but to disclose their true circumstances, since silence or partial disclosures could be met with a subpoena. This could substantially alter the dynamic that has so far prevented the U.S. government from obtaining the kind of detailed data it has needed for effective countermeasures.[11] The expectation that the imposition of extralegal pressure on a U.S. firm to transfer technology might be disclosed to the U.S. government could, in turn, have a disciplining effect on the use of this practice.

Second, the current bill gives the U.S. President dangerously broad discretion in identifying "critical technologies" that might result in harm to national security. Instead, a revised CFIUS statute should stipulate a process that engages the expertise of the National Academies of Science, Engineering, and Medicine and the other federal science agencies in the creation of a narrow definition of "critical

[9] At the time of this writing, Washington-based sources suggest that President Trump may soon issue an executive order asserting broad authority to limit outbound FDI at his discretion. Congressional passage of a substantial revision of the Cornyn-Pittenger proposal, along the lines described in this policy brief, could serve the useful function of pre-empting such an executive order.

[10] Broad-based, global licensing agreements into which Chinese parties enter on the same basis as other users of the technology around the world would be exempt from this additional scrutiny. On the other hand, technology transfer agreements in which U.S. firms are transferring technology to indigenous Chinese entities under terms that are very different from what is observed in other markets would be of special interest to this proposed review process.

[11] Multinationals rarely welcome the government's use of subpoena power, but it would be impossible for the antitrust agencies or the Securities and Exchange Commission (SEC) to enforce U.S. law without the information they can obtain through judicious exercise of this authority. The principal reason forced technology transfer persists is that the U.S. government has never been able to obtain the detailed data necessary to combat it. If the U.S. government remains unwilling to exercise subpoena power in this domain, then it will be forced to choose between acquiescence and a punishingly expensive trade war.

technologies“ that could limit the scope of CFIUS reviews (Hufbauer, 2017; Hufbauer, 2018). The national security agencies involved in the CFIUS process are likely to use their influence (and technological expertise) to push for a definition of critical technologies that is relatively broad, encompassing “dual use” technologies with civilian and military application. These political realities cut both ways. From the standpoint of a free trader seeking to limit the scope of government interference in mutually beneficial transactions, the definition of critical technologies likely to emerge from the interagency process may be too broad. From the standpoint of a critic of China’s current policy, worried that a review process predicated on threats to national security might miss Chinese efforts to misappropriate strategically important civilian technologies, the breadth of the definition on which the Pentagon and the intelligence agencies will likely insist may be about right.

Third, any new CFIUS statute needs to spell out a deliberative interagency evaluation process by which nations are designated as “countries of special concern,” and it should specify a set of standards and criteria that would justify the designation of a country as one of special concern. At the moment, the president would seem to have wide discretion in deciding which nations fit into this category. The disturbing current spectacle of a chief executive proposing to block steel imports from defense treaty allies on the grounds that such imports threaten “national security” drives home the need for strong limits on future executive discretion. Instead, any new CFIUS statute should mandate an extensive interagency review, involving intelligence agencies, the Department of Defense, and economic agencies, which documents that a country’s IP regime, investment regime, SOE purchases, and other institutional factors are insufficiently protective of U.S. firms’ IP and trade secrets. The interagency review should be conducted exclusively by individuals possessing a permanent (not provisional) high-level security clearance, and the reviewing agencies should have subpoena power. The review must document a significant number of forced technology transfers (or instances of IP theft) where the economic value of technology thus appropriated is meaningfully large. While CFIUS would, in principle, limit its legal authority to block technology transfer to cases that posed some threat to national security, the investigation potentially designating a country as one of special concern would admit as evidence forced technology transfers that did not pose a direct or proximate threat to national security. Such transfers would still constitute evidence of systematic underprotection of foreign technology and pervasive efforts to shift technology to indigenous parties. This interagency review process should be conducted in concert with key defense treaty allies and FTA partner nations, and some degree of international concurrence should be required by statute before a designation can be made.[12] When designated countries measurably improve their practices, they should be deleted from the list of countries of concern, and the statute should contain a provision allowing countries with this designation to petition for reclassification after some period of time has elapsed since their designation. In addition to placing bounds on the dangerously wide executive discretion that exists in the original Cornyn-Pittenger bill, this change creates a strong incentive for China to change its system. If China relied on *market-driven* technology transfers to private firms, upheld by strong IP laws, then it could avoid or end designation as a country of special concern, and that would enhance its access to technology. China could still be subject to limitations imposed by export control laws, but better behavior would allow it to escape this

[12] It seems reasonable that a well-constructed review process would designate only one or two countries as “countries of concern.” Other than China, and, possibly, Russia, it seems unlikely that any nation is undertaking these actions of forced technology transfer on a scale that poses any meaningful threat to U.S. national security or to the global regime of trade and investment in technology.

extra measure of CFIUS review. However, any reversion to a pattern of forced technology transfer or biased application of IP law could bring the CFIUS scrutiny back.

Fourth, in its review of a prospective transfer of a designated critical technology to an indigenous entity in a designated country of concern, the statute should require that CFIUS consider the possibility of the foreign entity obtaining the technology through third countries (Hufbauer, 2017). If the foreign entity has another pathway to obtain the technology, then a CFIUS-ordered restriction cannot be imposed unless and until the third parties are also willing to limit transfer. This will limit the degree to which the new authority would place U.S. multinationals under a competitive disadvantage relative to multinationals in Europe, Japan, or Israel that would operate outside of the jurisdiction of U.S. law.

Fifth, U.S. firms subject to CFIUS-ordered restrictions on outbound technology transfer should have the right to appeal the decision and, if dissatisfied, to challenge the government ruling in a legal proceeding.[13] Typical grounds for appeal might include the following arguments: the technology in question is not truly military or dual use in nature, the technology can be obtained through other sources not blocked by CFIUS, or the designated country of concern no longer meets the criteria for such designation. Commercial loss or inconvenience, *per se*, would not be a basis for appeal. This right of appeal would only apply to CFIUS-ordered restrictions on outbound technology transfer, not to restrictions on inward investment, which would continue to operate under current rules. This right of appeal will impose useful discipline on the internal interagency deliberative process, and it will help limit the overuse of CFIUS in cases where a national security threat is limited or indirect. If a CFIUS ruling were overturned on appeal or by a court, but there were strong reasons to expect a meaningful threat to national security, then the government could invoke other legal grounds for preventing the transfer. Technology transfers that truly threaten national security could also be denied on the legal basis provided by export control laws, and the statute should allow evidence gathered in the CFIUS review process (including classified evidence gathered through intelligence) to be used in prosecution under export control laws.

Other Policy Tools

The Use of Complementary Targeted Sanctions Under IEEPA (1977). Any time CFIUS blocks a transaction, whether inbound or outbound, it prevents financial flows that could benefit U.S.-based firms and individuals. Ideally, one would prefer policy countermeasures designed to punish Chinese behavior that have substantially more negative impact on the Chinese parties engaged in that behavior than they do on U.S. firms and individuals. The International Emergency Economic Powers Act of 1977, or IEEPA, provides sweeping legal authority for the U.S. president to order sanctions of firms, individuals, and countries. IEEPA was the legal basis for the U.S. sanctions recently imposed on China-based ZTE, which quickly brought this major multinational to its knees.

If the interagency review proposed above designates China as a "country of concern" under the CFIUS reforms described above, then that designation could also serve as the basis for issuance of an executive order, as called for under IEEPA, that would allow the broad powers of that statute to be utilized to deal

[13] This would constitute a significant change in CFIUS structure, and the details of its full implementation might require a separate policy brief. One potential approach would be to designate the Federal Circuit Court of Appeals as the single appellate body, provide an expedited procedure for review, and place the burden on the complainant firm to show that the government decision was wrong.

with the economic threat posed by forced technology transfer. Once codified in the federal register, this executive order could authorize the use of targeted sanctions on the Chinese entities that were the beneficiaries of the forced technology transfer, the top executives of those Chinese entities, and the government officials who were involved in brokering the forced technology transfer. The comprehensive analysis proposed as a prerequisite for the designation of China as a country of concern would produce specific evidence of forced transfers sufficiently detailed to identify these beneficiary firms, their leaders, and the government officials involved in pressuring Western firms. The judicious use of subpoena power and the full involvement of U.S. intelligence agencies in the review process would ensure that outcome. Targeted sanctions could involve travel bans in the Western world for key Chinese individuals and their families, foreign asset freezes, and financial and trade penalties on the firms and products benefitting from forced technology transfer. America's allies possess similar statutes (which provided the basis for their cooperation during the sanctions regime against Iran) and could participate in enforcing multilateral sanctions against entities that forced the transfer of U.S. technology and the U.S. could enforce sanctions on Chinese entities that benefitted from the forced transfer of European, Japanese, and Israeli technology.

As the ongoing CFIUS review process described above identified new cases of forced technology transfer or intellectual property theft, "micro" targeted sanctions of this type, using IEEPA authority, could also be employed (or threatened) as a complement to or a substitute for the restrictions imposed by CFIUS itself. Like the sanctions that could be imposed under CFIUS, these would not come without economic costs to the United States and its Western allies. However, the focus of these sanctions on specific Chinese entities currently pressuring Western firms to transfer technology or specific Chinese entities benefitting from such transfers would ensure that maximum pressure would be brought on the offending parties, with limited "collateral damage" to unrelated sectors. The targeted nature of the sanctions on China would invite similarly limited counter-sanctions (if any), from the Chinese, further limiting the fallout from this dispute. One hopes that the existence of a well-targeted, credible sanction could significantly deter forced technology transfer, such that the sanctions rarely occur in practice. As this brief has argued, technology transfer motivated by mutual benefit rather than coercion would be in the best interests of China and its trading partners.

Export Controls. The limited CFIUS reform supported herein will not necessarily be sufficient to prevent all conceivable transfers of sensitive technology to adversarial nations. To limit that risk, the United States and its allies should rely on existing export control laws, which already apply to technology transfers and outbound FDI as well as actual exports of sensitive goods.[14] When the risks of leakage of technology to a potential adversary are present but unclear, existing statutes provide broad authority for the Bureau of Industry and Security (BIS) of the Department of Commerce to investigate activities involving a dual use technology. BIS agents possess broad authority to subpoena documents, compel testimony, and suspend or postpone transactions that may carry with them a national security risk. If concerns intensify, then the federal government could expand the resources and staff made available to BIS to enforce existing laws.

[14] California Congressman Ed Royce has introduced a bill that would strengthen export controls and give them a firmer legal basis. Representative Royce's proposal, H.R. 5040, has a number of attractive features, but a full appraisal of that bill is beyond the scope of this policy brief.

Section 337 Cases. This policy brief has already noted that China's legal regime for enforcing intellectual property rights is flawed. The U.S., Japan, and European governments are right to pressure China to substantially upgrade the operation of its system – and such reform would be in the long-run best interest of China itself. However, it will almost certainly take years of determined effort by Chinese policymakers to bring the operation of China's patent system into line with international best practices. Any American policy that imposes high tariffs in the absence of instant patent reform will simply drive the world's two largest economies into a trade war. In the meantime, are there legal or policy tools available to American firms to protect them from intellectual property theft? One legal tool is provided by Section 337 of the 1930 Tariff Act. This allows for an expedited investigation of the import of IP-infringing products into the U.S. market, conducted by the U.S. International Trade Commission. These investigations tend to be much faster – and often far less costly – than civil litigation in IP courts. At the same time, many of the legal tools available in patent infringement cases, such as discovery, are available, and can be applied even if the exporting firm is located outside the United States.[15] Under existing law, an administrative law judge has the authority to order U.S. customs to impound IP-infringing imports at the border. While this judgment can be overturned by civil courts, such appeals could take months to years. Section 337 cases therefore offer a useful tool for U.S. firms facing competition with IP-infringing goods in their home market. Most of America's top trading partners have similar provisions in their law, so U.S. multinational firms with significant business operations overseas can often protect their sales in overseas markets through the use of similar tools. A sizable increase in the ITC's budget targeted to section 337 cases could expand the agency's administrative capacity to undertake these investigations and accelerate their speed.

Unilateral Efforts to Strengthen U.S. Technological Leadership in Key Domains. The U.S. government could and should undertake a number of steps to reinforce its technological leadership. American universities remain global leaders in the basic science underlying key domains like artificial intelligence. Unfortunately, the Trump Administration has pushed for deep cuts in government science budgets rather than increases – an unnecessary and self-imposed setback for a president bent on maintaining "American greatness." The other critical ingredient for sustained technological leadership is access to talent. There is a worldwide shortage of individuals trained in AI and related disciplines. Foreign-born students at U.S. universities constitute a large fraction of students pursuing advanced degrees in the sciences and engineering. If President Trump is serious about maintaining U.S. technological leadership, then he should abandon the anti-immigrant positions urged on him by his erstwhile chief strategist, Steve Bannon, and instead immediately embrace greater openness to high-skilled immigration. Arora, Branstetter, and Drev (2013) show that U.S. openness to immigration played a critical role in enabling Silicon Valley to respond to a software-biased shift in technological opportunity in IT – an opportunity Japan's far more restrictive immigration regime effectively closed off to Japanese IT firms. The current administration would do well to heed this lesson.

Conclusions

At the core of the Trump Administration's 301 case against China lies a real problem – China's persistent misappropriation of foreign technology. This longstanding pattern of activity violates China's WTO commitments, distorts international trade and investment, and undermines China's own long-run ability

[15] The absence of a discovery procedure in Chinese civil litigation makes the prosecution of patent infringement much more challenging in that legal context.

to contribute to the advancement of the global technological frontier. The problem is serious enough that it merits action. Unfortunately, the policies and threatened policies put forward by the Trump Administration are unlikely to change China's behavior. By unilaterally threatening high tariffs on a wide range of products, the Administration is already undermining the support of multinational corporations and U.S. trading partners that the better approach outlined here would require. These parties are now concluding – rationally – that the threatened tariffs would be a cure worse than the disease they are meant to remedy.

This policy brief outlines a better approach – one that is multilateral in its operation, limited in scope, and targeted at exactly the behavior the U.S. and its allies seek to change. This approach will regularly produce the kind of detailed data whose absence has prevented effective countermeasures in the past. While the use of the new policy tools – and the more aggressive use of existing policy tools – proposed herein will not be economically costless, the economic costs will be limited, by design, and they stand a reasonable chance of changing the strategic calculus of Chinese entities in a way that could significantly limit misappropriation of foreign technology going forward. The Administration's current path will almost certainly result in failure – but there is still time for President Trump and his advisors to choose a more effective approach.

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OPENING STATEMENT OF MARK COHEN, HEAD OF THE ASIA IP PROJECT, UNIVERSITY OF CALIFORNIA AT BERKELEY; FORMER SENIOR COUNSEL, U.S. PATENT AND TRADEMARK OFFICE

HEARING CO-CHAIR HUBBARD: Thank you.

Mr. Cohen.

MR. COHEN: Thank you very much, Mr. Chairman, for the opportunity of speaking before you today on this important topic.

It's an honor to be here again. I will not summarize my written statement although I do look forward to your questions on it.

I will focus on two timely issues: one, WTO developments since my written statement of last week; and two, China's IP regime at this moment.

Regarding WTO remedies, precisely one week ago at the same time I was preparing my written statement, the EU filed a request for consultations with China at the WTO that significantly overlaps with the U.S. request of March 23 and improves upon it.

The EU complaint is in a modest sense "bigger and bolder," to use the prior session's terms. While the complaint, U.S. complaint, addresses licensing of patents, the EU complaint addresses licensing of technology. The EU also appears to be addressing trade secret issues, data transfer and antitrust issues.

Interestingly, the EU did not participate in the 2007 IP enforcement case that the U.S. brought, but it's now bringing this case separately from the United States.

Notably, the EU raises concerns that I also raised in my testimony before the Commission in 2015 regarding the relationship between technology transfer, antitrust--and antitrust.

In addition, the EU implicates WTO principles such as nullification and impairment, which we just spoke about this morning.

As you can tell, and as I believe this morning's panel also agreed, I believe this more expansive approach deserves our support, however quixotic it may be, and it should probably be taken in conjunction with other domestic measures.

My second point concerns China's current IP regime. Ironically, China is now finally addressing many IP issues that the U.S. has long sought to change, albeit in its own interests. Some of these have been the subject of a WTO case, particularly those involving transparency and criminal enforcement.

China has also, and I believe threateningly, incorporated IP into its state plans, and it's applying a range of tools to advance its goal to becoming an innovative economy, albeit in a statist and mercantilistic manner.

Over the next few years, whether or not our 301 effort succeeds, China will be amending its patent copyright and antitrust laws. It will deepen pharmaceutical IP protection. It will be a major player in 5G standards, artificial intelligence, big data and software and business method innovations.

It will be consolidating and perhaps unfairly increasing IP and antitrust enforcement in its new Market Supervision Administration Agency. And it will perhaps launch a new national appellate IP court like our Court of Appeals for the federal circuit. Its licensing revenue will likely increase and its patent and trademark filings, already the largest in the world, will further increase as well as its courts' dockets.

Moreover, these increases will be largely on the basis of Chinese applicants, not foreign applicants. U.S. companies will increasingly be minorities and they will increasingly migrate from being plaintiffs in IP cases to being defendants.

The U.S. was suffering self-inflicted wounds before this 301 started. Our IP regime has grown weaker. We have cut science funding. STEM education needs to be revitalized. We have turned a blind eye and often ignored critical data. 301 is only one part of this story. I believe the proper response, and some of the speakers at this morning's panel also addressed this, is to make this a bit of a Sputnik moment and shifting our priorities, reorganizing ourselves, and rethinking our strategies to ensure that we remain competitive.

And while we fight our trade battles, we should also keep in mind that there are individual U.S. companies, small and large, who may be fearing retaliation who are also fighting for their own rights before Chinese IP agencies and Chinese courts, and increasingly doing this on our own soil.

This is the general repeating pattern, a problem that has appeared over the past few years. A U.S. company brings an action in the United States or another jurisdiction for patent or trademark or copyright infringement. The Chinese company brings a retaliatory action in a home court enforcing dubious patent rights or even seeking an antitrust remedy. The Chinese court accelerates its procedures--and it's the quickest docket in the world--to render a judgment in advance of the U.S. court.

Because of the chokehold of the Chinese market, the U.S. company is forced into settling, which results in a global cross-license allowing the Chinese company to continue to conduct business using what we now call stolen IP. This is using legal measures to obtain stolen IP.

These are Chinese fingers on the scales of justice, and we should address these issues openly and if necessary in the WTO or elsewhere. Can you imagine if a U.S. judge acted like the Chinese judges in Huawei versus Interdigital and not having their case published and saying that, quote, "Chinese companies should break through technical barriers in the development of space for their own gain through bold use of antitrust litigation against foreigners"?

I can point to other similar statements and actions by other judges and officials which openly have suggested bias in favor of Chinese entities.

Finally, I conclude as I did in 2015 that I think the IP Attache Program is an excellent example of a program that can fulfil many of the needs we have in developing coordination and incentives for interagency collaboration on the complex issues arising in China, and in this respect I disagree a little bit with the earlier panel. I think that the U.S. government depth in these issues is not nearly as deep as people would assume. We have to go much deeper. We're not using the new tools available to us, whether it's big data, artificial intelligence or others, and a lot more data is available now compared to ten years ago.

Regarding the Attache Program, Senator Grassley described the role of the attaches in his recent confirmation hearing of PTO Director Iancu. He says that this problem helps to promote U.S. intellectual property, policy and standards, as well as to improve foreign intellectual property systems and intellectual property enforcement for the benefit of American stakeholders.

I encourage the Commission to support the elevation of the attache rank and any other effort that brings greater coordination and competence to USG efforts in this difficult market.

Thank you very much.

PREPARED STATEMENT OF MARK COHEN, HEAD OF THE ASIA IP PROJECT, UNIVERSITY OF CALIFORNIA AT BERKELEY; FORMER SENIOR COUNSEL, U.S. PATENT AND TRADEMARK OFFICE

Statement of Mark Allen Cohen

Director and Distinguished Senior Fellow

Berkeley Center for Law and Technology

University of California at Berkeley

June 8, 2018

Before the U.S.-China Economic and Security Review Commission

These comments are submitted to the US-China Economic and Security Commission (the "Commission") in my personal capacity. I want to thank the Commission for the opportunity of again appearing before it. My last appearance before the Commission was on January 28, 2015, when I discussed the relationship between antitrust and IP policies in China on behalf of USPTO.[1] I have also been pleased to testify before your sister commission, the US China Congressional Commission, on rule of law and its relationship to intellectual property protection in China, which is also of great concern to me.[2]

My focus today will be on how to engage China on intellectual property issues, rather than the important standards concerns which the Commission has also identified.[3] However, even

[1] See Mark Cohen, "Hearing on the Foreign Investment Climate in China: Present Challenges and Potential for Reform" (January 28, 2015), https://www.uscc.gov/sites/default/files/Mark%20Cohen_testimony.pdf. Note all links to web pages in this testimony were viewed during May 2018.

[2]See Mark Cohen, "Ownership with Chinese characteristics: Private Property Rights and Land Reform in the PRC" (February 3, 2003), https://www.cecc.gov/sites/chinacommission.house.gov/files/documents/roundtables/2003/CECC%20Roundtable%20Testimony%20-%20Mark%20Cohen%20-%202.3.03.pdf.

[3]Those aspects of the proposed topics that focus on IP that are: Describe the current Chinese regulatory and informal challenges US companies face regarding IP (whether patent, copyright, trade secrets) rights. Have these challenges appeared in other contexts, and in what way are these challenges unique? How have these challenges evolved? [Describe the Chinese standards setting bodies and processes In what ways does the Chinese technical standards setting process mirror the U.S. or other countries' standards setting processes, and in what ways is it unique? What challenges do Chinese technical standards present for U.S. companies with Chinese operations, Chinese suppliers, or selling into the Chinese market?]; What domestic policy tools and sources of leverage does the United States have at its disposal to address Chinese IP [and technical standards] challenges? How have these police tools and sources of leverage been used in the past? Which agencies or actors were responsible for employing these tools? What gaps emerged from that experience? What multilateral policy tools and sources of leverage does the United States gain by working with other countries on Chinese IP [and technical

within the topic of intellectual property, the questions that the Commission has posed are broad. I will respond today in three categories: (a) what are the current IP challenges that US companies face in China today; (b) have past strategies been successful/what are the tools (domestic/international) that the United States had at its disposal; and (c) policy recommendations.

I. Current IP Challenges and the Section 301 Report

USTR's extensive Section 301 report, which was released on March 22, 2018,[4] (the "301 Report") gave voice to many long-standing concerns of myself and others, including foreign businesses, regarding China's efforts to become an innovation superpower as well as US government strategies to address China's innovation strategies. Based on discussions I have held in China with foreign businesses over the past several months, I believe that there is also widespread industry support for the 301 Report. However, many have also expressed concern about: negotiating strategies, choice of tools to address concerns (tariffs), and topics that may not be fully addressed in the report.

a. The Section 301 case discusses critical but oft-ignored topics and deserves support

In my experience, we have only recently, as a government, systematically addressed the technological mercantilism our trade, science, and IP diplomacy with China. However, we are not well organized as a government to address these matters. The United States has historically prioritized other important concerns such as trademark counterfeiting, copyright piracy, criminal enforcement of intellectual property, and worldwide traffic in counterfeit goods, which continue to cause great harm to US industry and the global economy.

As an example of this disinterest, the "IP Enforcement case" (DS/362) that the US brought in 2007 at the WTO against China did not implicate patents, trade secrets, technology licensing or civil enforcement of intellectual property. Indeed, in media interviews and speeches at that time, I argued that these issues were still important but were temporarily "orphaned."[5]

As another example, forced technology transfer, which is at the heart of the 301 Report, was not a significant topic of discussion in the decade following China's WTO accession. Japan, however, officially raised issues concerning discriminatory treatment of foreigners in China's

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standards] challenges?; Assess the success of the strategies used by the US government and industry to address challenges posed by Chinese IP [and standards] policies. What are the gaps? How could the United States increase the effectiveness of its efforts? The Commission is mandated to make policy recommendations to Congress based on its hearings and other research. What are your recommendations related to Congressional action related to the topic of your testimony?

[4] In the interest of full disclosure, I was on leave from USPTO from November 27 – March 30 and did not participate beyond the initiation of this report. In any event, my opinions are derived from my general understanding of the bilateral environment and are my own alone.

[5] See, e.g., Mark A. Cohen, "China's Orphaned Issues" in "Politics and IP in China Explained", Managing IP (Oct. 2008) at 24.

technology licensing regime at the WTO in 2002[6], arising from the Administration of Technology Import/Export Regulations (the "TIER") enacted by China one day before it acceded to the WTO (Dec. 10, 2001)[7], which is now the subject of a WTO dispute between the US and China.[8] As I testified to the Commission in 2015[9], these regulations impose discriminatory obligations on US licensors to China to provide non-waivable indemnities against third party risks, mandatory ownership of improvements by the licensee, and reasonable access to foreign markets which do not attach to a Chinese technology export or a domestic Chinese licensing transaction. The United States waited 17 years to raise this issue to the WTO.

There are numerous examples of USG disinterest in technology licensing: the comprehensive 2010 USITC Report on indigenous innovation in China did not discuss the Administration of Technology Import/Export Regulations. [10] In testimony by USTR on IP issues in 2006 before this Commission, the terms "innovation", "patents", "civil enforcement", "trade secrets" and even "courts" do not appear.[11] The Model BIT that was the basis for negotiations with China similarly does not enumerate technology licensing as an "investment". [12] In 2016, staff for this Commission prepared an excellent report on the proposed BIT which similarly did not discuss technology licensing.[13] At about the same time as this report, when USPTO raised the issue of ownership of improvements to technology in bilateral technical cooperation on

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[6] See WTO, Sept 10, 2002, IP/C/W/374, Responses from China to the questions posed by Australia, the European Communities and their member States, Japan and the United States Review of Legislation at Para. 68; WTO, IP/C/W/430 Nov. 16, 2005, Transitional Review Mechanism of China, Communication from Japan.

[7] CCPIT Patent and Trademark Law Office, "Regulations on Technology Import and Export Administration of the People's Republic of China" (December 10, 2001), http://www.wipo.int/wipolex/en/details.jsp?id=6585

[8] See Delegation of the U.S., "China—Certain Measures Concerning the Protection of Intellectual Property Rights" (March 23, 2018), https://docs.wto.org/dol2fe/Pages/FE_Search/FE_S_S009-DP.aspx?language=E&CatalogueIdList=244046&CurrentCatalogueIdIndex=0&FullTextHash=&HasEnglishRecord=True&HasFrenchRecord=True&HasSpanishRecord=True .

[9] See Mark Cohen, "Hearing on the Foreign Investment Climate in China: Present Challenges and Potential for Reform" (January 28, 2015), https://www.uscc.gov/sites/default/files/Mark%20Cohen_testimony.pdf, at pp. 7 – 8; see also my testimony before the House Judiciary Committee (June 7, 2016). Mark Cohen, "International Antitrust Enforcement: China and Beyond" (June 7, 2016), https://www.uspto.gov/about-us/news-updates/statement-mark-cohen-house-committee-judiciary.

[10] United States International Trade Commission, "China: Intellectual Property Infringement, Indigenous Innovation Policies, and Frameworks for Measuring the Effects on the U.S. Economy" (November 2010), https://www.usitc.gov/publications/332/pub4199.pdf.

[11] See Timothy P. Stratford, "China's Enforcement of Intellectual Property Rights and the Dangers of the Movement of Counterfeit and Pirated Goods into the United States" (June 7, 2006), https://ustr.gov/archive/assets/Document_Library/USTR_Testimony/2006/asset_upload_file166_9552.pdf

[12] See "2012 Model Bilateral Investment Treaty" (2012), https://www.state.gov/documents/organization/188371.pdf . Compare, Article 2 of the TIER, which provides "technology import and export … means acts of transferring technology … by way of trade, investment, or economic and technical cooperation…. includ[ing] assignment of the patent right, assignment of the patent application right, licensing for patent exploitation, assignment of technical secrets, technical services and transfer of technology by other means." (http://www.wipo.int/wipolex/en/text.jsp?file_id=182583).

[13] Lauren Gloudeman and Nargiza Salidjanova, "Policy Considerations for Negotiating a US-China Bilateral Investment Treaty" (August 1, 2016), https://www.uscc.gov/Research/policy-considerations-negotiating-us-china-bilateral-investment-treaty

clean energy[14] to the GAO, this matter was identified as a "potential discrepancy" only. Since that time, this dissenting position regarding the discrimination foreigners face in China's licensing regime has become the dominant position, as evidenced by the WTO case filed by the Trump Administration.[15]

There had been prior efforts to better understand China's licensing policies in recent years. USPTO, which I represented, repeatedly raised concerns about China's licensing regime at JCCT and other meetings during the second half of the Obama Administration[16] - at about the time I returned to the US Government. We also organized three separate programs on this topic with the State Intellectual Property Office and the Ministry of Commerce,[17] as well as a program comparing licensing practices with Taiwan.[18] I believe the lack of focus on licensing did not reflect a range of concerns of the highly competitive licensing sector of the US economy.[19]

USTR has ably documented other significant challenges in China's IP protection in both the 301 Report and its Annual Special 301 Report on global IP issues (the "Special 301 Report"). [20] I will use the balance of my time to address some areas where there are opportunities for improvements which may have not received adequate attention by USTR or this Commission. These include: the establishment of specialized IP courts and the expected establishment of a national appellate IP court, as well as numerous reforms and experiments in handling of IP litigation; the publication of cases of all types, including over 400,000 IP cases[21]; expanded

[14]Government Accountability Office, "US China Cooperation, Bilateral Clean Energy Programs Show Some Results but Should Enhance Their Performance Monitoring" (July 2016) "The U.S. Patent and Trademark Office has identified a potential discrepancy between Chinese law and the bilateral U.S.-China Science and Technology Agreement upon which the IP Annex to the CERC Protocol is based, according to U.S. Patent and Trademark Office officials. These officials stated that the potential discrepancy is related to ownership of any improvements made to IP licensed between U.S. and Chinese entities…." (https://www.gao.gov/assets/680/678214.pdf, at p. 27).

[15] See U.S. Chamber of Commerce, "U.S.- China IP Cooperation Dialogue" (2016) http://www.theglobalipcenter.com/wp-content/uploads/2017/06/ChinaReportEnglishFinalPDF.pdf at pp. 7-9. ("The current China technology import and export regulations that have impaired or threaten to impair greater technological collaboration between China and other countries… All of the Dialogue experts believe that the freedom to contract should be honored in cross-border technology collaboration.")

[16] See Hon. Bruce Andrews, "Remarks at Conference Hosted by the United States Patent and Trademark Office and George Mason University" (June 8, 2016), https://www.commerce.gov/news/deputy-secretary-speeches/2016/06/us-deputy-secretary-commerce-bruce-andrews-delivers-remarks-0

[17] Mark Cohen, "Two Upcoming Events: Innovation and Technology Licensing" (March 14, 2017), https://chinaipr.com/2017/03/14/two-upcoming-events-innovation-and-technology-licensing/ (MofCOM program); Mark Cohen, "USPTO/SIPO Program on Patent Licensing and Technology Transfer—A Quick Readout on a 41 Billion Dollar Business" (April 28, 2015), https://chinaipr.com/2015/04/28/usptosipo-program-on-patent-licensing-and-technology-transfer-a-quick-readout-on-a-41-billion-dollar-business/

[18] Conor Stuart, "USPTO Senior Counsel on China Mark Cohen on Patent Monetization and Protections in China and Taiwan" (April 28, 2017), http://en.naipo.com/Portals/0/web_en/Knowledge_Center/Feature/IPNE_170428_0701.htm.

[19] Thomas T. Moga, "Tech Transfer Turning Point?", China Business Review (Sept-Oct 2010), at 30.

[20] Office of the U.S. Trade Representative, "Special 301" (2018), https://ustr.gov/issue-areas/intellectual-property/Special-301

[21] http://en.iphouse.cn/; for statistical studies see http://en.iphouse.cn/report.html. IP House is one of several IP or legal database services, including a government-run judicial database.

protection for software and business method patents; and pharmaceutical-related IP reform and technological protectionism in the IP system. I do not believe that I can fairly cover all IP concerns in the few pages allotted to me; I have therefore selected these issues as being representative of other developments.

b. IP improvements in China also require USG support and legal analysis

Specialized courts: China's creation of specialized IP courts, and particularly, the Beijing IP Court, has captured the attention of academics and practitioners alike. This court has undertaken notable experiments in such areas as citation to cases and use of case law; drafting of shorter and more to the point judicial opinions; the introduction of dissenting opinions and en banc decisions by judges; experimentation with amicus briefs; and diminished role of behind the scenes adjudication committees. Many of these experimental reforms had been long sought after by US industry associations[22] and the Bar,[23] albeit – as with licensing - largely outside of the 301 context. These reforms have also been accompanied by increased transparency. According to one estimate, the Beijing IP Court is publishing 95% of its cases.[24] Foreigners also generally appear to be treated fairly. For example, in 2015, foreigners reportedly won 100% of their infringement cases in this court. [25]

High success rates are not limited to this one court. A doctoral candidate at Berkeley Law, Renjun Bian, looking specifically at China-wide patent litigation in 2014, has concluded that "foreign [invention] patent holders were as likely to litigate as domestic [invention] patent holders, and received noticeably better results – higher win rate, injunction rate, and average damages."[26]

More comprehensive data of this type has increasingly become available resulting from the decision by the Supreme People's Court to make judicial decisions publicly available beginning in 2014.[27] Amassed cases now total as much as 470,000, and have been the subject of

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[22] U.S. Chamber of Commerce, "U.S.- China IP Cooperation Dialogue" (2013), http://www.theglobalipcenter.com/wp-content/uploads/2013/01/US_China_IP_Cooperation_FINAL-FULL.pdf; Mark A. Cohen "The Widening Impact of China's Publication of IP Cases" (April 10, 2018), https://chinaipr.com/2018/04/10/the-widening-impact-of-chinas-publication-of-ip-cases/; "Historic USA-China IP Event" (2012), http://www.cafc.uscourts.gov/announcements/historic-usa-china-ip-event-0; He Jing, "Will China Welcome Amicus Briefs in Patent Cases?" (December 14, 2015), http://en.anjielaw.com/jobs_detail/newsId=337.html .

[23] Mark Cohen, "China as An IP Stakeholder" (June 2, 2012), https://chinaipr.com/2012/06/02/china-as-an-ip-stakeholder/#more-402 .

[24] Max Goldberg, "Enclave of Ingenuity: The Plan and Promise of the Beijing Intellectual Property Court" (May 19, 2017), https://elischolar.library.yale.edu/ceas_student_work/4 .

[25] Jacob Schindler, "The Beijing IP Court Gave Foreign IP Plaintiffs a Perfect 65-0 Win Rate in 2015, Reports One of its Judges" (July 4, 2016), http://www.iam-media.com/blog/Detail.aspx?g=8dc59dc8-6405-4b86-b241-27e89afc6089.

[26] Renjun Bian, "Many Things You Know about Patent Infringement Litigation in China Are Wrong" (October 1, 2017). Available at SSRN: https://ssrn.com/abstract=3063566 or http://dx.doi.org/10.2139/ssrn.3063566

[27] See Benjamin L. Liebman, Margaret Roberts, Rachel Stern and Alice Wang, "Mass Digitization of Chinese Court Decisions: How to Use Text as Data in the Field of Chinese Law" (June 13, 2017). 21st Century China Center

analytical studies on a range of issues.[28] Trade authorities' utilization of this database has unfortunately been limited, despite the United States having: specifically requested China to make its IP cases available in 2005[29] as part of a so-called "Article 63 request" at the WTO; a JCCT outcome in 2015 that required both the United States and China to engage on development of judicial IP case databases; and a high-level U.S. delegation in 2016 that further discussed this topic.[30]

IP case data assessment: Although this judicial data is invaluable, I believe it is too early to make comprehensive assessments on how foreigners are treated in Chinese courts, as we still need to better engage and understand these databases, and additional adjustments to data should likely be made based on the quality of the right being asserted, the quality of the lawyers handling the matter, how many cases are being rejected entirely, handling of motions and settlements that may not be reported, comparisons to other countries, etc. However, the data provides important insights on judicial behavior and may be used to expose weaknesses in the Chinese system. The Commission may want to hold a separate hearing to discuss this important development, its strengths and weaknesses, and its implications for rule of law and commerce at some time in the future.

Software protection and business method patents. Another notable area where China has made improvements is in protection of software and business method patents.[31] Changes in statutory and case law as well as USPTO practice in recent years, much of it addressing patent "trolls" or other forms of abuse, has made it more difficult to obtain these rights by deeming them too "abstract" and to enforce these rights, through making injunctions and other remedies less easily available. As Professors Madigan and Mossoff of George Mason University have noted in their recent paper *Turning Gold to Lead*, "other jurisdictions like China and the European Union become forerunners in securing the new innovation that drives economic growth and flourishing societies."[32] These pro-IP changes in China are coupled with other

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Research Paper No. 2017-01; Columbia Public Law Research Paper No. 14-551. Available at SSRN: https://ssrn.com/abstract=2985861 or http://dx.doi.org/10.2139/ssrn.2985861.

[28] http://www.iphouse.cn/report.html (statistical reports) and http://www.iphouse.cn/.

[29] WTO, IP/C/W/461, Communication from the United States, Request for Information Pursuant to Article 63.3 of the TRIPS Agreement (Nov. 14, 2005).

[30] US Fact Sheet: 26th Joint Commission on Commerce and Trade. https://www.commerce.gov/news/fact-sheets/2015/11/us-fact-sheet-26th-us-china-joint-commission-commerce-and-trade; Mark Cohen, "US-China Conclude High Level Exchange on Judicial Reform and Commercial Rule of Law", https://chinaipr.com/2016/08/06/us-china-conclude-high-level-exchange-on-judicial-reform-and-commercial-rule-of-law/.

[31] Mark Cohen, "SIPO Publishes Proposed Revisions to Patent Examination Guidelines" (October 27, 2016), https://chinaipr.com/2016/10/27/sipo-publishes-proposed-revisions-to-patent-examination-guidelines/; See Steve Brachmann, "Revised Chinese Patent Guidelines Mean Better Prospects for Software, Business Methods Than U.S." (December 20, 2016), http://www.ipwatchdog.com/2016/12/20/chinese-patent-software-business-method/id=75978/.

[32] Kevin Madigan and Adam Mossoff, "Turning Gold to Lead: How Patent Eligibility Doctrine Is Undermining U.S. Leadership in Innovation" (April 13, 2017). George Mason Law Review, Forthcoming; George Mason Law & Economics Research Paper No. 17-16. Available at SSRN: https://ssrn.com/abstract=2943431.

factors including: massive Chinese investments in AI, big data, and other software-dependent industries; limited foreign market access in China in many IT-intensive areas; the increasing global dominance of Chinese IT companies with the reservoir of data they have acquired; and China's huge supply of STEM talent, to likely pose a significant threat to US IT companies in the future.

IP Reform for pharmaceuticals. Another area where significant progress is expected is pharmaceutical IP protection. During the past few years, the China Food and Drug Administration (CFDA) has proposed several notable reforms in pharmaceutical IP protection that may significantly stimulate the development of innovative pharmaceutical products in China as well as their timely introduction into Chinese and foreign markets. These include: creating a patent linkage regime, similar to our Hatch-Waxman regime[33] whereby CFDA regulatory approval is denied to infringing products; providing opportunities for protection of clinical data against unfair appropriation by third parties; and patent term extension to compensate for regulatory delays in introducing innovative, patented medicines. In fact, on May 30, 2018 Berkeley Law concluded a half day program on the incentives provided by these proposed laws for start-up drug discovery firms in the Bay Area to an overwhelmingly supportive audience.

Of course, promised changes in the patent laws by themselves do not guarantee that foreigners will be afforded adequate protection. For example, the United States has sought for several years to improve China's handling of pharmaceutical patent applications by permitting post-patent filing supplementation of pharmaceutical data, and has obtained commitments to that effect, but with limited success.[34]

c. Challenges requiring re-evaluation

Treatment of foreigners by China's patent office. In seeking to address the impact of Chinese industrial policies on protection of IP, I believe that we should increasingly utilize big data type analyses, which are also left out of the 301 Report. One of the approaches that can provide answers for that question in terms of patent office practice is found in the research of Profs. Gaétan de Rasenfosse and Emilio Raiteri in *Technology Protectionism and the Patent System: Strategic Technologies in China* (2016).[35] Using data on about one half million patent applications filed in China, these researchers found no, or only weak, evidence of anti-foreign

[33] The Drug Price Competition and Patent Term Restoration Act (Public Law 98-417).

[34] Office of Public Affairs, "U.S.-China Joint Fact Sheet on 25th Joint Commission on Commerce and Trade" (December 29, 2014), https://www.commerce.gov/news/fact-sheets/2014/12/us-china-joint-fact-sheet-25th-joint-commission-commerce-and-trade ("The U.S. and China have been maintaining a useful and informative discussion on the supplementation of data, since the 24th JCCT in 2013, and China has made improvements on the practice pursuant to Chinese laws and regulations. Both sides affirm that continued exchanges and engagement on specific cases are beneficial.").

[35] See Gaétan de Rassenfosse and Emilio Raiteri, "Technology Protectionism and the Patent System: Strategic Technologies in China" (July 1, 2016). Available at SSRN: https://ssrn.com/abstract=2803379 or http://dx.doi.org/10.2139/ssrn.2803379.

bias in the issuance of patents overall. However, foreign applications in technology fields that are of strategic importance to China are four to seven percentage points less likely to be approved than local applications, all else equal. Given the importance of industrial policy in China and the country's strong focus on indigenous innovation and intellectual property, the empirical results provide a case of technology protectionism by means of the patent system.

Data-driven engagement is particularly persuasive when engaging with China's planned approach to innovation and economic growth. In response to such needs, USPTO launched a China IP Resource Center to support better data-driven analysis. This office works closely with USPTO's Office of the Chief Economist. In addition, since I have relocated to Berkeley, we are launching a series of informal roundtables with experts from various sectors to exchange views on conducting empirical research in China who are also engaged in such empirical research.

II. (a) Have past strategies been successful/(b) what are the tools (domestic/international) that the United States had at its disposal

In general, I believe the currently dispute vs dialogue approach to engaging China on trade-related intellectual property has not achieved its promise. Equally important, there is no single "silver bullet" for resolving many long-standing issues. Instead, coordinated, principled, informed, pro-active and multi-faceted long-term approaches – which may include WTO or non-WTO remedies – seem to work best.

a. Successful strategies

Specialized IP Courts. Perhaps the most notable IP success in recent years is the establishment of specialized IP courts, including the anticipated establishment later this year of a national appellate IP court, similar to our Court of Appeals for the Federal Circuit. The establishment of these courts reflects two decades of engagement by organizations such as the USPTO, the U.S. Court of Appeals for the Federal Circuit and the Federal Circuit Bar Association, including former Chief Judge Randall Rader and a succession of USPTO Directors including Jim Rogan, Jon Dudas, David Kappos and Michelle Lee, as well as my own efforts.

Targeting technical training. USPTO pursued several notable efforts to address weaknesses in China's patent examination system in certain technical areas, including design patent protection for graphical user interfaces and permitting the supplementation of relevant data after the filing of pharmaceutical patents. Similar efforts were undertaken to address trademark prosecution and copyright protection practices and have borne results in many well-defined areas.

USPTO Road Shows. Among the more constructive recent engagements involving China has been the re-initiation of USPTO "road shows" on China IP. In recent years, these "road-shows" have traveled throughout the country several times per year.[36] The road-shows introduce a

[36] USPTO, "China IP Road Shows" (2018), https://www.uspto.gov/learning-and-resources/ip-policy/china-ip-road-shows.

range of USG resources, team up with local experts, collect information on challenges companies face, and educate companies.[37] As IP is fundamentally a private right, informed and strategic pressure from US rights holders has the important added benefit of helping the US government in its support of IP advocacy.

Successful engagement pathways. Generally successful engagement follows a similar path: industry might bring an issue to our attention directly or USG may proactively notice it based on our own research; technical engagement commences with discussions among USG experts which might include any necessary training from USPTO. If the issue were susceptible of empirical research, data was obtained to advance our positions. If the issue involved law enforcement or antitrust, a collaborative program with colleagues in relevant agencies might be undertaken. Often this engagement was followed by diplomatic initiatives with foreign governments. US companies or trade associations often further bolstered these efforts with meetings and programs, sometimes involving academic institutions. If necessary, issues might be progressively elevated to include the Under Secretary level (e.g., Director's Office of the USPTO), cabinet level (the Secretary of Commerce) or even higher. Rarely, a case might also result in a decision to file a WTO dispute.

In fact, since China joined the WTO, there have been a total of 20 disputes filed by the United States, of which only two involved intellectual property. The second such case was only filed this past March, after exhausting many of the enumerated steps in the prior paragraph. Although many doubt the efficacy of the WTO, I personally believe that WTO-cognizable disputes should be exhausted before they are dismissed, and that merely raising a reasonable case at the WTO also helps alert all global trading partners of a potential issue which can add additional pressure.

b. Setbacks and weaknesses

WTO case fell short of requiring legal changes. Of course, not all efforts were successful and there have been any number of disappointments. DS/362, the earlier IP case that the US brought against China, is instructive on how best to approach failed engagements. The most significant claims in that case in my estimation involved two matters (a) increased criminal enforcement against counterfeiting and piracy, and (b) increased transparency (via the "Article 63 Request"). Most observers would agree that the United States lost on both of these claims, at least in terms of requiring China to change its laws or produce relevant cases.

It can also be argued with the benefit of hindsight that the US won on both claims. As indicated, China has decided to publish its cases. According to data from 2016, Criminal IP cases have increased since the US "lost" the case. There were 8,352 first instance criminal cases in 2016 involving intellectual property and IP-related crimes, involving 10,431 persons.

[37] See Houston, Texas China road show agenda (May 5, 2017) at http://www.adduci.com/sites/default/files/2017.05.05-tentative-agenda-for-china-ip-road-show.houston.may2017.pdf .

Depending on how IP crimes are calculated, there may have been an increase of perhaps 11 times since 2006.

Whatever the magnitude of the increase, Chinese officials have told me that China has in fact begun encouraging using criminal remedies to address IP infringement, much as was requested by the USG in the WTO case. I believe however that this does not mean that cases are proceeding in areas of importance to the United States. In 2016 only 207 of these criminal cases involved copyright matters, and only 40 cases involved the critical area of criminal trade secret enforcement (involving 43 people).[38] Recently released 2017 data shows that there was a further 35% decline in criminal IP enforcement of trade secrets to only 26 cases.[39] As there is no general obligation for WTO members to implement criminal trade secret regimes,[40] USG should be actively monitoring developments in this area to insure equality of treatment, as well as use all possible tools to prevent and address state-sponsored trade secret theft and support continuing pressure for cooperation on trans-border cases. USG also needs to continue to promote free trade agreements that create an appropriate international standard for criminal trade secret enforcement.

Additional resources less immediately important than coordination and technical personnel: Congress when it looks at IP and similar trade challenges in China is often tempted to provide additional resources to leading trade agencies. I believe that is often an unnecessary first step. When I was at the US mission in Beijing from 2004-2008, there were over 50 US diplomats tasked with IPR duties of various kinds, and an additional 250 USG officials throughout the world concerned with IP issues in China. While this represented a huge commitment of resources, very few of our officials had the "magic" three skills: knowledge of US IPR law and practice, proficiency in Chinese, and familiarity with Chinese law.[41] Much of my time was spent training and informing the USG team on Chinese law and IP priorities that they could address within their areas of expertise. Finally, as trade agencies increased in staffing and size, they often become less inclined to rely on the expertise of other agencies, creating greater potentials for miscoordination unless a priority is placed on sharing of information, economizing resources and training.

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[38] 中国法院知识产权司法保护状况（2016 年）（Situation With Respect to Chinese Judicial Intellectual Property Protection – 2016） http://www.court.gov.cn/zixun-xiangqing-42362.html. There appears to have been a drop in cases in 2017; See "知产保护更严社会满意度更高 (Intellectual Property Protection is More Strict, Society is More Satisfied)", (April 25, 2018", https://www.chinacourt.org/article/detail/2018/04/id/3280090.shtml (2,510 prosecutions).

[39] 中国法院知识产权司法保护状况（2017）(The Current Situation Regarding Chinese Courts' Judicial Protection of IP (2017) at p. 5 (available from the author).

[40] TRIPS Agreement, Art. 61 (obligations regarding criminal trademark counterfeiting and copyright piracy).

[41] Government Accountability Office, "Overseas US Government Personnel Involved in Efforts to Protect and Enforce Intellectual Property Rights" to Reps. Conyers, Berman and Coble (February 26, 2009), http://www.gao.gov/new.items/d09402r.pdf

Improving diplomatic rank for China-based IP attachés. Currently USPTO has two highly experienced attachés in China, Duncan Willson in Beijing and Michael Mangelson in Shanghai. A third is expected shortly in Guangzhou. These officials are often tasked by the Ambassador, as I was, with coordinating policy and engagement on IP for the US Mission as a whole. Unfortunately, due to USPTO's relatively weak political status in the interagency, they do not command a diplomatic title commensurate with their value and experience (First Secretary). Their rank is also lower than the one IP Attaché that China posts to the US (Counselor). They may consequently encounter difficulties in arranging meetings both within and outside the Embassy, including with visiting Congressional delegations or senior leadership. [42] Academic[43] and non-profit organizations and think tanks, such as The Commission on the Theft of American Intellectual Property[44] (the "IP Commission") and the USPTO's Patent Professional Advisory Committee ("PPAC"),[45] have urged that the State Department and Commercial Service elevate their status to no avail thus far.

Defunding of innovation coordination and research agencies. On innovation policies generally, one wonders if the US would not have benefitted today if some of the more important organizations that engage on innovation issues had not been defunded during the past twenty years, notably the Office of Technology Assessment of Congress, which prepared the important report *Technology Transfer to China* in 1987[46], in which it identified government plans and interference in the market as concerns for US transfers of technology. Many of the individuals who prepared the OTA report were acknowledged experts in the field with knowledge of Chinese, who were often at the beginning of distinguished careers as academics or diplomats. Another defunded organization was the Technology Administration (1980-2007) of the Department of Commerce which also helped in "developing policies to maximize science

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[42] Diplomatic List (Spring 2015), https://2009-2017.state.gov/documents/organization/244105.pdf at p. 17 (Ms. Ning Yu).

[43] "When it comes to cooperating and consulting about IP issues, some participants argued that there is no formal structure in place in overseas missions to ensure a coordinated presence by the U.S. Patent and Trademark Office or to undertake engagement with foreign counterparts at a suitable diplomatic rank. Structural impediments impact business groups and law firms, both of which have limited "boots on the ground" in China. …The United States should also align the staffing and processes used for engagement with the Chinese government and commercial entities so as to understand better and advocate for U.S. commercial and IP interests." Columbia University, "China's Economic and Trade Relations" (2012), (https://www8.gsb.columbia.edu/apec/sites/apec/files/files/ChinConfRpt412.pdf at 8.

[44] "The US should 'Strengthen U.S. diplomatic priorities in the protection of American IP', The IP Commission, "Update to the IP Commission Report" (2017), at p. 17. http://www.ipcommission.org/report/IP_Commission_Report_Update_2017.pdf. The first edition of this report noted that US embassies should "giv[e] appropriate senior rank to [the] IP attaché". "The IP Commission Report" (2013), at p. 75.

[45] PPAC "support[s] the raising of the current mid-level rank of USPTO IP Attachés by one level, which would give USPTO IP Attachés greater access to senior host government officials, Ambassadors at their respective embassies and senior industry representatives, while also allowing them to accomplish more effectively their mission[.]", letter of November 6, 2017 to President Donald Trump enclosing PPAC 2017 Annual Report at p. 4.

[46] U.S. Congress Office of Technology Assessment, "Technology Transfer to China" (July 1987), http://ota.fas.org/reports/8729.pdf .

and technology's contribution to America's economic growth, support entrepreneurship and innovation, strengthening U.S. technology cooperation with other countries, enhancing research and development in our nation's federal laboratory systems, and creating greater collaboration between government, industry, and universities".[47] More recently, a useful model for complex collaborative work on innovation has been undertaken by the Department of Defense with the University of California at San Diego. Its research is widely cited in the 301 Report.[48]

Interagency coordination and delineation of responsibilities. Fundamentally, US government structures, particularly diplomatic structures to promote IP protection, need to be realigned in China to address increasingly complex and sophisticated issues that require technical, legal and linguistic expertise and coordination amongst a vast range of government agencies of differing resources, knowledge and authority. In my view, the first step towards resolving this problem is not more money, but smarter allocations of responsibility including providing clearer incentives for agencies to coordinate amongst themselves and with industry.[49]

2(b) What are the tools that the United States has at its disposal.

More WTO IP Cases. Although the US has not actively used the WTO for IP-related disputes with China, I believe that there are additional WTO cases that could be filed if further research supports it, including such areas as: state sponsorship of infringement by SOE's or the Chinese government itself; misuse of antitrust law in a manner inconsistent with the TRIPS agreement; other instances of discriminatory treatment (tax preferences, standardization, procurement, local protectionism, etc.) based on preferences for Chinese ownership of IP rights; discriminatory IP protection and enforcement practices based on empirical research; and perhaps a WTO Non-Violation Nullification or Impairment[50] case to address the type of systemic issues identified in the Section 301 Report for which there may be no specific violation of a WTO commitment. Non-Violation complaints are not being accepted by the WTO at this time; however, the US might consider building a case that such an effort is necessary and/or that China is in violation of other systemic provisions of the TRIPS Agreement – including the provision requiring that IP be treated as a private right in the Preamble to the TRIPS Agreement.

Expanding markets in other countries. One important defensive tool involves expanding markets in other countries. I am pleased to see that the President appears to be reconsidering

[47] See Biography of Benjamin H. Wu, former Deputy Under Secretary for Technology http://www.asianamerican.net/bios/Wu-Ben.html .
[48] Institute on Global Conflict and Cooperation, "Innovation and Technology in China" (2018), https://igcc.ucsd.edu/research-and-programs/research/international-security/technology-innovation-security/innovation-technology-china/index.html .
[49]USTR, "US-China Trade Relations: Entering a New Phase of Greater Accountability and Enforcement, Top-to-Bottom Review," https://ustr.gov/sites/default/files/Top-to-Bottom%20Review%20FINAL.pdf (2006).
[50] For further background on this provision see Article XXIII, Nullification or Impairment. https://www.wto.org/english/res_e/booksp_e/gatt_ai_e/art23_e.pdf .

the advisability of the Transpacific Partnership, perhaps in light of the difficulties imposed upon our exporters of unilateral retaliation against China.

III. Policy Recommendations

The US experience suggests that innovation flourishes in open ecosystems where there is a free flow of capital, talent and technology. At the same time, the US needs to address mercantilist practices which not only pose competitive threats to the United States but can also undermine the innovative ecosystems that have driven growth in the US economy, such as exist in Silicon Valley. *Any steps taken to reduce collaboration with China or any other country needs to be carefully evaluated about its potential impact on our own technological competitiveness.* Here are some additional legislative suggestions to address China's mercantilist innovation practices:

USG Internal Prioritization Efforts:

1. Congress should optimize USG engagement on innovation and IP, by providing more direct oversight, attention to actual coordination undertaken by agencies, and through personnel and agency awards for coordination of tasks and for agency/academic/industry collaboration.
2. Increased resources may be directed to law enforcement, including Customs, to support outreach and cases involving theft of trade secrets or imports into the US with stolen IP. Mechanisms should be established to facilitate increased sharing of data among companies and the government to form comprehensive risk assessments.
3. USPTO IP Attachés should enjoy diplomatic rank commensurate with their importance, experience and roles.
4. More empirical and forward-looking analyses should be conducted to ensure that USG policy is sufficiently forward looking and geared to China's plans and policies. Competitive threats should be analyzed in advance. Initiatives such as the USPTO's China IP Resource Center should be well funded, work with counterpart offices in other agencies, and become a durable part of our engagement with China.
5. We need to require more, continuous and coordinated training within USG on China's legal and innovation regime so that our engagement is fact-based and well-informed and the expertise of all agencies is fully exploited. USPTO has provided such training on an annual basis, but on a purely voluntary basis.

USG Coordination with Affected Businesses:

6. Additional support should be given to small and medium sized enterprises seeking to enforce their rights such as through Section 337 actions, or that are experiencing retaliation in the Chinese market.
7. We should increase sharing of data and training among companies to develop comprehensive risk assessments. China has "early warning" systems to help its companies assess IP risks overseas; we should look at providing similar support for our companies.

8. We should also make USG comments on proposed legislation public, in whole or redacted form, absent compelling reasons not to share, so that USG positions are well-understood and aligned with industry and, indeed, by the Chinese people.[51]

Optimizing IP Strategy in Bilateral Relations:

9. The US should insist on reciprocity in licensing terms with China. As Chinese law imposes onerous discriminatory licensing terms, USG may consider enacting reciprocal legislation to address China's unfair acts. We might encourage our trading partners to do the same.[52]
10. We should amend the antidumping laws to recognize that the failure to treat IP as a private right is a factor in considering a country as a non-market economy. Currently, the market-orientation of a country's IP regime is not a specifically enumerated factor in determining whether it is a non-market economy, notwithstanding that the TRIPS Agreement requires that IP is treated as a private right.[53]
11. USG should extend reciprocal treatment for IP legal services between the United States and China involving IP. As China does not permit foreign lawyers to take the Chinese bar, and foreign law firms in China cannot hire licensed Chinese lawyers, US government agencies, including the USPTO, might insist that Chinese companies hire US admitted lawyers who are also US nationals or green card holders if consistent with our international commitments. This could be a modest but important first step in improving the market for legal services by foreign law firms in China as well as insuring accountability of counsel appearing before US government agencies.[54]
12. We should equip our courts, law enforcement and our lawyers with more legal tools to fairly adjudicate disputes with Chinese entities. Adverse inferences might be taken from unnecessary delays in collecting evidence overseas through judicial channels. We might also demand more cooperation from Chinese law enforcement on IP issues of common interest. In addition, denials of due process, threats to the freedom of US litigants or their counsel in China, lack of transparency in court proceedings and retaliation against appropriate use of legal process, etc. should all be vigorously opposed.[55]

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[51] See letter of SIPO Commissioner Tian Lipu to USPTO Director Kappos (Sept. 27, 2012), https://www.uspto.gov/sites/default/files/ip/ip_overseas/china_team/Commissioner_Tians_letter_to_Mr_Kappos.pdf.

[52] Robert T. Atkinson, "China's Strategy for Global Technology Dominance by Any Means Necessary" (November 12, 2015), http://www.forbes.com/sites/realspin/2015/11/12/chinas-strategy-for-global-technology-dominance-by-any-means-necessary/ : "Congress should pass legislation that requires Chinese entities that license technology in the United States to do so on the same terms that China requires of U.S. entities that license technology there."

[53] Tariff Act of 1930, Pub. L. No. 103–465, 1930, codified at 19 U.S.C. § 1677(18).

[54] Mark A. Cohen, *International Law Firms in China: Market Access and Ethical Risks*, 80 Fordham L. Rev., 2569 (2012). Available at: https://ir.lawnet.fordham.edu/flr/vol80/iss6/9.

[55] See, e.g., Reuters, "InterDigital Execs Fear Arrest and Won't Meet China Antitrust Agency" (Dec. 16, 2013), https://www.reuters.com/article/us-interdigital-china/interdigital-execs-fear-arrest-wont-meet-china-antitrust-agency-idUSBRE9BF0CW20131216.

13. We should not give up the battle for the Chinese media. Any significant policy effort undertaken with respect to China that encourages market reform and rule of law should have adequate media outreach in Chinese. Such efforts are critical to cutting through the negative propaganda that often surrounds US trade efforts to encourage Chinese reforms. As a positive example, when I was interviewed by Phoenix TV after the US filed the IP Enforcement case against China (DS/362), I had an audience of over 150,000,000 people for two separate dedicated programs. This public media effort was set up when I served at the Embassy with now Principal Deputy Assistant Secretary for Public Affairs at the State Department, Susan N. Stevenson.

Regulatory Oversight of Innovation Activities:

14. We should actively monitor our government to government technological cooperation and support state government and university-level reviews to ensure that the anticipated benefits of such cooperation are in fact obtained.
15. We should revise the law regarding the Committee on Foreign Investment in the United States (CFIUS) to provide greater coverage over technological threats. At the same time, CFIUS needs to cooperate more deeply with science and technical agencies, including the USPTO to insure its technical analyses are fact-based, well-founded, up to date and that appropriate investment and collaboration is welcomed.
16. We should amend our antitrust laws address to address state-directed technology practices as mandatory pricing terms for Chinese sales or purchases of technology or technology-intensive items, or use of "act of state" or "sovereign immunity" defenses.[56] Exemptions for US and foreign technology sellers/manufacturers might be created when they want to coordinate strategies where China acts as a state-directed monopolist or monopsonist.

Coordinating Action with Trade Allies:

17. We should closely coordinate with like-minded trading partners on trade-related negotiations, law enforcement and on domestic law changes that could provide a more level global playing field with China. Examples of this might include reciprocal government procurement restrictions; enhanced law enforcement cooperation on criminal activities (as was accomplished in the Sinovel case described in the Section 301 Report);[57] enhanced sharing of data and intelligence; and collaborative training.

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[56] Stephen Ezell, "Tariffs Won't Stop China's Mercantilism. Here are 10 Alternatives", https://www.realclearpolicy.com/articles/2018/04/23/tariffs_wont_stop_chinas_mercantilis (Apr. 23, 2018) m_here_are_10_alternatives_110605.html?mc_cid=493f9ad771&mc_eid=52b2620ab4#!; see also Richard Goldstein and Stephan Bomse, "Second Circuit Squeezes the Juice out of Vitamin C. Jury Verdict" (Sept. 21, 2016), https://blogs.orrick.com/antitrust/2016/09/21/second-circuit-squeezes-the-juice-out-of-vitamin-c-jury-verdict/; http://www.scotusblog.com/case-files/cases/animal-science-products-inc-v-hebei-welcome-pharmaceutical-co-ltd/.

[57] Office of the U.S. Trade Representative, "Special 301" (2018), https://ustr.gov/issue-areas/intellectual-property/Special-301.

I welcome your questions, and I thank the Commission again for this opportunity. Although many friends and colleagues offered their support for this testimony I, however, exclusively own any opinions, errors or omissions in this report.

OPENING STATEMENT OF WILLY SHIH, PH.D., ROBERT AND JANE CIZIK PROFESSOR OF MANAGEMENT PRACTICE IN BUSINESS ADMINISTRATION, HARVARD BUSINESS SCHOOL

HEARING CO-CHAIR HUBBARD: Thank you very much.

Dr. Shih.

DR. SHIH: Chairman Cleveland, Co-chairs Hubbard and Stivers, Commission members, staff, other distinguished guests, good morning and thank you for the invitation to speak with you today.

I focused my written testimony on two main areas: first, on Chinese policies and practices that fostered the misappropriation of IP and strategic knowledge, and then on some positive steps we as a nation can take to respond. In view of the limited time, I'll spend my time today on the latter, especially since we've already heard a lot about the former.

I think we should spend much more energy trying to open up the gap in areas where we do lead and exploit our strengths as the most innovative and the most powerful economy on the planet. Slow them down but run faster ourselves.

First, I think we can strategically target bringing certain manufacturing activities back to the U.S. Example: when we first began making integrated circuits in this country, we started sending the processed wafers to Asia for testing and packaging, where workers looking through microscopes wire-bonded gold wires to chip pads, put them in packages and then sent them back.

The process was very labor intensive so labor arbitrage saved a lot of money. Same thing for electronic circuit boards and assembly. Ultimately, most of electronics manufacturing has now ended up in China.

But these days chip packaging is completely automated. It still sits in Asia because that's how the supply chains are organized. Before tax reform, there were advantages to doing that value-add offshore. It's called accumulating profit in low-tax locations. But that doesn't need to be the case today.

Now let's look at hyper-scale data centers being built by Amazon Web Services, Google, Microsoft, Facebook, NSA and others. Intel builds their Xeon chips I think in Hillsboro, Oregon, maybe Phoenix, then they ship them to China or Vietnam for testing and packaging, then they go into a distribution center where they feed server board manufacturing lines in China, and then they come back to the U.S. and go into those data centers up the Columbia River from Portland and other places, of course,

What if we had an import processing zone where we could invite some of those chip packaging firms, or some of the server board firms, to set up next door to the Intel fab? With our new tax law and the ability to expense capital equipment immediately, we could start reshoring a lot of that capability back to U.S.

There is also less tax justification for invoicing from offshore, and frankly the logistic simplicity and the amount of inventory you would take out of the supply chain might financially justify the whole thing.

Now I heard Amazon alone is buying ten percent of Intel's Xeon chips this year, Microsoft six percent, Google five percent. Add in Facebook, Apple and others, and you have quite a bit of volume. So harness our domestic demand, and it will play into a key technology trend of 3D packaging, which we really want to lead in, and it also could strengthen our ability to sustain the most advanced semiconductor manufacturing in the U.S. The biggest challenge, of course, will be getting workers.

Now this isn't rocket science. This is just looking carefully at how things have evolved and then checking the underlying assumptions. Maybe we should check into why the old tax law drove so much medical device manufacturing offshore and see if those reasons are still valid.

Next, I think we should talk up the benefits of localizing supply chains. Toyota's Georgetown, Kentucky assembly site pulls on 350 supplier locations in the U.S. and 100 in Kentucky alone. Vehicles coming from this factory have among the highest domestic content on any vehicles produced in the U.S.

Toyota has found it be a strategic advantage to localize their supply chains. I think too many firms have adopted a global sourcing model, find me the lowest cost with acceptable quality anywhere in the world. So rather than help my local machine shop upgrade, I'll move the work to Poland or China or India or wherever. Toyota obviously thinks local sourcing is an advantage. Having recently spent a day there, I can assure you they are not stupid. They work with their suppliers to upgrade their capabilities. Maybe we need to help local governments to help them upgrade suppliers and focus on localization.

And maybe we should point out to companies this is part of being a good citizen in the community, which is also an important constituency. With the changes to the tax law, there has never been a better opportunity to do this. Again, the challenge will be finding enough workers.

As a country, I think we have to run faster. This is what the PCAST report "Ensuring Long-Term Leadership in Semiconductors" said, and I think that applies not only in semiconductors but in almost every technology-driven field. That plays to our strengths because we continue to be the world leader in basic scientific research and in coming up with transformative innovations.

The May 2018 Economics and Trade Bulletin, published by the Commission, highlighted areas where the U.S. still has a trade surplus with China. Aerospace obviously is one of those areas. U.S. companies are very good at complex systems. Look at Boeing's 787 or their new 777-X. It took Airbus, with extensive subsidies, decades to learn how to do that well, and we can even see today very competent manufacturers like Mitsubishi struggling with their MRJ.

Boeing and now Airbus are reacting to the threat of Chinese competition by incessantly improving their product, driving their manufacturing efficiency, and trying to always be a generation or more ahead. Even Chinese airlines, though they are pressured to buy Comac product, need to buy Western so that they themselves stay competitive.

How can our government help? In the 1970s, NASA supported foundational research with its Aircraft Energy Efficiency Program, kind of an Apollo Program, which was just mentioned, for aeronautics. You know, NASA contracted with companies to do early stage research, and it was of immense value to the companies and U.S. industry more broadly. It was precompetitive research at its best. The Aerospace Innovation Act introduced on May 24 by Senate Aerospace Caucus co-chairs Warner and Moran holds promise for continuing that tradition.

We should strengthen our leadership in biotechnology. The massive and well-coordinated funding for the Human Genome Program and the interdisciplinary effort that that triggered really secured this country's position in the field, and there are lots of other investments like that which we have made which have continued to benefit us.

These are things that we do better than any other nation on earth. We should do more of it and work harder to expand our lead.

We also need stable funding. Federal funding for basic research has been flat in recent years, with NSF and NIH trending down until this year. Stable funding is vital in our military

procurement programs as well. Long-term budget uncertainty and years of sequestration has been highly counterproductive for defense manufacturers. Imagine if you don't know how many people you can have, afford to have on your payroll from week to week. Would you want to work at a place like that?

I urge the president to re-charter the PCAST, the President's Council of Advisors on Science and Technology. We need a channel for more ideas and advice on how to secure our lead in science and technology, which ultimately drives our economic leadership. Going back to the PCAST report on semiconductors that won broad bipartisan support. It had a lot of good ideas on what we can and must do.

You know at the Harvard Business School, we teach students that strategy is an integrated set of choices that collectively position the firm in its industry so as to create sustainable advantage relative to competition and deliver superior financial returns. How should we position ourselves for sustainable global economic leadership in the face of freer movement of capital, goods, and services? We can slow down our strategic competitors, but at the end of the day, we win by running faster and opening up the gap.

Thank you very much for the opportunity to speak before you today.

PREPARED STATEMENT OF WILLY SHIH, PH.D., ROBERT AND JANE CIZIK PROFESSOR OF MANAGEMENT PRACTICE IN BUSINESS ADMINISTRATION, HARVARD BUSINESS SCHOOL

Willy C. Shih
Robert & Jane Cizik Professor of Management Practice in Business Administration
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Testimony before the U.S. - China Economic and Security Review Commission
June 8, 2018

Hearing on "U.S. Tools to Address Chinese Market Distortions"

Chairman Cleveland, hearing co-chairs Commissioners Hubbard and Stivers, commission members, staff, and other distinguished guests, good morning, and thank you for the invitation to speak with you today.

I am going to focus my testimony on two main areas: first on Chinese policies and practices, and then on some positive steps we as a nation can take to respond.

Much has been said before this commission about ways to respond to Chinese policies, or how to get China to stop doing things that are basically unfair, like stealing intellectual property (IP). In order to fully understand these issues and formulate appropriate policy responses, I think it is important to dissect the issue into several components: (1) reverse engineering and copying, (2) false representation upon sale, (3) jurisdiction, and (4) misappropriation. With that background we can understand the core issue: industrial knowledge and know-how flowing to what the National Security Strategy calls a strategic competitor.

Reverse engineering has its roots in the analysis of hardware, where deciphering designs by disassembly and analysis of finished products is commonplace. In the U.S., the legal definition of reverse engineering comes from a case that was heard by the U.S. Supreme Court: *Kewanee Oil Co. v. Bicron Corp., 416 U.S. 470 (1974).* Former employees of the Harshaw Chemical Co., a unit of Kewanee Oil, later formed or joined Bicron Corp. and were accused by Harshaw of misappropriating trade secrets used to grow large sodium iodide crystals for use as ionizing radiation detectors. The court ruled that trade secret law "does not offer protection against discovery by fair and honest means, such as by independent invention, accidental disclosure, or by so-called reverse engineering, that is by starting with the known product and working backward to divine the process which aided in its development or manufacture." The reverse engineering of manufactured products is a way to acquire know-how through disassembly, measurement, and analysis. Reverse engineering is very common and it is an accepted practice. I recently spoke with an executive at a U.S. automaker who admitted that they reverse engineered Tesla's vehicles as well as those of other manufacturers. In the Chinese context, this

is what is most important to companies located there – the ability to learn quickly how things work and to then make their own versions. It might be laziness or lack of time that induces direct copying without modification. What is not permissible is direct copying for *sale* of patented or copyrighted products. For example, making a copy of a Cisco router is permissible if you don't copy the copyrighted software or patented parts. The software includes the firmware, which is a key component. But re-engineering the firmware and copying non-patented components is permissible, as long as you remember that hardware patents could prevent you from selling your copy. An instructive example of some of these subtleties can be found in the IBM PC clone market, in which IBM thought they were protecting the design and function of their PC with a chip that was called the Basic Input Output System (BIOS), software instructions stored into memory (known as firmware) that they copyrighted. Engineers at Phoenix Technologies produced a "clean room" copy with a circuit that produced identical outputs given any given set of inputs, creating the Phoenix BIOS. That launched the IBM PC clone market, because everything else could be assembled from commercially available components.

Next, the subject of false representation upon sale. In *Bonito Boats, Inc. v. Thunder Craft Boats, Inc.*, the Supreme Court argued that "the competitive reality of reverse engineering may act as a spur to the inventor, creating an incentive to develop inventions that meet the rigorous requirements of patentability."[1] The Court ruled that it was not illegal for Thunder Craft to use a Bonito boat hull as a "plug" to make a mold for its own boat hulls. Thus direct copying of a design that was not patented was permissible.[2] What would not have been permissible would have been Thunder Craft selling boats under the Bonito name, citing a Supreme Court case from 1917:[3] "The plaintiff has the right not to lose his customers through false representations that those are his wares which in fact are not, but he may not monopolize any design or pattern, however trifling. The defendant, on the other hand, may copy plaintiff's goods slavishly down to the minutest detail: but he may not represent himself as the plaintiff in their sale."

False representation, as much as the copying of designs, has been the big issue for global brands in China and emerging markets. The flood of fake Rolex labeled watches, sport utility vehicles dubbed the "Hilux Safe" that are copies of Toyota Motor's popular off-road Hilux Surf, fake Gucci handbags attract a lot of attention and the ire of the original brand holders. Selling knock-offs with a false brand representation is not allowed in countries with strong property rights regimes, but it is quite a different activity than simply making copies or "close imitations." American companies like Nike and Disney have this problem in spades in China, though my understanding is that Disney has made considerable progress through innovative actions it has taken. Lesser known but very serious are problems that companies like Cisco have with counterfeit products coming out of China and being sold on global markets including within the U.S.

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[1] *Bonito Boats, Inc. v. Thunder Craft Boats, Inc., 489 U.S. 141 (1989).*

[2] The U.S. Congress subsequently enacted the Vessel Hull Design Protection Act as part of the Digital Millennium Copyright Act, providing copyright protection to boat hull designs.

[3] *Crescent Tool Co. v. Kilbourn & Bishop Co., 247 F. 209, 301 (CA2 1917).*

Was the Chery QQ, a city car produced by Chery Automotive an illegal copy of the Daewoo Matiz, as claimed by General Motors, the owner of Daewoo Motors? It was branded Chery, though a Daewoo spokesperson claimed that "If you didn't have the name tags on the car, you couldn't tell them apart. It's such a knockoff that you can pull a door off of the Chevy Spark and it fits on the QQ - and it fits so well that the seals on the door hold."[4] It depends on whether any part of the vehicle infringed on currently valid patents held by Daewoo in China, or where Chery tried to sell the vehicle. An official from China's State Intellectual Property Office stated that the infringement would not be "set up" unless GM could provide information on how Chery gained information about the Spark's appearance by illegal means.[5] Thus the burden of proof of infringement fell to Daewoo, assuming it even had patents on file in China. I recently spoke to a manager at a Japanese car company who explained that they had experienced the same copying of a car body and entire chassis. The doors in their case were interchangeable as well.

In the U.S. or regions where there is a strong property rights regime, once an unpatented design or a design whose patent has expired is "disclosed" through public sale, the law states that it is in the public domain and copies may be sold by anyone who chooses to do so. This is one of the pillars of patent law. Summarizing from *Kewanee Oil Co. v. Bicron Corp*., the Supreme Court stated, "The stated objective of the Constitution in granting the power to Congress to legislate in the area of intellectual property is to "promote the Progress of Science and useful Arts." [6] The patent laws promote this progress by offering a right of exclusion for a limited period as an incentive to inventors to risk the often enormous costs in terms of time, research, and development. The productive effort thereby fostered will have a positive effect on society through the introduction of new products and processes of manufacture into the economy, and the emanations by way of increased employment and better lives for our citizens. In return for the right of exclusion — this "reward for inventions," *Universal Oil Co. v. Globe Co., 322 U. S. 471, 484 (1944)* — the patent laws impose upon the inventor a requirement of disclosure.

Next, the all-important topic of jurisdiction. Patents are granted by governments, and convey the right to exclude others from making, using, selling, offering to sell, or importing a protected invention within the territory of jurisdiction. Patent grants gave inventors an exclusive period of benefit in exchange for disclosure of the invention. It's important to understand that patents filed only in the U.S. only prevent the sale of infringing products imported into or made by one who copies in the U.S. If you want to protect a product from copying in China, you have to file there as well. The U.S. is the world's most important market, and our strong patent enforcement environment, a mature legal system for handling patent disputes, and the economics of enforcement make the U.S. unique. This is why you can actually find Chinese companies like Huawei and ZTE fighting each other in the Northern District of California. But

[4] Ralph Hanson, "Chinese Chery QQ – a carbon copy of the Daewoo Matiz," Motorauthority.com, http://www.motorauthority.com/blog/1029627_chinese-chery-qq--a-carbon-copy-of-the-daewoo-matiz

[5] "Chery QQ: No GM Patent Infringement," China.org.cn, http://www.china.org.cn/english/BAT/106449.htm

[6] *Kewanee Oil Co. v. Bicron Corp., 416 U.S. 470 (1974).*

it also means that if you operate in China, you have to understand China's patent laws and systems and work within them.

These were major reasons for bringing China into the World Trade Organization (WTO). The WTO's Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) introduced intellectual property rules into the multilateral trading system. The TRIPS agreement covers five broad areas:[7]

- How general provisions and basic principles of the multilateral trading system apply to international intellectual property
- What the minimum standards of protection are for intellectual property rights that members should provide
- Which procedures members should provide for the enforcement of those rights in their own territories
- How to settle disputes on intellectual property between members of the WTO
- Special transitional arrangements for the implementation of TRIPS provisions.

By joining the WTO, China was supposed to make sweeping changes to hundreds of its laws, regulations, and measures affecting trade and investment. These are at the core of our disputes today – China's poor compliance is reported to Congress annually.

The 2016 U.S. Trade Representative (USTR) to Congress on China's WTO compliance pointed out that "Chinese government officials, acting without fear of legal challenge, at times require foreign enterprises to transfer technology as a condition for securing investments approvals, even though Chinese law does not – and cannot under China's WTO commitments – require technology transfer." In practice, how does this happen? Perhaps the best-known example was requiring foreign automakers to have a joint venture partner to manufacture and sell into the Chinese market.

The report continued, "Similarly, in the trade remedies context, China's regulatory authorities at times seem to pursue antidumping (AD) and countervailing duty (CVD) investigations and impose duties for the purpose of striking back at trading partners that have legitimately exercised their rights under WTO trade remedy rules. As three WTO cases won by the United States confirm, China's regulatory authorities appear to pursue these investigations even when necessary legal and factual support for the duties is absent. In addition, U.S. industry and industries from other WTO Members have asserted that China's competition policy enforcement authorities not only are targeting foreign companies, but also at times use *Anti-monopoly Law* investigations as a tool to protect and promote domestic national champions and domestic industries." Qualcomm has suffered at the hands of this policy, paying $975 million as part of a settlement. China did not like its champions like Huawei or Xiaomi Technology having to pay high royalties to Qualcomm for use of its patents. This was basically an

[7] See "Intellectual property: protection and enforcement," https://www.wto.org/english/thewto_e/whatis_e/tif_e/agrm7_e.htm.

argument over patent rates and how they were calculated. I could say much more about this space, but the USTR has done a thorough job of documenting them.

Let me move on to the subject of misappropriation. This is really the central strategic issue facing us – the misappropriation of core industrial and scientific know-how. Much has been said about cyber-espionage and theft of trade secrets. I am not an expert on that, so I will not make any statements on this. But the real issue is how do Chinese firms acquire the explicit knowledge, as well as the all-important tacit knowledge to become world-class competition for American firms and firms from other advanced economies.

There are legitimate mechanisms. Know-how can walk out the door in the heads of employees. I once met a gentleman on an airplane bound for Shanghai. He was a retired aerospace engineer from McDonnell-Douglas, and was on his way to central China to teach a company how to fabricate titanium structures. I asked him a few more questions, and learned that he had been hired as a consultant, and this was all perfectly legal. I also interviewed a senior manager at a major Chinese battery maker a few years ago who had once worked at a well-known American firm that was trying to break into the Chinese market. Because the American company was trying to avoid import duties, they needed to increase their local content, so he worked with the battery firm to improve its quality and fix its production processes. He helped them significantly, teaching them about quality and lean production. And when the American firm eventually got taken over, he left it to join the battery firm. That battery firm today is a global market leader.

The more problematic situations are when companies are required to form joint ventures, as in automobiles for example. Joint ventures are an important way for the junior partner to learn how to do things, and the senior partner becomes the tutor. It is in the economic interest of the Western partner to make the venture successful, and it will bring in its production processes and teach its own and its partner's employees processes and methods. Over the short term both sides win, in what amounts to a trade of market access for know-how. The problem with China's approach is that China requires joint ventures in fields that it thinks are strategically important, and essentially trades market access for an accelerated path for its companies, many of whom are state-owned enterprises (SOEs), to become world-class competitors.

Then of course there is strategy of acquiring firms for their knowledge and capabilities. We have long believed in letting the market do its work, and that mergers and acquisitions were fine as long as consumers benefit and they don't create concentrations of market power. Companies from almost every country do this in the normal course of business – Tesla needed to automate its Model 3 production line, so it bought Grohmann Engineering of Germany, General Motors needed to fast-forward efforts in self driving vehicles so to it bought Cruise Automation. The problem we have with Chinese companies buying U.S. technology companies is that China plays by a different set of rules – rules on ownership, on what can be acquired, and how things are financed, often by State capital in non-market ways.

If I wanted to sum up the discussion up to this point, I think our sense of unfairness comes from China operating under global norms and rules when it is to its advantage, and its own rules when those are advantageous. And since their system is a modified market-based system "with Chinese characteristics," it conveys advantage to Chinese firms.

I think the best thing we can do is gain consensus with a select set of allies who recognize that they have as much to lose from this misbehavior as we do. I was in Germany last week, and there is heightened sensitivity to the way the Chinese are buying up technology assets, copying things, and foreshadowing a world where German manufacturing sources get replaced by Chinese ones. If we work together with key industrial countries specifically Germany, Japan, the United Kingdom, France, and South Korea on standards of acceptable behavior, China will have no choice but to follow. If we try to do by it ourselves, we will be played against the others, or worse, a coalition of the others.

Two more things that we should think about. We recently cut off ZTE's ability to source American designed electronic components because of their violation of a sanctions settlement. This has caused an existential crisis at the company, which has been widely noted across China. I was in China four weeks ago, and I can't tell you how many people asked me about it. As we increase the pressure on China and Chinese companies, it will lend further urgency to the country's drive to become self-reliant on technologies that they presently import. This of course is the thrust of their Made in China 2025 initiative. We therefore should think very strategically vis-a-vis our actions in this regard.

There are many avenues for misbehavior, and cutting off one will push firms, regional governments, and the national government into other channels. For example, when the International Trade Commission (ITC) imposed a duty on Chinese made solar panels in 2012, many manufacturers moved assembly to places like Malaysia using materials and key components sourced from China.

My second point is on Chinese government subsidies to specific industries. In my opinion, subsidies tend to reduce innovation. They have a tendency to cause companies to focus on trying to beat everyone else as the low-cost producer. This encourages them to recklessly add capacity in the pursuit of scale, and find every place they can to squeeze cost or otherwise tip the scales. This is one of the things that is commonplace in China today. Once somebody comes up with a good idea, everybody piles on and does the same thing. Regional and municipal governments turn on the subsidies, everybody adds too much capacity, and the business becomes a race to the bottom. In my opinion, Chinese state and local government subsidies are the most pernicious issues we face.

If we step back and look at the big picture, we can try to slow down the copying and bad behavior. But at the same time we should spend much more energy trying to open up the gap

in areas where we lead and exploit our strengths as the most innovative *and* the most powerful economy on the planet. In other words, not just slow them down, but run faster ourselves. Are we really leveraging both of these attributes to maximum effect? Maybe we have gotten old and are a little out of shape, but when we see other countries nipping at our tail, we should whip ourselves into shape and get moving.

We need to up our game in things we do well where we can leverage our strengths. First, we can strategically target bringing certain manufacturing capabilities and activities back to the U.S. I lived through a lot of the history of semiconductors and electronics moving offshore in the first place. When we first started ramping up the volume of integrated circuit manufacturing in this country, we started sending the processed wafers to Asia for testing and packaging. A semiconductor wafer is eminently tradable – it has a high value density and it doesn't cost a lot to ship one half way around the world as a percentage of its value. We sent wafers to Malaysia or Singapore, where workers looking through microscopes wire-bonded gold wires to the chip pads, put them in packages, and then sent them back. The process was very labor intensive, so by employing labor arbitrage, we could save a lot of money. Same thing for electronic circuit boards, and assembly. At first the work went to Japan and Singapore, then Taiwan and Korea, but ultimately a lot of it ended up in China. And China did a super job in the 2000s getting manufacturers to localize their supply chains by offering reduced duty and access to the Chinese domestic market.

These days chip packaging is really high tech. The connections are dense and complex, so the whole process is completely automated. It still sits in Asia, because that's how the supply chains are organized. And before tax reform, there were advantages to doing that value-add offshore. It was called accumulating profit in low-tax locations. But that doesn't need to be the case today.

Let's look at hyper-scale data centers being built by our friends at Amazon Web Services, Google, Microsoft, Facebook, the National Security Agency, and others. I think Intel builds the Xeon chips in Hillsboro, Oregon (and/or maybe Phoenix), then ships them to Asia for testing and packaging, then they go into a distribution center where they feed server board manufacturing lines in China, and then they come back to the U.S. and go into those datacenters up the Columbia River from Portland and other places of course. Those Asian steps are highly automated, though they still create a fair number of jobs.

What if we had an import processing zone, where we could invite some of those Taiwanese chip packaging firms, or some of the Taiwanese server board firms, to set up next door to the Intel fab? With our new tax law and the ability to expense the capital equipment immediately, we could start restoring some capability to the U.S. There is also less tax justification for invoicing from offshore. And frankly, the logistic simplicity and the amount of inventory you would take out of the supply chain might financially justify the whole thing. I heard Amazon alone is buying 10% of Intel's Xeon chips this year. Add in Google, Facebook, Microsoft, and Apple. Maybe a little more from each of Oracle, IBM, HP, Dell, and you have quite a bit of

volume. Harness our domestic demand and use it to rebuild part of the electronics supply chain and along with it the industrial capabilities. I would expect those NSA datacenters would love the local sourcing model. And it would play into the technology trend of 3D packaging as a way to address the continuation of Moore's Law. It would also strengthen our ability to sustain the most advanced semiconductor fabs in the United States, which I think is absolutely critical.

This is not rocket science. It's just looking carefully at how things have evolved, and then checking the underlying assumptions. Maybe we should check into why the old tax law drove so much medical device manufacturing offshore, and see if those reasons are still valid. We should look at our assets, play offense, play aggressive, rethink our assumptions.

In that light, we should talk up the benefits of localizing supply chains. For their Georgetown, Kentucky assembly site, Toyota pulls on 350 suppliers locations in the U.S. and 100 in the state of Kentucky alone. Vehicles coming from this factory have among the highest domestic content on any vehicles produced in the U.S. Toyota has found it to be a strategic advantage to localize their supply chains, just as Chinese local governments encouraged manufacturers to do in the 2000s. That's not to say that U.S. firms don't think the same way. I just think many have adopted more of a global sourcing mindset – find me the lowest cost with acceptable quality anywhere in the world. So rather than help my local machine shop upgrade, I'll move the work to Poland or China or India. Toyota obviously thinks local sourcing is an advantage. Having recently toured their operations I can assure you they are not stupid. They work with their suppliers to upgrade their capabilities. They have taught the world a lot about manufacturing, and we should pay attention to how they run their supply chain. Maybe we need help to local governments and regions to help them upgrade suppliers and focus on localization. And maybe we should point out to companies that this is part of being a good citizen in the community, which is also an important constituency. Again, with the changes to the tax law, there has never been a better opportunity to do this. The challenge will be finding enough workers.

I think the best thing we can as a country do is run faster. This was what the PCAST report, "Ensuring Long-Term Leadership in Semiconductors" said, and I think that applies not only in semiconductors, but in almost every technology-driven field. That plays to our strengths, because we continue to be the world leader in basic scientific research, and in coming up with transformative innovations.

And as I said, we need to act strategically. The May 2018 Economics and Trade Bulletin published by the Commission highlighted areas where the U.S. still has a trade surplus with China. Aerospace is one of those areas. Western countries, the U.S. in particular, are very good at complex systems. If you look at a Boeing's 787 or their new 777-X, or an F35 for that matter, those are very complex systems. It took Airbus, with extensive European subsidies, decades to learn how to do that well, and we can see even very competent manufacturers like Mitsubishi struggling today with their MRJ family. I think the way Boeing (and now Airbus) are reacting

to the threat of the Chinese competition, Comac with its C919 and Irkut with its MC-21, is to incessantly improve their product, drive their manufacturing efficiency, and try to always be a generation or more ahead. The nice thing about this approach is that even Chinese airlines, though they are pressured to buy the Comac product, need to buy Western so that they themselves can stay competitive.

Another reason I advocate this line of thinking is that capabilities come from practice. And Chinese companies (and those from other Asian nations before them) got very good at copying. I did a study on the history of the Chinese motorcycle industry ten years ago. They got started copying the parts of Honda, Yamaha, and Suzuki motorcycles from Japan. So hundreds of firms sprung up as assemblers. And they got very good at doing incremental improvements. But I remember saying at the time, if I were one of the Japanese makers, I would go tell my engineers to go improve the thermal efficiency of my engines. That's something people who grew up on copying will take a little longer to figure out.

One of the big U.S. commercial aero engine manufacturers has taken a very strategic approach in protecting its lead. They have been systematically increasing the compression ratio of their high-pressure sections and along with it the thermal efficiency of their engines. This encompasses design, a great deal of work with new materials, and a manufacturing strategy that spreads critical components across a network of highly specialized plants spread across the southern and eastern states. Nobody has all the pieces of the gun, so to speak. But the company knows what they have to protect, and they guard those trade secrets jealously.

Continuing on this example, there is also a great story of how our government can help. Back in the 1970s, NASA supported foundational research with its Aircraft Energy Efficiency program, what one author called the Apollo Program for aeronautics. The program came out of a hearing before the Senate Aeronautical and Space Sciences Committee in the wake of the 1973 Arab Oil Embargo. The hearing painted a dire picture of "immediate crisis condition," "long-range trouble," and "serious danger." NASA contracted with both Pratt & Whitney and GE to do early stage research on advanced propulsion systems for subsonic aircraft, with involvement from Boeing, Lockheed, and McDonnell-Douglas. This became a learning platform that was of immense value to the companies and U.S. industry more broadly. The Experimental Clean Combustor program sponsored early development of the Dual Annular Combustor at GE, which went into the CFM-56 engine, the most commercially successful turbofan engines in history. The CFM LEAP, which is the next generation of that engine, is even used on the C919. The Advanced Subsonic Technology (AST) and Ultra Efficient Engine Technology (UEET) Programs similarly helped advance the basic science and helped secure long term global leadership for the U.S. in the large turbofan category. It was pre-competitive research at its best. In that regard, the Aerospace Innovation Act introduced on May 24 by Senate Aerospace Caucus co-chairs Warner and Moran holds promise for continuing that tradition.

Computers, semiconductors, lasers, optical communications, cloud computing, smartphones, supercomputers, GPS – they all started with us. I would argue that the historic lead the U.S. had in communications technology came out of defense spending as well. We all know that the

Internet came from DARPA's work in packet switching, but recall also that Qualcomm's strength came out of a big bet that it made on code-division multiple access (CDMA), based on DOD's work on spread spectrum technologies.

We should also try to strengthen our leadership in biotechnology. The massive and well-coordinated funding for the Human Genome program and the interdisciplinary effort mounted at places like MIT and Harvard among others secured this country's position in the field. And it was more than just the basic gene sequencing work, but also the federal funding before for places like MIT's Chemical Engineering department that taught us how to manufacture biopharmaceuticals. These are things that we do better than any other nation on earth. We should do more of it, and work harder to expand our lead.

I am arguing for more of this kind of work, and more importantly, stable funding for basic research. Federal funding for basic research has been flat in recent years, with NSF and NIH trending down until this year. Stable funding is vital in our military procurement programs as well. Long term budget uncertainty and years of sequestration has been highly counterproductive for defense manufacturers. Imagine if you are trying to run a long-term R&D program in the application of carbon fiber composites or some other advanced material to aerospace applications and you don't know how many people you can afford to have on your payroll from week to week. Would you want to work at a place like that?

Our government helps by being an early adopter of new technologies. We did this with semiconductors and integrated circuits, jet engines, GPS, design automation tools, composite materials. Even antibiotics and computers if you go back to World War II. We should look upon the pressing need to re-engineer our national electrical grid for security and to move to the new world of distributed generation as another such opportunity. We should pay attention to crop science, agrochemicals, and the application of biotechnology. The Chinese acquisition of Syngenta signals the recognition of the importance of the technology.

Lastly, I urge the President to re-charter the PCAST – the President's Council of Advisors on Science and Technology. We need a channel for more ideas and advice on how to secure our lead in science and technology, which ultimately drives our economic leadership. Going back to the PCAST report on semiconductors, that won bipartisan support. It had a lot of good ideas on what we can and must do.

At the Harvard Business School, we teach students that strategy is an integrated set of choices that collectively position the firm in its industry so as to create sustainable advantage relative to competition and deliver superior financial returns. What should our strategy as a nation be? How should we position ourselves for a sustainable global economic leadership in the face of freer movement of capital, goods, and services? We can slow down our strategic competitors, but at the end of the day, we win by running faster and opening up the gap.

Thank you very much for the opportunity to speak before you today.

OPENING STATEMENT OF GRAHAM WEBSTER, CHINA DIGITAL ECONOMY FELLOW AT NEW AMERICA; SENIOR FELLOW, PAUL TSAI CHINA CENTER AT YALE LAW SCHOOL

HEARING CO-CHAIR HUBBARD: Thank you very much.

Mr. Webster.

MR. WEBSTER: I'd like to thank the chairs, the entire Commission, and the professional staff of the Commission for inviting me to speak today on this important topic.

I also want to congratulate the Caps on their win last night and having, being a visitor from Oakland, California, I request your support for the Warriors tonight.

[Laughter.]

MR. WEBSTER: Of all of the technological fields on our docket today, I'm going to focus on digital technology because that's where I do my work.

First, a basic reality. The Chinese government has efforts to develop a more independent digital economy base, and those efforts are broad and deep. They will not be halted completely.

The efforts have two motivations: first, a national security motivation. Chinese officials see dependencies on certain foreign technologies as a threat to national security and regime survival. The Snowden revelations only intensified this concern over the last five years.

Second, a development motivation. Chinese officials seek to guide economic development in a direction that improves people's lives, moves the economy up the global value chain and gives Chinese citizens a steady stream of accomplishments to be proud of.

Together, these two motivations for "indigenous innovation" in "core technologies," as some of the top speeches emphasize, cannot be stopped entirely, but the way they unfold is not set in stone.

Chinese officials are responsive to international events, including U.S. behavior, in both positive and negative ways.

This raises opportunities and also cautions for the U.S. government. A positive story we might take from Europe. There has been relatively strong influence from the General Data Protection Regulation, GDPR, on China's regulatory process in data protection. GDPR's global agenda-setting power has been strong, and Chinese thinkers and officials in building their own system have grasped an opportunity to make their digital economy more interoperable with the world.

A negative story might come from the Commerce Department decision, reversed at least for now, to deny Chinese company ZTE access to U.S. components after it violated a settlement agreement. Regardless of the merits of the case, this showed an ability and willingness on the part of the U.S. government to cut off a major company from crucial suppliers, and it reinforced Chinese views that their country needs domestically produced and designed ICT components.

So in addition to the domestic development drive, a new regulatory framework surrounding the Cybersecurity Law has been coming into shape over the last year. I write a lot about this in my written remarks. I'll just include a couple of notes here.

The law and the related regulations create security reviews for procurement and for outbound transfer of certain data. Different actors in networks and in the market get different responsibilities in cybersecurity and data protection. And a wide array of bureaucratic power centers get new responsibilities and leverage.

Across several area of regulation in the digital economy, including security reviews and data protection, there are a few common themes.

First, important concepts that determine who is subject to what kind of regulation are still only partially defined. These include critical information infrastructure, important data, and personal information. And all of these definitions eventually impact international firms.

Second, where there is ambiguity, there is discretion. While these definitions are still being clarified, regulators can use the ambiguity to help or hurt whoever they choose, an obvious potential avenue for political influence on outcomes.

Unsettled definitions can also be shaped through consultation and lobbying. So it can be an opportunity as well.

Third, China's government pursues both legitimate interests, from my point of view. For example, in security and reliability of networks or personal privacy protection. And they also pursue objectionable goals. For example, favoring domestic businesses, targeting dissidents, and restricting speech.

There are a number of measures the U.S. government should consider taking in advocating for the American people, given an indigenous innovation drive and an emerging regulatory environment. I'll list five now.

First, some of China's regulations or practices may violate WTO disciplines. The U.S. should use the tools available, and develop new ones, and I'll leave it to all of the experts who have been speaking today on the various ways that should happen.

Second, the U.S. government should keep objectives clear and transparent when developing or revising systems that can limit Chinese investments or acquisitions in the United States. Measures described in terms of protecting U.S. national security should have clear and credible connections to national security and not just commercial interests.

Third, Congress should proactively channel more resources to fundamental research and innovation in technology fields in the United States, ensuring that U.S. institutions remain attractive for top international talent, and, as Professor Shih said, "run faster."

Fourth, the U.S. government should police practices, not peoples. If the United States targets a nationality for increased scrutiny, it starts to surrender the mantle of the American dream, and things can descend into ugly suspicion.

It also risks missing harmful practices not involving the targeted nationality.

Fifth, the United States should become a leader in the development of digital technologies that, by design, are protective of human rights, such as privacy and freedom of expression.

For example, in the era of artificial intelligence applications based on large data sets about people, the United States has the potential to consistently lead Chinese competitors in developing trustworthy systems that respect fundamental rights and operate ethically.

But industry may not be motivated to do this itself. That means the government should develop regulatory incentives in the United States that better protect U.S. citizens' data and incentivize U.S. businesses to develop world-leading rights-protecting technologies.

Finally, I'd like to encourage the U.S. policy community to be careful with its own techno-nationalism, which may be surging in various quarters. Not every Chinese achievement is a U.S. loss. Innovations in both countries feed off one another and supply chains are highly collaborative.

The United States should authentically stand in the digital economy for the openness the Chinese government has recently and somewhat disingenuously claimed as its approach. And I hope the United States will continue to rise to its highest aspirations as a land where people dreaming of a better life are met with open arms, courtesy everywhere from border protection

stations to campus communities, and a nation proud to welcome visitors and claim new Americans as compatriots.

I look forward to the discussion.

PREPARED STATEMENT OF GRAHAM WEBSTER, CHINA DIGITAL ECONOMY FELLOW AT NEW AMERICA; SENIOR FELLOW, PAUL TSAI CHINA CENTER AT YALE LAW SCHOOL

Testimony Before the U.S.-China Economic and Security Review Commission

By Graham Webster

Senior Fellow, Paul Tsai China Center, Yale Law School
Fellow and Coordinating Editor, DigiChina, New America

Hearing on "U.S. Tools to Address Chinese Market Distortions"

June 8, 2018

Introduction

I'd like to thank the chairs, the entire Commission, and its professional staff for inviting me to speak with you today on the important topic of China's technological development policies. I come to you today as a practitioner of Track 2 and Track 1.5 diplomacy between the United States and China on a wide variety of issues for more than five years with Yale Law School's Paul Tsai China Center, and as coordinating editor of the DigiChina project at New America, a cross-organization collaborative effort to translate, analyze, and contextualize policy developments in China's digital economy. In this written testimony, I cite a great deal of our DigiChina work in recognition that, while my opinions and any errors are my own, I would have precious little to offer without the constructive collaboration over the last year of this community of specialists.

The theme of this hearing is "U.S. tools to address Chinese market distortions," and this panel focuses on exploring "a coordinated policy response to China's technonationalism." Commission staff have written a very useful summary of "China's technonationalism toolbox," naming 10 policy tools Chinese authorities have used in efforts to strengthen their country's technological development.[1] In my testimony today, I will focus especially on one such tool—regulations.

General Principles in Analyzing Chinese Policy Developments

First, before we review the details of Chinese policy developments, there are a few important themes to keep in mind:

[1] Katherine Koleski and Nargiza Salidjanova, "China's Technonationalism Toolbox: A Primer," U.S.-China Economic and Security Review Commission, https://www.uscc.gov/sites/default/files/Research/China%27s%20Technonationalism.pdf.

Chinese government efforts to develop a more independent technology base are broad and deep, and they will not be halted. The Communist Party for years has repeatedly articulated ambitions to enhance China's role in global science and technology development. Leaders have in recent years made clear they view dependencies on certain foreign technologies as potential threats to national security and regime survival. It has been more than five years since Chinese media identified U.S. firms as "eight guardian warriors" with broad and deep presence in China's networks; security-minded Chinese analysts and officials spoke of "secure and controllable" systems in contrast.[2] And speaking from first-hand experience in bilateral dialogues, it is clear the Snowden revelations only intensified this concern.

This adversarial-minded security motivation for seeking sharply reduced levels of technological dependence is accompanied by a genuine desire to guide and encourage economic development in a direction that improves people's lives, moves the economy up the global value chain, and gives Chinese citizens a steady stream of accomplishments to be proud of. Together, the security and development motivations for "indigenous innovation" in "core technologies" constitute a force that cannot be stopped entirely.[3] Seeking a total halt to this process would be akin to fighting gravity. Instead, responses should assume that this gravitational force will persist, but that the way it acts in the world can be shaped through incentives, institutional design, and technological innovation itself.

Chinese plans express ambitions, but not always expected realities. In China's system, government plans provide guidance and set the direction of work across the bureaucracy and for some market actors. The 2017 New Generation Artificial Intelligence Development Plan (AIDP) is an example of a document full of aspirations but drafted in full awareness that technological or market developments may change the definition of success.[4] Anyone seeking to understand the likely course of events should be aware of plans and ambitions but spend more time focusing on concrete events and achievements. Even programs, such as Made in China 2025 (MIC2025), that channel funding and set domestic content targets are limited by realities of the status quo of China's industrial development.

Formal Chinese laws and regulations operate in parallel with more opaque politics. Understanding the realities of China's digital economy regulatory environment requires attention to laws and other regulatory instruments, both before and after they become final. The full story, however, lies in how those documents combine with realities of enforcement (or not) and informal arrangements market participants may reach with regulators. Firms and governments may reach understandings with officials that reduce regulatory ambiguity or circumvent troublesome barriers, but this informal layer of governance increases uncertainty and volatility in

[2] Even before the Snowden revelations, commentators had identified the eight (Cisco, IBM, Google, Qualcomm, Intel, Apple, Oracle, and Microsoft), and a "de-Ciscoization" campaign was being discussed. See Graham Webster, "China and the Eight Guardian Warriors of American Tech," *SupChina*, https://supchina.com/2017/03/16/china-eight-guardian-warriors-tech/.
[3] Paul Triolo et al., "Xi Jinping Puts 'Indigenous Innovation' and 'Core Technologies' at the Center of Development Priorities," *DigiChina* (2018), https://www.newamerica.org/cybersecurity-initiative/digichina/blog/xi-jinping-puts-indigenous-innovation-and-core-technologies-center-development-priorities/.
[4] Graham Webster et al., "China's Plan to 'Lead' in Ai: Purpose, Prospects, and Problems," ibid. (2017), https://www.newamerica.org/cybersecurity-initiative/blog/chinas-plan-lead-ai-purpose-prospects-and-problems/.

the regulatory environment writ large. Successful international business or political responses will respond to both black-and-white and gray areas in the policy environment.

Regulators and the central leadership in China are responsive to international events, including U.S. behavior. Though the basic goals of spurring indigenous innovation and a degree of technological independence will not fade, Chinese officials adjust to the international environment in both positive and negative ways. A positive story might be the relatively strong influence Europe's General Data Protection Regulation (GDPR) has had on China's emerging data protection regime. The EU's GDPR-based global agenda-setting power has been strong, and Chinese thinkers and officials have grasped an opportunity to make their digital economy more interoperable. A negative story of influence might be the Commerce Department decision (under review at time of writing) to deny the Chinese information and communications technology (ICT) company ZTE access to U.S. components.[5] Having demonstrated a capability and willingness to cut off a major company from crucial suppliers, the U.S. government reinforced Chinese views that domestically-produced and -designed ICT components must be developed, and that the United States is a potentially unreliable partner in critical technology sectors.

The Chinese government is far from monolithic. While it is well established that divisions exist within China's authoritarian government, certain divides are crucial for understanding the regulations that shape the digital economy. There, a perennial tension exists between officials and offices responsible for security and those responsible for technological and economic development. Major Chinese ICT companies also have clout in certain areas of regulation, and they are rarely perfectly aligned with their regulators. The give-and-take among power centers can highlight areas of flexibility.

Chinese Policies That Pose Challenges for International Companies

The Chinese government's digital technology approach can be understood as having three crucial layers: national ambitions, development plans and initiatives, and policies. Each layer contains elements that have implications for international (especially U.S.) competition, and elements that are influenced by international (especially U.S.) behavior.

Layer I: National Ambitions.

Under Xi Jinping, officials describe the central national ambition in digital technology as a strategy of building China into a "cyber superpower" or "cyber great power."[6] An authoritative September 2017 article published in the Party journal *Qiushi* describes China's "cyber superpower" strategy as operating in four major areas: (1) online content management, including propaganda and censorship; (2) ensuring cybersecurity, broadly conceived; (3) building a

[5] Graham Webster, "China's Zte Has Long Been on Washington's Radar, for Quite a Few Reasons. Here's the Story.," *Washington Post* (2018), https://www.washingtonpost.com/news/monkey-cage/wp/2018/05/22/chinas-zte-has-long-been-on-washingtons-radar-for-quite-a-few-reasons-heres-the-story/?utm_term=.c7af6a5a88bd.

[6] Rogier Creemers et al., "Lexicon: 网络强国 Wǎngluò Qiángguó: Understanding and Translating a Crucial Slogan and 'Cyber Superpower' Ambition," *DigiChina*, https://www.newamerica.org/cybersecurity-initiative/digichina/blog/lexicon-wangluo-qiangguo/.

domestic development and production base for Internet technologies; (4) and increasing Chinese influence on the governance and development of the global Internet.[7]

(1) Online content management is primarily a domestic concern, but the uncensored global Internet and proactive U.S. and international efforts to advance freedom of speech are directly in tension with this goal.

(2) Ensuring cybersecurity is a comprehensive goal, the achievement of which requires efforts by domestic Chinese actors and creates a range of processes designed to ensure national security, personal privacy, broader data protection, and network security. While there are significant domestic elements of this goal, including data protection practices and standards for procurement in sensitive systems, the cybersecurity goal directly interacts with global markets. Consciousness of cybersecurity risks rose significantly in China following the Snowden revelations, and U.S. intelligence services are often cited as adversaries against which Chinese entities should defend. Even without specific reference to U.S. spying, the task of increasing cybersecurity standards could be expected to bring about regimes to review and certify hardware and software—and such regimes can be used to limit international competition either through manipulating processes or because uncertainty about reviews adds friction to the market.

(3) The drive for "indigenous innovation" in "core technologies"—by no means limited to the digital world—arises from a hybrid motivation. Chinese leaders have good reason to encourage the economy to climb the value chain. Heavy industry and low-tech manufacturing are unsustainable for China for reasons such as rising wages, environmental impacts, and social inequalities. Hence MIC2025 seeks to develop world-leading industries in high-tech sectors. Meanwhile, at a time when market and national security tensions are heightened, China's economy also risks significant disruption if it remains heavily dependent on foreign components or intellectual property. Actions like the ZTE denial order further underline the leverage foreign governments may have over domestic industrial production and economic advancement. That amount of leverage is unacceptable to Chinese leaders, and so part of seeking to build China into a "cyber superpower" is ensuring a more independent ICT stack.

(4) Efforts to increase China's influence over the development and governance of the Internet globally have two main motivations. First, they advocate for the supremacy of state actors in governing the Internet, pushing a "multilateral" model of Internet governance, as opposed to the "multi-stakeholder" status quo historically favored by the U.S. government. Second, Chinese officials seek an increased role for Chinese companies

[7] Analysis and translation: Paul Triolo et al., "China's Strategic Thinking on Building Power in Cyberspace: A Top Party Journal's Timely Explanation Translated," ibid., https://www.newamerica.org/cybersecurity-initiative/blog/chinas-strategic-thinking-building-power-cyberspace/. Chinese-language original: 中央网信办理论学习中心组 [Cyberspace Administration of China Theoretical Studies Center Group], "深入贯彻习近平总书记网络强国战略思想 扎实推进网络安全和信息化工作 [Deepening the Implementation of General Secretary Xi Jinping's Strategic Thinking on Building China into a Cyber Superpower: Steadily Advancing Cybersecurity and Informatization Work]," *求是 [Qiushi]*, Sept. 15.

in building out the Internet across the world, especially in developing countries, and especially in the countries connected with Belt and Road Initiative rhetoric or the related Digital Silk Road concept.

The framing for the Chinese government's "cyber superpower" or "cyber great power" ambition implicitly sets a goal of reaching general parity with any other national power in digital technology, and that means at minimum rising to become a near peer of the United States. Such an ambition is no simple task, especially in a country where overall Internet penetration only recently surpassed 50 percent, reaching 55.8 percent in December 2017, according to official statistics.[8]

Layer II: Development Plans and Initiatives.

Although China's economy has transformed dramatically since Reform and Opening, the party-state retains the practices of long-term planning and top-down development strategizing. U.S. and other governments have devoted considerable attention to such plans and strategies in recent years, especially Made in China 2025 (MIC2025) and the New Generation Artificial Intelligence Development Plan (AIDP).

In both cases, and in other industrial planning or development funding initiatives such as the National Integrated Circuit Industry Investment Fund (IC Fund), Chinese companies and researchers often significantly lag global leaders. Challenges ranging from talent cultivation to intellectual property development and mastering specialized manufacturing techniques will not be surmounted easily. Even as some innovation efforts take off, others are likely to remain mired in such foundational challenges.

International reporting on Chinese development plans and initiatives often cites eye-popping targets for market development, loans, or research and development (R&D) funding. Big numbers may be misleading, however: Top-down R&D may be less efficient than market-based efforts around the world, and targets in high-tech fields more than a few years out are unlikely to be rooted in realistic assessments of what's possible.

Official Chinese plans and initiatives are important as unifying principles around which already existing and newly encouraged efforts can rally, but their effects on concrete industry developments must be examined empirically, and efforts to mitigate ill effects stand a better chance of success if they focus on outcomes instead of slogans. When plans like MIC2025 or the AIDP become highly visible symbols, it becomes increasingly likely that foreign pressure to roll back the efforts will instead produce a reflexive firming of public resolve.

Layer III: Policies.

For international business, the policy environment is one area where China's official ambitions and plans become pervasively relevant. Since Xi Jinping became the top leader, the Chinese

[8] "第 41 次《中国互联网络发展状况统计报告》[the 41st "China Internet Development Conditions Statistical Report"]," http://www.cnnic.cn/hlwfzyj/hlwxzbg/hlwtjbg/201803/t20180305_70249.htm.

government has advanced a perhaps uniquely comprehensive effort to construct a cohesive policy environment for cyberspace.

In kicking off this process, the Xi administration took the consequential step in 2014 of establishing the Central Leading Group for Cybersecurity and Informatization (CLGCI) chaired by Xi himself, which centralized decision-making on cyberspace and ICT policy. The CLGCI secretariat, the Cyberspace Administration of China (CAC), then advanced efforts to coordinate and produce policy frameworks for which responsibility had previously been spread across several bureaucracies—including the Ministry of Public Security (MPS), the Ministry of Industry and Information Technology (MIIT), the Ministry of Propaganda, and the military and intelligence establishments.

CAC's role was further elevated this year when the State Council announced that the CLGCI would be upgraded from "central leading group" to "central commission" status. The renamed Central Commission for Cybersecurity and Informatization (CCCI) retained CAC as its secretariat.[9] (Formally, CAC is a "one structure, two nameplates" entity serving as the secretariat of the Party's CCCI and as the State Internet Information Office.) Although the full membership of the CCCI is not yet public, official coverage of an important Xi speech at an April National Cybersecurity and Informatization Work Conference named Premier Li Keqiang and Politburo Standing Committee Member Wang Huning, a close Xi adviser, as vice chairs.[10]

The interagency process centralized in CAC has produced an array of regulatory developments with the Cybersecurity Law (published in late 2016 and in effect since June 1, 2017) at its center. Other laws, including the National Security Law, the Counterterrorism Law, the National Intelligence Law, and a pending Encryption Law, interlock with this framework. We can understand the Cybersecurity Law and related regulatory efforts as an interlocking matrix of six regulatory systems. Here I briefly summarize the framework described by our joint work from New America's DigiChina project.[11] For international business, the most consequential elements of the Cybersecurity Law framework are emphasized in bold.

- *The Internet Information Content Management System.*
  This system tightens controls over online activities, attaching activity to users' offline identities. It censors information the government views as harmful and **imposes "self-regulation" on intermediaries**.

- *The Cybersecurity Multi-Level Protection System (MLPS).*
  This preexisting system, launched in 2006 and associated with MPS efforts to secure critical infrastructure, ranks network applications by sensitivity, imposes security

[9] Rogier Creemers et al., "China's Cyberspace Authorities Set to Gain Clout in Reorganization," *DigiChina*, https://www.newamerica.org/cybersecurity-initiative/digichina/blog/chinas-cyberspace-authorities-set-gain-clout-reorganization/.
[10] Paul Triolo et al., "Xi Jinping Puts 'Indigenous Innovation' and 'Core Technologies' at the Center of Development Priorities," ibid., https://www.newamerica.org/cybersecurity-initiative/digichina/blog/xi-jinping-puts-indigenous-innovation-and-core-technologies-center-development-priorities/.
[11] Paul Triolo et al., "China's Cybersecurity Law One Year On: An Evolving and Interlocking Framework," ibid., https://www.newamerica.org/cybersecurity-initiative/digichina/blog/chinas-cybersecurity-law-one-year/.

requirements, and **issues certifications** accordingly.

- *The Critical Information Infrastructure Security Protection System.*
  The **concept of "critical information infrastructure" (CII)** is a crucial element of the Cybersecurity Law framework. It overlaps with but is broader than classical concepts of critical infrastructure, and operators of CII are subject to security reviews for procurement, data protection requirements, and other regulation.

- *The Personal Information and Important Data Protection System.*
  The Cybersecurity Law and related regulatory documents outline new protections for "**personal information**" and "**important data**," though neither of these concepts is fully defined. **Cross-border data transfer** and **data localization** requirements emerge here and in the CII system, and some elements of this system are self-consciously designed to maximize interoperability with international regimes such as GDPR.

- *Network Products and Services Management System.*
  This still-nascent system encompasses the **Cybersecurity review regime** (CRR) to undertake reviews of products and services used by CII operators. The scope and standards of review are not yet clear. The system's interaction with the existing MLPS is not clear either.

- *The Cybersecurity Incident Management System.*
  Incident response, threat information sharing, and standards-setting are all increasingly centralized under the CAC, which in April took over from MIIT as parent of the National Computer Network and Information Security Management Center (NCNISMC), "which is closely associated or essentially conterminous with the National Computer Network Emergency Response Technical Team/Coordination Center of China (known as CNCERT or CNCERT/CC)," according to our analysis.[12]

How China's Digital Regulatory Environment Affects International Companies

These schematic systems pose several challenges for international companies, and indeed for Chinese companies as well. Some are best viewed from the perspective of network operators' obligations, and others are best viewed through the lens of data collection, storage, and movement. In all cases, the regulations create significant uncertainty.[13]

Obligations for Network Operators (and Their Suppliers)

[12] Rogier Creemers et al., "China's Cyberspace Authorities Set to Gain Clout in Reorganization," ibid., https://www.newamerica.org/cybersecurity-initiative/digichina/blog/chinas-cyberspace-authorities-set-gain-clout-reorganization/.

[13] In testimony before a House subcommittee, Samm Sacks of the Center for Strategic and International Studies offers an alternative helpful way to understand impacts on international companies, identifying several different kinds of review regimes, plus a drive for localization. See House Energy and Commerce Subcommittee on Communications and Technology, *Telecommunications, Global Competitiveness, and National Security*, May 16. https://docs.house.gov/meetings/IF/IF16/20180516/108301/HHRG-115-IF16-Wstate-SacksS-20180516-U21.pdf

Entities that operate networks in China potentially face several different challenges. First, if they are operating "critical information infrastructure" (CII), a concept central to the Cybersecurity Law, products and services they use must undergo review in a still-nascent "cybersecurity review regime" (CRR).

CII is not well defined. In the Cybersecurity Law, CII specifically includes "public communication and information services, power, traffic, water resources, finance, public service, and e-government." In draft regulations from July 2017, "sectors such as media, specifically including radio stations, television stations, news agencies, and other such news work units" plus sanitation, healthcare, cloud computing, and big data are all marked as CII.[14] Article 19 of the draft regulations further gives sectoral regulators responsibility (and apparently discretion) to define CII in their area of work. The theoretically possible reach of the CII category is practically limitless, so until further regulations or standards clarify its boundaries, foreign entities acting either as suppliers to or operators of potential CII will not clearly know their obligations.

The CRR is not fully set up. Questions remain about the cybersecurity reviews that products fueling CII would be required to pass. Among them: What standards for security will be employed? Who will do the examining? (Although some of the examiners have been identified, a full decision-making process is not yet clear.) Will previous certifications, for instance under MLPS, suffice or smooth processes? Will informal approvals negotiated with regulators stick?

The question of whether prior arrangements will hold was exemplified in the public sphere in June 2017 when controversy erupted over Microsoft's Windows 10 China Government Edition, produced in cooperation with China Electronics Technology Group Corporation (CETC). For such a general purpose product as an operating system—and for a variant designed specifically to serve public sector customers—it is fairly clear that CII operators would need an option that satisfies the CRR requirements. Thus several days after the Cybersecurity Law went into effect, Chinese Academy of Engineering Academician Ni Guangnan, long an advocate for development of an indigenous Chinese operating system, called for a halt of purchases of the Windows 10 China Government Edition by government customers. Ni rejected the "user testing" and "security testing" the Microsoft-CETC product had undergone before the Cybersecurity Law took effect and called for a new cybersecurity review. Ni expressed the opinion that the new review would "at minimum require[] access to the software's refactorable and complete source code."[15]

Halting the progress of a product designed specifically to address Chinese government security concerns for software running in the public sector would be extraordinary, and Ni's view that full source code examination would be necessary would imply the possibility of intellectual property loss during the review. But Ni's wasn't the only influential voice here. A few days later, Wang Jun, a lead engineer from the China Information Technology Security Evaluation Center

[14] Paul Triolo, Rogier Creemers, and Graham Webster, "China's Ambitious Rules to Secure 'Critical Information Infrastructure'," *DigiChina*, https://www.newamerica.org/cybersecurity-initiative/blog/chinas-ambitious-rules-secure-critical-information-infrastructure/.

[15] Graham Webster, "Ni Guangnan: China Should Suspend Purchases and Use of Windows 10 China Government Edition Pending Security Review (Translation)," *Transpacifica*, http://transpacifica.net/2017/06/ni-guangnan-china-should-suspend-purchases-and-use-of-windows-10-chinese-government-edition-pending-security-review-translation/.

(CNITSEC, a pseudo-governmental organization likely to be involved in the CRR), credited the Microsoft approach and pushed back on Ni's firm view. "According to my understanding, in their cooperation, Microsoft is willing to open source code under the condition that intellectual property is protected. I believe developing Windows 10 or another later government-use edition in this method is a positive and meaningful attempt," Wang said. "We understand the goal of this method is to try to give government and critical information infrastructure users an improved edition that suits Chinese users' security requirements better than the general edition." Wang's broader interview advocated for prudent security review measures and implicitly against strict application of rules in a case such as this.[16]

Obligations for Those Handling 'Important' or 'Personal' Data

Data localization and cross-border transfer. The Cybersecurity Law may seem to make some things clear. "Personal information and other important data gathered or produced by CII operators during operations within the mainland territory of the People's Republic of China shall be stored within mainland China" (Article 37). Even allowing for the ambiguity in definitions for CII, personal information (PI), and important data (ID), the requirement to store significant categories of data is clear. Article 37 further provides that a "security assessment" is required before transferring these classes of data out of mainland China. If a foreign entity is deemed to be operating CII and collecting or producing PI or ID, it would have to follow these rules.

In September, the U.S. government filed a WTO challenge to this cross-border data transfer review regime, saying: "The impact of the measures would fall disproportionately on foreign service suppliers operating in China, as these suppliers must routinely transfer data back to headquarters and other affiliates."[17] In response, a Chinese government social media account released a short statement stating that two key regulatory documents that color in details of the regime on cross-border data transfer were still under revision, and "the controversy and compromise has not yet been resolved, which will continue to test the technological and coordinating capabilities of the legislature." Having acknowledged that the Cybersecurity Law, formally in effect, did not specify all of the answers, the posting continued: "it is foreseeable that various stakeholders in the game will persist in the tendency to make interpretations." The implication was that lobbying about the details of implementation had not concluded.[18] By all appearances, approximately nine months later, this is still the case.

Protecting personal information. Articles 41–45 outline requirements for handling of PI by the broader category of "network operators," and those requirements are fleshed out in considerable detail in a nonbinding but authoritative document issued by the CAC-subordinate Technical Committee 260 (TC260) standards setting body, the Personal Information Security Specification.

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[16] Rogier Creemers, Paul Triolo, and Graham Webster, "Chinese It Security Examiner Describes Review Process, Clarifies Status of Chinese Government Windows Edition," ibid., http://transpacifica.net/2017/06/1963/.
[17] "Communication from the United States: Measures Adopted and under Development by China Relating to Its Cybersecurity Law," (World Trade Organization). https://docs.wto.org/dol2fe/Pages/SS/directdoc.aspx?filename=q:/S/C/W374.pdf
[18] Samm Sacks, Paul Triolo, and Graham Webster, "Beyond the Worst-Case Assumptions on China's Cybersecurity Law: There's Still an Internal Tug-of-War over Cross-Border Data Flows," *DigiChina*, https://www.newamerica.org/cybersecurity-initiative/blog/beyond-worst-case-assumptions-chinas-cybersecurity-law/.

A more detailed but still nonbinding definition of "personal information" is provided in the Specification. International businesses are even more likely to be deemed "network operators" than CII operators, and this data protection regime places significant though not internationally unusual compliance requirements on those handling personal information.

Common Themes

Across several areas of regulation, there are common themes.

- First, important concepts that determine who is subject to what kind of regulation are often only partially defined. These include CII, important data, and personal information.

- Second, where there is ambiguity, there is discretion. While definitions are still being clarified, regulators can use the ambiguity to help or hurt whoever they choose, an obvious potential avenue for political influence on outcomes.

- Third, in each area of regulation, the government pursues interests broadly seen as legitimate (for example in security, personal privacy protection, or ensuring reliable operation of networks) while also pursuing goals opposed by the U.S. government (for example favoring domestic businesses, targeting dissidents, or restricting speech).

Tools and Recommendations for the U.S. Government

There are a number of measures the U.S. government should consider taking in advocating for the American people in the face of Chinese digital technology regulations.

- Some of China's regulations or practices may be in tension with or directly in violation of WTO disciplines. The U.S. government should use available WTO tools to pursue remedies. U.S. government should also support efforts to improve the WTO system along with allies that share the interests of the American people. It must be said, however, that if the U.S. government wishes to employ elements of the established, rules-based international trade order, it should refrain from offering dubious national security justifications for tariffs or other restrictions on foreign trade. U.S. claims that lack strong justification undermine efforts to exert pressure on China.

- The U.S. government and industry groups seeking leverage against Chinese practices that harm their competitiveness should coordinate international trade actions, standards for national security review in investments, and advocacy on ongoing policy developments within China. The U.S. government should refrain from actions that unnecessarily antagonize allied governments or industry groups.

- The U.S. government should keep objectives clear and transparent when developing or revising systems that can limit Chinese investments or acquisitions in the United States. Measures described in terms of protecting U.S. national security should have clear and credible connections to national security. U.S. government credibility is threatened when

measures that have visible commercial benefits for U.S. interests are justified in vague terms of national security.

- National security-related reviews on the part of the U.S. government should be as transparent as possible so as to minimize the appearance or actuality of conflict of interest. U.S. advocacy against opaque Chinese review practices is far less credible when U.S. actions themselves appear to discriminate based on national origin, not only based on bona fide national security concerns.

- Congress should work proactively to channel more resources to fundamental research and innovation in technology fields in the United States. The U.S. government should ensure that the United States remains an attractive place to study, conduct research, and build businesses that provide economic and social benefits.

- The U.S. government should police practices, not peoples. If the United States targets a nationality for increased scrutiny, it surrenders the mantle of the American dream and descends into ugly suspicion. Overreliance on national origin as a risk factor can also increase the likelihood that risks from less-scrutinized countries may go undetected.

- The United States should become a leader in the development of digital technologies that are protective of human rights, such as privacy and freedom of expression, by their design. For example, in the era of artificial intelligence applications based on large datasets about people, the United States has the potential to consistently lead Chinese competitors in developing systems that respect fundamental rights and operate ethically. But industry may not be motivated to do this itself. This means the government should develop regulatory incentives in the United States that better protect U.S. citizens' data and incentivize U.S. businesses to develop world-leading rights-protecting technologies.

- The Executive Branch should ensure, and Congress should demand, that law enforcement actions in the trade sphere remain independent of political agendas. It undermines U.S. democratic norms and the legitimacy of U.S. law if one can reasonably suspect that a law enforcement action—be it an indictment of alleged Chinese military hackers or a denial order in a sanctions case—is a chip on the negotiating table and not an impartial function of the U.S. government.

It should be needless to say, but in today's political climate it needs to be said: Not every Chinese achievement is a U.S. loss, and not every Chinese technological product comes from purloined intellectual property. The peoples of the United States and China are going to have to live with each other as neighbors across an oft-traversed Pacific, and as competitors in a variety of fields. They will live with each other as potential adversaries in some spheres, but also as fellow human beings facing common challenges such as climate change, rising inequality, and threats to international security.

The United States should authentically stand for the openness the Chinese government has recently (and somewhat disingenuously) claimed as its approach in cyberspace. I hope the United States will continue to rise to its highest aspirations as a land where people dreaming of a better

life are met with open arms, courtesy everywhere from border checkpoints to campus communities, and a nation proud to welcome visitors and claim new Americans as compatriots.

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PANEL II QUESTION AND ANSWER

HEARING CO-CHAIR HUBBARD: Thank you very much and indeed thanks to all of you.

I have some questions on deck from commissioners, but I just wanted to ask you something, Dr. Shih, but anybody could feel free to weigh in, because of something you said in your oral remarks about tax reforms, benefits in bringing manufacturing back to the United States. You also spoke about localizing supply chains. Those all sound like arguments that firms will do in their own self-interests. They need little guidance from us.

Or are you saying something more, that there's a policy angle beyond firms will figure it out?

DR. SHIH: Well, I wouldn't underestimate the inertia associated with change. Okay. So because, you know, supply chains were all designed with a set of rules that were in place when they were designed, okay, so for, example, Intel's packaging, they'll take the chips from Oregon, and they'll package them in Chengdu or they'll package them in Vietnam or they'll package them in Malaysia, and that's how it's organized, and it works efficiently today.

Okay. So, but that was designed in an era when the tax law was this way and the costs were that way, and the cost of change and the tax law has changed, and over time that might change.

In my written testimony, the other thing I highlight is I think the most pernicious problem is one of subsidies. Okay. So if you look at what's happened in semiconductor equipment and semiconductor packaging in China in the last two years, the investment has been incredible, and it's heavily financed by subsidies.

Okay. So I don't know how to get around the subsidies although when you look at Amazon HQ2 thing, that's, you know, that's playing the same game, right, so that makes it very challenging to deal with, but when I talk to people, it's kind of a new idea because they're used to doing things a particular way; right.

And I think just by calling into question some of those assumptions, okay, and maybe what we need to do, I've suggested to people like maybe it's an import processing zone or maybe it's some kind of special economic zone.

By the way, that's how China thought in the late '90s and early 2000s. Import processing zone. How do I encourage people to do something that in my book makes sense?

HEARING CO-CHAIR HUBBARD: Commissioner Cleveland.

CHAIRMAN CLEVELAND: If Toyota is only--has a hundred companies in the supply chain in Kentucky at this point, that's down from when they first got there when I worked on this, which was about 180, but your point is well-taken.

Mr. Cohen, I'm interested in and a little bit confused by your written versus, your testimony versus your recommendations. You talk about improvements in IP courts, and that in 2015 foreigners reportedly won 100 percent of their infringement cases in the Beijing IP court, where they're publishing 95 percent of the cases, and that there are 470,000 cases that have now become part of a public database, which I was interested in.

But then you go on--which sounds like improvement in terms of transparency--but then you go on in your recommendations--and this is what I'd ask you to focus on--to say that we should consider reciprocity, in licensing terms, reciprocity for IP legal services, which sounds very similar to problems we've had with auditing firms, and then we should consider amending antitrust laws to address state-directed technology practices.

Could you expand on those three recommendations and put it in the context of some of

the improvements?

MR. COHEN: Sure.

CHAIRMAN CLEVELAND: Thank you.

MR. COHEN: Absolutely. So we're at the beginning of this big data analysis. China made 30 million cases available online in 2014, and we're just digesting this now. Of that, roughly 270,000 were IP related, and another 200,000 or so have been culled by various private companies from the courts themselves. So the current IP landscape of cases is about 470,000.

How much of a missingness factor, in the words of Ben Liebman, Rachel Stern and others, exists in the judicial database is yet unknown. I can tell you that Rachel Stern looking in one province estimated 70 percent reporting factor, 30 percent missingness. In IP, it's hard to say, and this is something that has wide-ranging implications not just for IP but for rule of law, commercial law, human rights, et cetera.

As I look at this, and this is really early stage, what I see is a system that generally works well if you don't have anything that's at the core of industrial policy. If you're at the core of industrial policy, then the state intervenes directly or indirectly, and the playing field, which is already a little tilted, gets tilted even further.

And I think the reference for me is Gaetan de Rassenfosse's study on patent prosecution where if you started adjusting for the quality of the law firm, the nature of the examiner or the adjudicating entity, and you looked at whether the patents were in core technology fields, you would see that in those core fields foreigners were discriminated against, and they were not discriminated against in non-core fields.

So that's my initial estimate. You know, I think this is an evolving area, and it's one that really deserves careful attention. We really wanted China to publish cases. We brought an Article 63 request back in 2005 or so. Those cases are now available online, and it's really a rich mine of information.

Now how does that relate to some of my other suggestions? Well, first of all, some of the things we're talking about are domestic changes in the United States where I think we can make it easier for our law firms, our companies, to litigate. The vitamin C case in the Southern District of New York, where basically the court took a position deferring to Chinese forced pricing practices, maybe that needs to be evaluated under anti-monopoly law.

Maybe we should look a little more carefully when we exert jurisdiction under antitrust laws against U.S. licensors trying to license into a very difficult market in China, such as Qualcomm encountered. When I testified here in 2005, I believe I calculated that the damages that China was looking for in the Qualcomm case were on an order of magnitude I believe of 30 to 40,000 times average patent damages in a Chinese court case.

That to me is a disbalance that needs to be addressed, including being addressed by our own antitrust regulators.

Then if we look at the additional problems of these kind of techno-nationalist litigation issues, and they really undercut so much the credibility of the litigation database because if you see these obscene cases, and some of them really do look obscene, where judges are calling out to bring more cases against foreigners, you really wonder, well, how comprehensive is this database? Are we really looking at Lei Feng of judicial litigation where cases are concocted, et cetera?

But I think that in that context anything that's reciprocal that can help our companies will be helpful in leveling the playing field a little bit. You know, whether it's issues involving collecting evidence from China, China does not permit discovery, which is a longstanding issue;

letters rogatory when we go through The Hague process; enforcement of judgments where we enforce money judgments from all over the world in the United States, and we do it on a non-reciprocal basis.

We permit foreign nationals to practice, get bar admissions and practice before our courts. China does not do that, and that's really impaired the effectiveness of our law firms.

So I think we can still move on a range of areas in improving the playing field, helping our companies, helping our service sectors, and also we need to look really carefully at how litigation is being undertaken in China at this moment in time.

HEARING CO-CHAIR HUBBARD: Commissioner Tobin.

COMMISSIONER TOBIN: Thank you all.

As Commissioner Stivers said earlier this morning, we're after today moving forward to our report writing and thinking constantly, continuously, about recommendations we'll put forth.

So I want to ask Mr. Cohen and Dr. Shih on this round a few questions related to recommendations. I'm not trained as a lawyer, Mr. Cohen, so perhaps you had as your third prioritized action, USPTO IP attaches should enjoy diplomatic rank commensurate with their importance, experience and roles.

I'd be interested--I'm sure that that's more than just a title structure--if you could speak to that.

And then let me lay out my question for Dr. Shih, too. You and I think also Mr. Webster spoke about funding for basic research, increasing that, and in which you would be strengthening our basic research, and you also spoke about finding enough workers. So could you speak to the kinds of workers, and before that, the amount of funding that you think, and where we would be seeking funding to go?

So, Mr. Cohen, please.

MR. COHEN: Sure. So this arcane area of diplomatic rank--

COMMISSIONER TOBIN: Yeah.

MR. COHEN: If you go to the diplomatic lists of the State Department or the Ministry of Foreign Affairs, every diplomat that's posted in a foreign country is set forth according to their diplomatic rank. So typically you have the ambassador, the deputy chief of mission, the minister-counselor in charge of a particular unit in the embassy, the deputy, which is typically counselor level, first secretary, second secretary, third secretary, et cetera.

Typically those higher ranking positions are given to career State Department people. Sometimes rather ungenerously given to other agencies. The PTO has no foreign affairs authority, which means that we have to get detailed to other agencies where typically the diplomatic rank extended to us is lower than might otherwise be.

COMMISSIONER TOBIN: I see.

MR. COHEN: So basically this is first secretary level. Now for American IP officials who want to meet with someone who does not know them, the first response of the Chinese government official is to look up in the diplomatic list what rank you are, and they say, oh, he's just first secretary, I'm not going to send my director there. I'm going to send the deputy director, et cetera.

So the result is we have people out there, like currently the person in Shanghai with 20 to 30 years of IP experience, speak excellent Chinese, who are not meeting at a rank appropriate with their experience, and that's largely attributable to the lack of foreign affairs authority and the unwillingness of other agencies to recognize the competence brought.

When I was at the embassy, I was lucky, because Ambassador Randt made it a point that

notwithstanding my diplomatic rank, I would be at meetings. But that's really dependent upon the personality and support of the ambassador. It doesn't happen to everybody, and it doesn't happen easily, particularly when you have a structure in a U.S. embassy where you have multiple agencies just like in Washington with IP competence.

So one of the other internal issues is how can you bring everybody together, and when I was at the embassy, the way I did that is I went to Ambassador Randt, and I said can you extend an invitation to set up an internal task force that I would chair, but that only came about because the ambassador personally intervened.

Having someone higher up in the diplomatic protocol would also command respect from other agencies.

COMMISSIONER TOBIN: Has this been put forth before that you know of?

MR. COHEN: Multiple times. It's been--and several, the Commission to Stop IP Theft made the recommendation. Several trade associations made the recommendation. You're dealing with agencies in the U.S. government that don't want to relinquish higher-level diplomatic rank positions.

COMMISSIONER TOBIN: Thank you.

This is something for us to think seriously on.

MR. COHEN: Thank you.

COMMISSIONER TOBIN: Dr. Shih.

DR. SHIH: Yeah. I also want to tie to what Mr. Cohen said about IP. Okay. And give you another example on IP, and it will give you a flavor for a little of the challenge we face.

You know, Qualcomm's strength comes from its early investments in CDMA. CDMA was a technology that came out of DoD spread spectrum work. Okay. And so when I talk about funding for basic research, I think about things like NSF, NIH funding, but also things like DoD funding, DARPA funding, which have led to many, many, many benefits for this country.

Now that means not only funding at an appropriate level compared to GDP, as a percentage of GDP, compared to what we have done in the past like in the '80s or earlier, okay. And not only that level of funding but also stable funding, right, because you need the stability and going from continuing appropriations or sequesters and stuff like that are just horribly destructive for any of that type of work.

Finding enough workers. That goes to two levels; right? One is, you know, in the factories that I visited across the Midwest--right--getting enough of the skilled workers, and that means do I have enough in the pipeline, okay, in the basic STEM education, and there has been a lot said about that.

There's also an engineering level, too. One of the reasons Huawei is destined to be such a potent threat in IP is the number of engineers they have. Okay. I went to one site that had 40,000. There was another site that had 50,000 engineers. And if you look at 5G, and there's a lot of talk about 5G--

COMMISSIONER TOBIN: Right.

DR. SHIH: --how much standard essential IP they have originated, it's because they're investing in the engineers, okay, and that's--so that also goes to, you know, the U.S. has the strongest universities in the world. Okay. But then we don't let those people stay; right. So there's many, many issues, but it's at two levels, right. It's on the shop floor, but it's also at the engineering level.

COMMISSIONER TOBIN: And you're absolutely right. The 5G and the Internet of Things could be a push for us, you know, because we've got to have our eyes open on that.

DR. SHIH: It could be. I don't know how many people in this country understand how much engineering Huawei has thrown at it.

COMMISSIONER TOBIN: Yeah.

DR. SHIH: Okay. And that's all legitimate. Okay. And it's the number of people they have on committees and the number of people they have doing basic research.

COMMISSIONER TOBIN: Thank you both.

HEARING CO-CHAIR HUBBARD: Commissioner Wessel.

COMMISSIONER WESSEL: Thank you all. Thank you for those returning and thank you for those who are appearing before us.

I have probably ten hours of questions, but I understand I have a couple of minutes so I will try and limit them.

HEARING CO-CHAIR HUBBARD: That sounds more reasonable.

COMMISSIONER WESSEL: And hope that--thank you--and hope we can also probably submit some questions for the record afterwards.

Look, we all know that we would prefer to be a rules-based, you know, strong process oriented society. That's what makes us great. But I look at China 2025. We're now seven years out. Who knows whether they hit all their targets, but, you know, they're going to put in one trillion plus dollars to try and do it.

We just talked briefly about 5G where China understood the importance of the 5G standards and moved to have the head of the International Telecommunications Union General Secretary be a Chinese national, and they have sent legions to do that.

We've got a lot of problems on the horizon that, you know, we can talk about process. Dr. Branstetter, you talked about rather than identifying countries of concern in legislation--correct me if I'm wrong--let's have a process to do that.

I think China is "a country of concern." Would you agree or should we have a process--so why not just say it?

DR. BRANSTETTER: Can I respond to that?

COMMISSIONER WESSEL: Please.

DR. BRANSTETTER: So I think maybe I'll take, you know, some words from Graham Webster. I think it's important that we discipline actions--right--not peoples or countries. So if we have, you know, clear criteria for this designation and a process that actually documents the behaviors that we think are happening and that firms come to many of us privately screaming are happening, you know, but are reluctant to come forward with explicit details, if we can document this, right, then that actually creates an incentive for China to change, but we also have a mechanism by which we can monitor their behavior and actually determine whether they're changing or not.

COMMISSIONER WESSEL: But haven't we documented it enough though? Look, I agree, to look at Iran, Russia or others. I mean, you know, in China we now have a three, 400 page report on IP. We have great IP Commission report, et cetera, et cetera.

You know, all I'm saying we now have the ARM, you know, transaction that China is seeking to acquire 51 percent. They are--ARM is probably one of the most critical feeder technology companies in terms of chip sets, as I understand it. If we don't do something, China is going to own ARM.

DR. BRANSTETTER: Yeah. So I have no doubt, right, that any, you know, well-constructed process will identify China as a country of concern. Right. I do think it is important that we have this process. I think we already have some information that we could leverage. I

don't think that this investigatory process would need to take very long or consume a lot of government resources.

But I think the key thing that I want to emphasize in the statements that I made earlier and in my written testimony is that I think it's very important that we have a monitoring mechanism that identifies when our companies are being subjected to pressure to transfer strategically significant technology. That provides specific information that will enable our government to act in a focused way, and I think that's a very important part of our strategy.

COMMISSIONER WESSEL: Agree. And this Commission a number of years ago had a recommendation to look at Chinese investment in the U.S. and Congress made a request through the Appropriations Subcommittee. At that time, Commerce was able to identify $219 million of Chinese investment in the U.S., but they indicated in their report, thank God, that Rhodium said that year it was seven billion.

We have those authorities right now at, you know, at BEA. We have the authority through SEC on publicly traded companies because these are material pieces of information.

What do we do to, I don't want to go through all these processes when I see a current and, you know, a clear and present danger, if you will. What can we do to try and focus attention on high value targets--and this is for everyone--you know, to try and get at some of these questions?

The question of, you know, status, I agree with you in terms of, you know, diplomatic rank, and that's something, as you know, that's going to take a little time. What are the three or four things that we can do today that's going to send a clear signal to our businesses that we are not going to allow this to continue, and then take the time to put in place the processes to ensure an orderly approach?

Dr. Shih, do you have thoughts on that?

DR. SHIH: Well, it's, the challenge with that is because, you know, China is very good at symmetry. In other words, oh, if you do that, then we can do that. Okay. The only problem is they play by a different set of rules than we do.

COMMISSIONER WESSEL: And they've already done it in a number of ways.

DR. SHIH: Right. So I think it's challenging. As I look at the ARM transaction, you know, this is completely consistent with Made in China 2025.

COMMISSIONER WESSEL: Clearly.

DR. SHIH: Because they want to have control of an instruction set architecture so they can make modifications to it and put their own security things in it.

I think, you know, this is why we address a lot of these things with CFIUS. Right. I think it's, it's very challenging, but the best things that I have seen us do in this country is when companies have a good comprehension of where their strategic assets are and how to protect their trade secrets. I won't give you the name, but I was with one company in China once and they said, well, you know, we like to hold our meetings walking around the park. Okay. And there's some, there's some discussions, if you want to talk about that topic, we make everybody fly to Tokyo. Okay. Now that's kind of a nice story, but what does it say really?

It says you have to have a consciousness of what's strategically important. Okay. And there are companies, U.S. companies, who do well in protecting those interests. It becomes more problematic when you have standards associations, be they IEEE standards or International Telecom standards or anything which because we have, we have gone to an open process with that, and there are benefits for having, for example, ITU standards.

I said one of the reasons so much of my testimony was focused on running faster is because, you know, that competition is coming, not only from China but from a lot of other

places, and that's really the only way I know to kind of keep ahead is like you have to invest more, you have to be creative.

One of the things that I have found fascinating as I travel across to Asia is that companies and people and organizations who are good at copying--okay--they're very good at copying, they may not be so good at systems; right. I know how to make the parts, but I don't really understand the more complex stuff.

COMMISSIONER WESSEL: Integration. Yeah.

DR. SHIH: Right. So I just think we have to play, we have to play a bigger game, and that means we have to invest. We have to invest in our people. We have to understand what's strategically important to hold on to. I mean there will be some people who would say when you're looking at instruction set architecture, it's a commodity now. Right. Because actually the real value is no longer in instruction set architecture. The real value is in all the software and innovation you put on top of that.

Okay. IBM has that problem with Power PC. I used to work on Power PC at IBM, and, you know, it's kind of a commodity--right--the instruction set architecture because that's not what matters. The challenge there is what happens when you have a lot of people using it, and now we're going to branch to somewhere else. It's a very difficult problem. I'm sorry I don't have a better answer.

COMMISSIONER WESSEL: Any other thoughts or--

MR. COHEN: I would just, just a note of caution on this, issues involving CFIUS and technology transfers. I often hear and I often heard when I was in the U.S. government people saying, well, you know, Syngenta has "x" number of patents or Micron has "y" number of patents. Patents are disclosed documents.

If there is a problem with revealing something proprietary of national interest, then the patent should have been handled as a secret patent. So the patent by itself actually doesn't indicate that there's something that immediately merits national security concern.

It could suggest that there's something overlaying the patent that does involve that, and I say that because I've heard this many times when I was in the government, and I'd always have to go back to the patent lesson 101. This is a disclosed document. The patent system works on public disclosure and improvements over time.

What does concern me is that when people are asking questions of this nature, it suggests to me that they may be not addressing the more complicated technical issues, which are not easy in judging what the relative competitive strength of a company is. Does Syngenta have some certain proprietary life forms or whatever or methods of cultivating them? We may not know, and it may not be on any disclosed document.

I know early on when I was at the Patent Office, I was looking just at a very rudimentary level when we were very actively engaged in trying to get China to invest in the U.S., just looking at patent holdings. How many patents does the Chinese company seeking to acquire a U.S. company have? How many are in the target company? Is this a tech-driven acquisition or is it driven for other purposes? And a lot of this analysis is not being done.

The U.S., for example, in our bilateral science cooperation, there are about 450 patents that have been derived from bilateral science cooperation. I don't think anybody has fully exhausted whether the Chinese inventors who benefited from that cooperation also filed patents on that in China, whether they were improvements on that, whether that was a stolen IP with U.S. government funding. We're not talking about private sector. How are we managing our assets so that we're getting what we expect out of them?

I don't think that's 100 percent clear. So this, a lot of this rhetoric about stolen IP omits the fact, first of all, that patent infringement is not a matter of theft. There is no international obligation to criminalize trade secrets. There is good faith infringement that occurs all the time because this is a technical issue. And most importantly, these are complex technological areas, and just having folks, even like me, I have a BA and MA in Chinese language and literature, I'm not the guy to evaluate the technical complexity of a CFIUS transaction.

COMMISSIONER WESSEL: Understand.

HEARING CO-CHAIR HUBBARD: Okay. Commissioner Stivers.

HEARING CO-CHAIR STIVERS: Thank you.

I want to talk about more on forced technology transfer. Dr. Branstetter, first of all, thank you for your excellent testimony.

You stated that in your testimony the key idea is to replace, you know, the current indiscriminate tariffs by the Trump administration with carefully targeted sanctions imposed on I guess specific Chinese entities that are directly involved in technology misappropriation. And then you go through the auto industry and digital service companies.

You also state that inadequate IP enforcement is only part of the problem. You say China has adopted a set of policies deliberately designed to force foreign multinationals to transfer this technology.

So can you explain to me how do you impose sanctions on these specific entities instead of China when we know this comes from--this is part of a central government plan? Can you explain that, that which seems like an inconsistency, which I'm sure it is not?

DR. BRANSTETTER: Well, it's certainly not designed to be an inconsistency. So the basic idea is perhaps best illustrated by example. Right? What we often find and what perhaps members of the Commission have heard in private discussions with U.S. multinationals is that the pressure to transfer technology can arise through two channels, many channels, but principally two.

One is the nature of China's FDI regime, which closes important sectors of China's economy to wholly-owned or majority-owned foreign enterprises so that you have to form a joint venture with the Chinese entity. You don't exercise control over this Chinese entity in all cases, and you necessarily have to transfer sensitive technologies to the Chinese entity in order to realize the commercial value from your innovation.

Now, this is statutory. This is part of China's WTO Accession Protocol that its trading partners agreed to. But it can clearly create some problems for U.S. multinationals, particularly as the nature of the market changes.

Another channel is through the role of Chinese state-owned enterprises, right, which play a very important role in what we might call the network sectors of the Chinese economy--health care, energy, transportation and telecommunications.

Often these state-owned enterprises play a very important role in deciding who gets to sell into the Chinese market, and because these enterprises' chief executives are not appointed by the shareholders, but they have to be approved by the Party State, they can place an awful lot of weight on Chinese industrial policy objectives; right. So they can use their position as an important purchaser to place pressure on U.S. multinationals or foreign multinationals to transfer technology to an independent Chinese entity that they don't control as a kind of quid pro quo for market access.

Now China's Accession Protocol would seem to prohibit this behavior, right, but these conditions aren't being applied through legal means. They're being applied through extralegal

means.

And any multinational that complains about this behavior could be worried that they would face sanctions from the Chinese state or from the state-owned enterprise and also that there's probably another multinational that might agree to these terms if they don't.

So if I could just complete that. So, you know, there's pressure being applied that I would argue contradicts China's obligations under its WTO Accession Protocol and the TRIMs Agreement, but there's pressure to keep silent; right. And any multinational that voluntarily comes forward is taking a risk; right.

So what I'd like to do is change the game theory by making it, you know, much more likely that the multinational will have to disclose these terms, right, and by disclosing the terms, they would actually specifically identify the state-owned enterprise executives, the government officials that were applying the pressure. Right. And that allows the United States government to sanction those companies, those individuals, that are applying the pressure; right.

Now there's a risk involved here, right, that could lead to retaliation, but we're not placing tariffs on whole industries or whole product categories. We're not subjecting tens of billions of dollars of U.S. exports to potential retaliatory tariffs. We are focusing on a specific entity, a specific individual or group of individuals or a specific firm; right.

And I think that if the Chinese parties that are involved in this kind of pressure were to think or expect that the threats that are whispered, you know, in restaurants in Beijing might be posted on an official government website and individuals might face real sanctions, then that might change their behavior in a really productive way.

HEARING CO-CHAIR STIVERS: Okay.

HEARING CO-CHAIR HUBBARD: Commissioner Kamphausen.

COMMISSIONER KAMPHAUSEN: Thank you all very much.

This has been a great panel, as well, and I very much appreciate Dr. Shih's enjoinder that we learn how to run faster as a country and as people interested in these issues. Thank you.

I'd also underscore Mr. Cohen's points about the interplay or how we should think about improvements in the Chinese IP system relative to the marginal issues and relative to the core issues as incorporated in industrial policy in dealing with the strategic industries.

In my day job, among the things I do is work on the IP Commission, and we found that the improvements are important, but to the extent that they or at those points in which you run up against the priorities of national industrial policy, they're really, really inconsequential, and so your point I think underscores that but also underscores this broader contribution that you've made and so appreciate your help even to us at the IP Commission and as you testify here today.

My question, though, is for Professor Branstetter. In your testimony, you talk about some of the challenges, in your written testimony, some of the challenges in CFIUS reform as currently envisioned, and in particular, you talk about the limitations on the ex or the outbound dimensions either of investment or even technology. And later you talk a bit about export controls.

I wonder if you would talk about the interplay of investment control and export control? And again, in our work at the IP Commission, we found that our friends in Japan at the Ministry of Economic Trade and Industry have a much more holistic and coherent view. They manage both investment control and export control within one ministry, and here we have split jurisdictions.

Any thoughts or comments you have on this issue would be valuable to hear.

DR. BRANSTETTER: Sure. So in the written testimony and in my oral remarks, I'm

trying to balance, you know, two objectives. One is the avoidance of unproductive interference, right, by a federal agency or process in the decisions of U.S. companies; right. So I think we only can intervene where we think there really is a national security concern or sort of a broader, you know, a strategic concern.

And that meant that what I'm recommending in terms of a review process is going to be deliberately narrow in scope and limited in focus in order to avoid that unnecessary interference.

Now what that means, right, is that the process that I'm envisioning would not be sufficient to prevent all movements of technology to all potentially adversarial nations or adversarial non-state actors, and so we need something else to protect us in that dimension.

And in that context, I think it makes perfect sense to look at our existing export laws and think about possibly putting them on a stronger legal footing and improving their importance and improving the monitoring functions that are attached to those laws.

But I think as a practical matter, you know, these things would probably have to, you know, function separately in the U.S. because I think just getting the kind of review mechanism that I'm proposing in place would take quite a bit of legislative energy and perhaps executive energy as well.

I think, you know, standing up something like, you know, METI in the United States would involve so many agencies and committees of jurisdiction that I think it would be very, very hard to achieve that degree of coordination although I would agree that in this instance it probably serves Japanese interests.

If I could just make one brief additional statement, it is interesting that some of our allies in Asia are already either informally or formally reviewing the kinds of technology transfer that their firms are engaging in vis-a-vis China in the manner that I'm suggesting and also that China has recently imposed a legal obligation on its enterprises to submit their technology transfer plans to government review.

So I'm not suggesting that we do something that China is not already doing or that some of our trading partners in Asia are not already doing.

Thank you.

HEARING CO-CHAIR HUBBARD: Commissioner Wortzel.

COMMISSIONER WORTZEL: Mr. Cohen, if I could, I'd like to follow up on a point you raised about patents. Who may designate a patent as having national security implications? I mean is it the company itself? Or is it the U.S. Patent Office?

And I guess what this question boils down to is you raised, I think, a very good point, and I need some education on it. If something is not developed with the national security in mind, is there a body at the U.S. Patent and Trademark Office that can look at it and say you know we don't think this patent ought to be a public document because of its national security implications?

MR. COHEN: Thank you very much for your question.

This is a whole realm that I was not actively involved in at the U.S. Patent and Trademark Office. But there are people who handle secret patents, which contain confidential information, and they work in a SCIF and an enclosed environment. Usually, for example, if someone wants to file a patent overseas or if it triggers concerns, it comes out because basically a computer driven analysis of key words.

So if you are filing a patent that has thermonuclear device in it, probably that will end up getting sent to the secret patent people. But if you described it in other ways more gently where there are civil implications only, it may not.

But generally there is a group of people who handles military application patents at the USPTO as there is in China as well.

COMMISSIONER WORTZEL: Well, I understand that. I'm, I guess what I'm asking is should there be a process at the Patent Office? Should we think about a process at the Patent Office as a recommendation that says there ought to be a body that says I don't care if this wasn't developed for the U.S. government? I don't care if it wasn't developed in a SCIF. I think this particular process or patent has such important national security implications that it should not be a public patent.

MR. COHEN: You'd have to speak to the folks who handle secret patents who would know this better than I frankly. So many patents are disclosed before they're granted as well, and that was with the changes to the U.S. patent law. So disclosures are happening at a more rapid rate than in the past.

HEARING CO-CHAIR HUBBARD: While I'm waiting to see if fellow commissioners have any other questions, I just have one additional--one additional question. Our client, of course, is the Congress, and I know, Professor Branstetter, you mentioned the Cornyn-Pittenger CFIUS reform.

Could each of you say if there's something specific you think we should take into account for the Congress? I know, Lee, in your case, it's the CFIUS reform but any others?

DR. BRANSTETTER: I think I'll take advantage of my time here before you to focus on the explicit proposal that I'm putting forward.

But to broaden it just a bit, right, it doesn't necessarily have to, you know, the review process that I'm proposing doesn't necessarily have to reside in CFIUS. And I think many of you are much closer to Congress than I am in Pittsburgh. It may be that the proposal as it moves through committees is moving in that direction.

But those of us who have had any connection to CFIUS in the past, I think appreciate the professionalism of that process and the way in which the balance of national security and intelligence agencies, on the one side, and the economic policy agencies on the other almost always ensures a good balance between economic concerns and national security concerns.

It's also a domain in which the resources of the intelligence community are often applied I think in a very productive manner. So I think all of these argue for this kind of review process either being based within CFIUS or in a committee that has that kind of interagency balance and that access to intelligence agency resources.

Part of the reason why I wanted to so significantly restrict the original Cornyn-Pittenger bill to focus only on technology transfer to unaffiliated parties only in certain critical dimensions of technology and only to a small group of countries of special concern is because I don't want to overwhelm CFIUS with such a large docket of cases that that interagency balance would have to be changed in ways that, you know, frankly, might, you know, create a prejudice against economic interests, you know, in favor of purely national security ones.

I like the balance that exists. I think it's important that that balance be maintained. If we want to do it in CFIUS, then we really need to restrict the scope of review.

Thank you.

HEARING CO-CHAIR HUBBARD: Commissioner Bartholomew had a clarifying question.

VICE CHAIRMAN BARTHOLOMEW: Yeah, I do, Dr. Branstetter.

I thought that CFIUS was not allowed to consider economic concerns so I'm confused about you talking about this balance. Now, you're talking about a corporate financial concern,

which is to my mind not necessarily synonymous with an economic concern. But can you clarify that?

DR. BRANSTETTER: Yeah. Thank you for your question.

You're absolutely right, right, the writ of CFIUS is to think about national security concerns, right, but consider the, I guess the inclination of the agencies at the table; right? There are different agencies at the table that are going to define national security concerns, in some cases very broadly, in some cases more narrowly.

And whenever we're thinking about restricting investment into the United States, right, or in this case, restricting the right of a U.S. firm to transfer some technology that it owns to an indigenous party abroad, we're potentially incurring economic harm; right? So, you know, calibrating the right policy response that protects our security interests at the sort of lowest possible economic cost is a difficult question in many cases, and that's the dimension on which I think it's very helpful to have this interagency process that sees the problem from multiple vantage points.

Does that address your question?

VICE CHAIRMAN BARTHOLOMEW: Not really. I mean sort of--

DR. BRANSTETTER: Okay. Sorry. Sort of?

VICE CHAIRMAN BARTHOLOMEW: Well, again, I mean CFIUS from my understanding specifically can't deal with the economic consequences of a transaction. So I personally think that economic security and national security are completely intertwined. Not everybody thinks that way, and so when there's a CFIUS transaction, it's my understanding that they are not allowed to consider the impact of job loss or the impact on the community or even the impact within an industry that is not national-security based but is economic-based. I mean does this transaction make, weaken an industry in the sense that it undermines the competitiveness within an industry--those are characteristics that can't be taken into account during a CFIUS review.

DR. BRANSTETTER: No, that's right. That's right. So under current legislation and practice, the focus is very much on national security although again, you know, national security is sort of this broad thing that can be, you know, a little bit hard to define.

Some of our trading partners and allies have a national interest consideration that their equivalent of CFIUS takes into account. It's a sort of separate question of whether we would want to change the focus of CFIUS to include this kind of national interest justification or not.

I'm not an expert on how the Canadians or the Australians actually interpret this national economic interest statute and allow it to inform their decisions. You know, as a casual spectator, it seems to me that they're able to include this consideration without unduly restricting foreign direct investment into either Canada or Australia.

So personally I might be open to a consideration of this, right, provided that this economic interest didn't lead to sort of open-ended justification for federal government intervention in the actions of private firms; right. I actually think that there is merit to the current focus on national security because in my mind that actually provides a clear justification for the federal government to step in and interfere in the actions of private firms.

And, you know, I think as many people on this panel might agree and certainly people in this room, there are these dual-use domains of technology that are, that feature very prominently in China's industrial policy goals that relate in a clear way to future military capabilities, and so my sense is that, you know, even as CFIUS chooses to pursue its current focus on national security issues, if it were changed in the manner that I'm proposing, then some consideration

would have to be made of transfers of technology that are dual use, right, and while in a particular context might be purely civilian, an application could also lead to the acquisition of military capabilities down the line and would raise clear national security implications that CFIUS would need to consider even under its current statutory parameter settings.

HEARING CO-CHAIR HUBBARD: Other thoughts from the panel for Congress?

MR. WEBSTER: I have a couple. One is just to echo a little bit of what Dr. Branstetter has just been saying.

As the whatever reforms or succession happens with CFIUS moves forward, and I believe that broader coverage is needed than is currently available in the system, I want to express support from the perspective of U.S.-China relations for the highest degree of transparency and process that's available, and the reason is that if the U.S. review regime seems opaque, which it does often on the Chinese side, it tends to act as an argument in all kinds of bilateral engagements that the Chinese side can use against the U.S. side saying, you know, look, your CFIUS is just, it's, you know, it's an opaque, it's totally discretionary process, you do what you want, well, we do what we want too, we have our interests.

I want to also say that if there's going to be an economic security or economic national interest criteria installed into some sort of investment or other review regime, for the same reason that economic element needs to be as transparent and well-documented as possible, so that if such a regime were to exist, if a transaction gets shut down by this new process, it should be documented so that the U.S. public, first, and the international trade community can know that this was not simply because, you know, one company stepped on somebody to try to get their competitor hosed.

It's really a value, especially in this era when we have friction with our allies around the world in trade and investment relations, keeping that transparency and credibility intact is crucial.

And one more thing, I did say this briefly, but I think that there's a really important opportunity for the U.S. Congress right now as it begins to deal with the questions of privacy regulation and data protection in a way that the U.S. hasn't so far. U.S. leadership can help U.S. digital companies compete against Chinese companies on the world stage.

Right now GDPR has set up a pretty impactful global standard or a very influential model. That's not the right model maybe for privacy protection and maybe for the economic interests of companies, and it's certainly not favored by a lot of actors in the U.S.

So what's the U.S. model? Right now we don't have a comprehensive one, and I think we may be on the precipice of building one, and competition with the giants in China should be something that's on the agenda there. So those are a couple of thoughts.

MR. COHEN: The U.S. is the largest technology exporter in the world. I believe it's about $140 billion or so a year. In certain markets, like Taiwan, technology exports are the principal service export to that economy.

Yet, I think, in general, our trade diplomacy, and particularly our advocacy for U.S. companies, resembles a post-World War II U.S. economy looking at steel and autos and textiles and agricultural goods and rarely looking at intangible goods, and that's not just technology. That also includes motion pictures and music, et cetera.

We already are somewhat littered with the remains of past technology-oriented agencies in U.S. government. OSTP is understaffed. OTA, which used to be at the Hill, no longer exists. The Technology Administration had about a 20-year tenure. There's really no one in the commercial service that actively promotes legitimate U.S. exports, which to a degree has

deprived us of some of the granularity in our narrative about forced technology transfer.

When there is a legitimate reason to collaborate, when it serves U.S. national interests and the economic interests of the licensor, then that's a good thing; that's a good export. Qualcomm is a major exporter of technology, and that needs to be supported.

That also means that there needs to be institutions around that so that we could support that just like we would support any physical export, and that we also have greater knowledge about what is happening in those markets. That would be one recommendation.

DR. SHIH: I would just echo what Mr. Cohen and Mr. Webster said, and one thing I would add is--I think Mr. Webster said it earlier--we need to be very strategic about how we handle some of these things. I mean I look at the whole ZTE situation, which continues to play out, and, you know, this is why there is Made in China 2025-- because China sees the chokehold the U.S. has on key technology, okay, and says because they could shut down a whole company, we need to develop alternatives.

So we need to think strategically about that. I was in China about four weeks ago. I can't tell you how many people asked me what's going to happen with ZTE. Okay. Everybody was asking me what's going to happen with ZTE. Okay. And so if you ask the population at large, they buy into the Made in China 2025 because they don't want to have a gun held to their head.

And I think we need to think about that. That argues in favor of what Mr. Webster said about having a very transparent process, which everybody understands.

HEARING CO-CHAIR HUBBARD: Commissioner Wortzel.

COMMISSIONER WORTZEL: Mr. Webster, in your written testimony on page 11, you make the point that the U.S. government should police practices, not peoples, and that's a point you also made in your oral testimony.

I infer that to be a criticism of our counterintelligence and security community for potential profiling.

MR. WEBSTER: Well, I would say it's an implied criticism of that. It's not limited to that though. I'm concerned about things like either proposed or already in process restrictions on visas for people from China, or I would extend this to other nationalities. It's not just a China issue.

I'm also concerned that if you target Chinese people, and ethnic Chinese people, the dynamic inside this country gets toxic really fast, and I think we're experiencing that now.

COMMISSIONER WORTZEL: Well, let me ask you a further question then. What if a particular nation state has certain practices, such as using students for espionage, inserting people into a country for espionage, that are well documented in both court cases and in espionage civil and criminal cases? It seems to me that it isn't the fault of the United States government or Congress that a certain nation state's population happens to be more heterogeneous than another state.

MR. WEBSTER: I would say in direct response to that that it's not the fault of some Chinese that their government conducts these types of activities. And so I'm saying police the practices and not the people.

In that particular situation, for instance, if you're concerned about Chinese individuals working in labs where sensitive technology is developed, I would say that then you should probably be concerned about people from any country working in those labs, including the United States.

If things are so sensitive that Chinese researchers need special authorization, then so should people from France or from Germany or from Wisconsin. I think that it's, you know, the

sensitivity is there, and if your adversary is China or if it's Iran, China or Iran can go to somebody from another country. You miss the point if you're looking at the nationality and it violates basic American principles.

HEARING CO-CHAIR HUBBARD: Well, Speaker Ryan appointed me so we can't put Wisconsin in that group.

[Laughter.]

HEARING CO-CHAIR HUBBARD: But Commissioner Wessel--

MR. WEBSTER: I was born there--just for the record.

COMMISSIONER WESSEL: Thank you all again.

Been spending a lot of time recently on autonomous vehicles, on AI, et cetera, and, you know, the commodity of greatest value in those industries and probably for a lot of others in the future is data.

And you talked about rules on data. It seems that from my perspective we're way behind the curve in terms of understanding the value of that data. The Chinese, you know, in the Anthem hack allegedly were not looking for the PII but were looking for the underlying patient data to help in personalized medicine, et cetera.

Mr. Webster, since you spend a lot of time in this area, what do you think from this, for this Commission and as we advise Congress, what should we be looking at in the data area that has not really been looked at, you know, aside from the issues, and we all agree in terms of human rights, surveillance, you know, those issues, the ownership of data, and its potency in terms of fueling and enhancing future industries, you know, what kind of things do you think we should be looking at that haven't been on the agenda?

MR. WEBSTER: Thanks.

It's a large and important question. Just a couple of thoughts. In--I don't recall which speech right now, but Xi Jinping has identified data as a basic national resource.

COMMISSIONER WESSEL: Right.

MR. WEBSTER: And this is discussed in Chinese writing as, you know, a kind of core development understanding. There's a little bit of caution to be had there. Large data sets are not necessarily going to solve all the problems for AI developers. There's research out there right now that shows that there's diminishing returns after a data set for certain types of applications gets to a certain size.

So if you're talking about competition between the U.S. and China, a U.S.-sized data set or one held by Google or Amazon, who operate in many countries, may not be all that disadvantaged versus a Chinese-sized data set just because on a logarithmic scale, you've lost--

COMMISSIONER WESSEL: Quantum computing may change some of that dynamic, but yes.

MR. WEBSTER: It sure might, and there I will not speculate on whether, what might be possible.

I think I turn to the basic insight that the Chinese government has grasped in the last few years, which is that the digital economy, cyberspace, digital industries, need a comprehensive regulatory approach, and of course their system is different from the one here, but they've put together this interlocking and highly complex set of regulations that, as I said, are not fully fleshed out, but data protection, protecting access to it for domestic interests are part of it.

I would say on the U.S. side, from a more open perspective, there might be encouragement for useful data sets to be made public, and I mean public globally. So in AI development, people turn to, you know, the standard training sets, and they're sort of

benchmarks.

If you develop a new technology, you'll apply it to the task that many others have applied it to, and you can sort of show off in this way and say I've, you know, I've made it to 98 percent rather than my competitor's 95.

Building libraries of shared data sets is a public good. You know, I suppose we could do it as a national competition, but I think it's just something that could be powerful across the board, and China will be doing it in terms of creating these data sets.

And then there's, you know, as I alluded to earlier, there's the competitive global agenda setting task that I think the U.S. government has when it comes to data protection in general. If there's a stronger U.S. regime on privacy and data protection in the next few years, that will hopefully come into some sort of agreement with whatever GDPR has become at that time, and that will produce a consensus that stands apart from some of the Chinese practices, especially including pretty much limitless state access to user data. So--

COMMISSIONER WESSEL: Let me understand though because GDPR, what we are looking at are more privacy-based approaches rather than value-based approaches. And correct me if I'm wrong, that the Chinese view the data as in part fueling, first of all, some bad things in terms of, you know, social credit and other systems, but in terms of its competitive value. GDPR wasn't set up as terms of competitive value but more for the privacy-related approaches.

So you just said, you know, you'd like to see public data sets, and, you know, I think in a lot of areas, medicine, et cetera, that's great, although at some point, you know, it crosses over into having real competitive value for these industries in the future.

How do we deal with that tension? How do you--what's the line at which we should say open/not open, et cetera, and how do you set that? I'm not asking you for a specific, you know, data set, but how do we deal with this if this is truly one of the great commodities of the future?

MR. WEBSTER: Well, I don't have a good answer for that, and one reason is that I'm not convinced that the Xi Jinping dictum that it's a basic national resource is going to turn out to be right.

It's going to be sector by sector and application by application. Some data driven applications require these big data sets. Some can be done in other ways. The engineering is going to develop and--you know, I'm a China studies guy. I don't--I've tried to begin learning machine learning, coding, but, you know, forget about it. We're going to have to look for deeper insights there.

But I will say that in the Chinese planning on AI development, one of the insights that they've landed on is that there's a barrier in creating a competitive Chinese AI industry if only the big data companies, the sort of, you know, Baidu, Alibaba, Tencent and a couple of other--

COMMISSIONER WESSEL: Uh-huh.

MR. WEBSTER: If only they have these big comprehensive data sets, this really hurts the little guy. The analogy is that, you know, if you're, if the big trees are too big and too rich, then nobody can grow on the forest floor.

So the Chinese plan specifically addresses this by saying we're going to have to create these public data sets so that smaller upstarts can jump in. In the U.S., you know, the upstarts kind of come around and then they, you know, the lucky ones get acquired by some of the big ones, and the same dynamic in China.

I think that both the U.S. and China if they want to really lead in these technologies, I would urge a, you know, very privacy protective and security protective development of common data sets.

You know, it does get into that risk though. I mean if you're just sharing data willy-nilly, then you can see what types of problems we're going to get into, and I tend to lean more on the protect side than on the let it all flow.

COMMISSIONER WESSEL: Thank you.

HEARING CO-CHAIR HUBBARD: Commissioner Cleveland.

CHAIRMAN CLEVELAND: Dr. Shih, I'm curious. You, I liked your statement that Commissioner Kamphausen mentioned of it's not just a question of slowing them down but us running faster.

Do you see a vanishing point? I mean one of the myths about China has always been that they don't have the kind of transformational innovation engineering capacity and that's always been our advantage. But, and as I'm reading your testimony, your written testimony, you are clear that we do continue to sustain this advantage although funding is an issue.

I'm curious about whether you see there's sort of an inflection point at which these 40,000 engineers that you identified have that innovative capability? Have we reached that point or are we not there yet?

DR. SHIH: I think it varies by field. So, for example, in telecom, principally through the investments by Huawei in engineering, hiring so many engineers and putting them at--and Huawei was also I should say schooled by litigation with Cisco, okay, and because of that they, in my view--Mr. Cohen probably knows better--in my view, the IP regime in telecom is more highly evolved and it's better developed in China--okay--and so the question really would be what are the fields where they are catching up or have caught up or will surpass us? Where are the ones they are investing?

In that regard, when we talk about Made in China 2025, I go back to the 863 plan, which was first created in March of 1986, in terms of if we want to be a modern economy, what kind of capabilities do we want? They're investing very heavily in biotech--okay--and bio-pharmaceuticals.

I think the U.S. and Western countries are still ahead, but the level of investment they're making, you know, world's largest gene sequencing capacity is in Shenzhen, right, at BGI, and, you know, so they've made huge investments in the life sciences. So they are catching up, but I think if you look at those types of complex, more complex systems, hardware, software systems, cyber physical systems, the U.S. and the West are still very good at that, and that's why I think we have to invest where we're strong.

MR. COHEN: Yeah. Of course the traditional narrative is China is an expert in incremental innovation but not disruptive innovation, and there's a lot of explanations people offer for that. Confucian society is one. Another one is that it's a highly bureaucratic approach to innovation so disruptive technology is not favored because there's too much possibility of failure. So it's really a risk-adverse innovative ecosystem.

Nonetheless, you know, we have seen some successes. I think high-speed rail, for example, is a good example where China was able to acquire technology, leverage these regulations that are now subject to the WTO case to improve upon it, own the improvements, leverage the regulations to get access to foreign markets, and aggregate what they could get from the best in the world leveraging competitors throughout the world, and coming up with a world-class high-speed rail system at relatively low cost.

Now is that incremental innovation or disruptive innovation? I don't know, but I do think some of this stuff is trackable, and I think in the pharma sector, for example, you know, we don't really do this very well yet in the U.S. government or in industry, but you could track scientific

publications where China is ramping up. You could track patents where in pharma, unlike IT, just a few patents could be extremely meaningful, if it's a new compound. Then you could talk about regulatory approvals, whether you're able to introduce that into the market.

Pretty easy to track that whole cycle of events, and I think it's very interesting to see that China is now looking at these more risky sectors, a new pharmaceutical product, you know, a billion to $2 billion of investment, to bring it to market, and we're starting to see licensing revenue flow to China as China makes, for example, some of its biotech technology available to the West.

So I'm not so sure if the traditional narrative is going to hold up that well or perhaps whether Chinese society is adjusting to the fact that failure isn't such a bad thing.

One of the gaping holes in the trade secret regime, which was just recently corrected, was that you had to have practical applicability for a trade secret to be protected in China, by the way, a clear WTO violation that the U.S. did not address, and one that really harmed the biotech sector because failures don't have practical applicability, and if you have a library of 10,000 molecules, none of which was successful, that is extremely valuable.

But that was not protectable as a trade secret under Chinese law. That's changed. I think China has recognized in this highly bureaucratized innovative system that failure is valuable, and that there is risk that you have to encounter in order to innovate, and I think it's really one of the open questions for the next ten years whether they will really succeed.

DR. SHIH: I just want to add something. If you look at the high-speed rail example, one of the huge advantages that China has, and they're leveraging it because it's the world's largest market for so many things, is they get practice. Okay.

So because they put up so many tens of thousands of kilometers of high-speed rail, they get practice. They go down the learning curve. They get better at it. And I visited many factories. I visited one factory there that makes like 30 percent of the world's microwave ovens. Okay. Man, do they get good at it.

CHAIRMAN CLEVELAND: Interesting. That's an interesting note to conclude on.

HEARING CO-CHAIR HUBBARD: Any other questions from other commissioners? Commissioner Kamphausen.

COMMISSIONER KAMPHAUSEN: Very quickly, on the topic of what looms on the horizon in the issue of IP loss or IP protection. Mr. Cohen, when we started the IP Commission process six years ago, who would have thought we are where we are now where it's a common topic of discussion, even on talk shows and so forth, and there have been efforts to measure loss and we can have our discussions about that.

I guess the more pressing thing for me to want to hear your thoughts on, Professor, and perhaps Professor Branstetter, as well, is what looms? And maybe you've partially answered this in your response to Commissioner Cleveland just now. But what's the issue that we are just now seeing hints of or that looms on the horizon that we ought to be paying attention to so we're not playing catch-up in another four or five years?

MR. COHEN: Of course, the good news is China's Five-Year Plans. So we should be able to predict a little bit if we choose to read those sometimes dreadful texts about where China is headed.

I think it's been pretty clear for the past ten or 15 years that the migration in China in terms of areas of concern to the U.S. are less and less in CDs and DVDs and counterfeit goods. Those problems have not gone away, and I know they cause real harm, but it's increasingly to the higher-value jobs and higher-value technologies that the U.S. has played such an active role in

the past.

So I think what we're looking at is an increasing focus on patents, on technology, on trade secrets, on licensing, and this is something that I'm actually thankful for the 301 investigation. This is long overdue. I never thought that the U.S. economy would be destroyed by counterfeit luxury goods. I didn't think that is a problem.

But the potential disruption from China emerging as an innovative power even if it played more by the rules would be significant. It would offer much more collaborative opportunities if China did play by the rules, and it offers significant risks to the extent China does not.

So I really think that this is the issue not only for this moment, for the next ten or 20 years. One of my daughters asked me what she should study in graduate school. I said study technology management and see if you can get involved in the interface with China because I think this is a going to be a significant issue going ahead.

Biotech is going to be significant. 5G, IoT, you know, AI, all those things, all these buzzwords that we have abbreviations for, are all going to be significant, but it's not simply IP. It's also the talent flow. It's the investments that China is making. It's the STEM education, and it's really the challenge for this generation and the next.

DR. BRANSTETTER: So I'm at Carnegie Mellon; right. We think a lot about artificial intelligence, machine learning. My engineering and computer science colleagues are absolutely convinced that this domain represents a general purpose technology, like electricity, like information technology 1.0, that eventually it will impact every sector in the economy, most occupational categories.

And of course there's a lot of concern in this city about competition in this domain between the U.S. and China. So I think I agree with Mark, right. I mean of all of the sort of strategic commercial frictions that we're trying to manage vis-a-vis China, this issue of technology and innovation is increasingly recognized as central; right. This is our future. I think that that's good.

It's good that government effort and attention is focused on this. And I think there are some specific policy steps that could be taken to better protect U.S. interests in this domain. I won't reiterate points that I've already made.

But if I could look beyond what's probably going to be a pretty difficult, you know, ten to 15 years in the U.S.-China relationship to the longer-run future, I mean I think it's clear to anybody who has spent any time in China, right, or has any sense of Chinese history, you know, this is a people that is capable of truly great things; right.

And the simple fact is that innovation is getting harder, right. I mean the larger, you know, the body of knowledge upon which we stand becomes, the more effort is required to add to it. China could be an amazing partner. A different kind of China that played by a different set of rules could be an amazing partner in the creation of new technology; right.

And I very much hope that we will somehow be able to manage this difficult period, and that on the other side, we'll, you know, have this real possibility of collaboration and engagement that I think many of us here on the panel are hoping for. You know, that probably sounds a little bit, you know, over-optimistic, perhaps naive, but a lot of us in this room who have some grey hair know how much the world has changed over the past few generations and how things that weren't imaginable when I was much younger are now at a very different place; right.

I have, I give a lot of credit, and even thanks, to that earlier generation of American policymakers that brought us through the Cold War to the world that we're now living in. And

I'm confident that as you make your recommendations to Congress, that our current generation of leaders is going to act in a wise and judicious manner and get us to that better future.

Thank you.

HEARING CO-CHAIR HUBBARD: Any other questions from the Commission?

COMMISSIONER WORTZEL: That's a great note to end.

HEARING CO-CHAIR HUBBARD: That is a great note to--thanks to Cordell Hull and all kinds of great men and women who came before.

Thanks especially to this panel for what you've done as well as the morning panel and to Suzanna and the team here for putting together such a great hearing.

I think the second panel, the discussion of technology transfer and IP and digital innovation was all very important, but there are two takeaways. The new plastics from "The Graduate" is technology management. I shall remember that.

[Laughter.]

HEARING CO-CHAIR HUBBARD: And run faster has to be good advice in any sport.

Thank you everybody.

HEARING CO-CHAIR STIVERS: Thank you.

[Whereupon, at 12:58 p.m., the hearing was adjourned.]

PUBLIC COMMENT FOR THE RECORD

Submitted via email by Jean Public on May 21, 2018

china has the us by the economic throat. it is clear that we are importing too much chinese products. we need to cut what we import. and we need to insist they take an equal amount of things besides our food. they need to foot th ebill for higher priced american goods.
they steal and they pilfer and we have open boarders with chinese being here stealing everything we have, and yet when americans go there they are fully watched. we do not have a friendly relatinoship with this country and clearly china is landing its planes in the china sea, which is threatening japan and others. and us. its clear we need to ptu them at arms length, not considered a friend or trading partner at all. they are represssive, they will never be our friend, because they want to be number one and order the usa around. this comment i sfor the public record. please receipt. jean publiee jean public1@gmal.com