

# THE EVOLVING U.S.-CHINA TRADE AND INVESTMENT RELATIONSHIP

---

## HEARING

BEFORE THE

U.S.-CHINA ECONOMIC AND SECURITY

REVIEW COMMISSION

**ONE HUNDRED TWELFTH CONGRESS**

SECOND SESSION

JUNE 14, 2012

Printed for use of the  
United States-China Economic and Security Review Commission  
Available via the World Wide Web: [www.uscc.gov](http://www.uscc.gov)



UNITED STATES-CHINA ECONOMIC AND SECURITY REVIEW COMMISSION

WASHINGTON: 2012

## U.S.-CHINA ECONOMIC AND SECURITY REVIEW COMMISSION

Hon. DENNIS C. SHEA, *Chairman*  
Hon. WILLIAM A. REINSCH, *Vice Chairman*

## Commissioners:

CAROLYN BARTHOLOMEW	Hon. CARTE GOODWIN
DANIEL A. BLUMENTHAL	DANIEL M. SLANE
ROBIN CLEVELAND	MICHAEL R. WESSEL
Hon. C. RICHARD D'AMATO	LARRY M. WORTZEL, Ph.D.
JEFFREY L. FIEDLER	

MICHAEL R. DANIS, *Executive Director*

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 No. 110-161 (December 26, 2007) (regarding responsibilities of the Commission, and changing the Annual Report due date from June to December).

The Commission's full charter is available at [www.uscc.gov](http://www.uscc.gov).

June 28, 2012

The Honorable Daniel Inouye  
*President Pro Tempore of the Senate, Washington, D.C. 20510*  
The Honorable John A. Boehner  
*Speaker of the House of Representatives, Washington, D.C. 20515*

DEAR SENATOR INOUE AND SPEAKER BOEHNER:


We are pleased to notify you of the Commission's June 14, 2012 public hearing on "*The Evolving U.S.-China Trade and Investment Relationship*." The Floyd D. Spence National Defense Authorization Act (amended by Pub. L. No. 109-108, section 635(a)) provides the basis for this hearing.


At the hearing, the Commissioners received testimony from the following witnesses: Dr. Yingying Xu, Economist and Council Director, MAPI (Manufacturers Alliance for Productivity and Innovation); Dr. Judith Dean, Professor of International Economics, Brandeis University International Business School; Dr. Wei Shang-Jin, N.T. Wang Professor of Chinese Business and Economy, Columbia University Business School; Mr. Ahmed Siddiqui, Founder and Chief Financial Officer, Go GO Mongo!; Mr. James Fellowes, Chairman and CEO, Fellowes Inc.; Mr. Michael McCarthy, Chief Legal and Administrative Officer, Infinera; Mr. Nova Daly, Public Policy Consultant, Wiley Rein LLP; and Mr. David Fagan, Partner, Covington & Burling LLP. The hearing provided a broad overview of new methodologies for measuring and managing our bilateral trade relationship with China; ongoing enforcement challenges that U.S. businesses are experiences in their dealings with China; challenges posed by inbound Chinese investment; and the potential opportunities attendant in the negotiation of a U.S.-China Bilateral Investment Treaty. The hearing reviewed these issues in the context of their implications for the United States and United States businesses.

We note that prepared statements for the hearing, the hearing transcript, and supporting documents submitted by the witnesses will soon be available on the Commission's website at [www.USCC.gov](http://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 2012 Annual Report that will be submitted to Congress in November 2012. 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, Jonathan Weston, at (202) 624-1487 or via email at [jweston@uscc.gov](mailto:jweston@uscc.gov).

Sincerely yours,

  
Hon. Dennis C. Shea  
Chairman

  
Hon. William A. Reinsch  
Vice Chairman

## CONTENTS

THURSDAY, JUNE 14, 2012

### THE EVOLVING U.S.-CHINA TRADE AND INVESTMENT RELATIONSHIP

Opening Statement of Commissioner William A. Reinsch (Hearing Co-Chair) .....	1
Prepared Statement.....	4

#### **Panel I: Trade Flows and the Evolving Bilateral Trade Balance**

Statement of Dr. Judith Dean Professor of International Economics, Brandeis University.....	6
Prepared Statement.....	9
Statement of Dr. Shang-Jin Wei N.T. Wang Professor of Chinese Business and Economy Columbia University.....	19
Prepared Statement.....	21
Statement of Dr. Yingying Xu Economist and Council Director, Manufacturers Alliance for Productivity and Innovation (MAPI).....	30
Prepared Statement.....	33
Panel I: Question and Answer .....	42

#### **Panel II: Trade Enforcement Challenges**

Opening Statement of Commissioner Daniel Slane (Hearing Co-Chair) .....	63
Statement of Michael McCarthy Chief Legal Counsel, Infinera Corporation.....	64
Prepared Statement.....	68
Statement of James Fellowes Chairman and CEO, Fellowes Inc.....	83
Prepared Statement.....	86
Statement of Ahmed Siddiqui Founder of Go Go Mongo.....	88
Prepared Statement.....	90
Panel II: Question and Answer .....	96

**Panel III: Bilateral Investment Issues**

Opening Statement of Commissioner Daniel Slane (Hearing Co-Chair) .....	112
Statement of David Fagan Partner, Covington and Burling LLP.....	113
Prepared Statement.....	116
Statement of Nova Daly Public Policy Consultant, Wiley Rein LLP.....	123
Prepared Statement.....	126
Panel III: Question and Answer .....	134

# THE EVOLVING U.S.-CHINA TRADE AND INVESTMENT RELATIONSHIP

THURSDAY, JUNE 14, 2012

---

U.S.-CHINA ECONOMIC AND SECURITY REVIEW COMMISSION

*Washington, D.C.*

The Commission met in Room 562 Dirksen Senate Office Building, Washington, D.C. at 9:00 a.m., Chairman Dennis C. Shea, and Commissioners William A. Reinsch and Daniel Slane (Hearing Co-Chairs), presiding.

## OPENING STATEMENT OF COMMISSIONER WILLIAM A. REINSCH, HEARING CO-CHAIR

VICE CHAIRMAN REINSCH: Good morning. Welcome to the final economic hearing of the U.S.-China Economic and Security Review Commission's 2012 Annual Report cycle. I want to thank everybody for joining us today. We appreciate your being here. More information about the Commission, its Annual Report, and its hearings are available on the Commission's Web site, at [www.USCC.gov](http://www.USCC.gov).

At today's hearing, we will examine the evolving U.S.-China Trade and Investment Relationship. In the first panel, we will consider how the bilateral trade balance has changed over time, and we will examine the potential policy implications of promising new methodologies for measuring and understanding the trade balance.

Value-added measurements of trade are drawing considerable attention for their potential to provide more precise information about the nature of our bilateral trade relationships.

In an era when production chains are increasingly global and driven by different countries' relative technological progress, production costs, access to resources and markets, and trade policies, value-added trade data could greatly refine our understanding of the interdependencies in the U.S.-China relationship and improve our policy choices for addressing competitive challenges.

This is a wonky topic, I acknowledge, but I think it's an important one because if we're going to fashion a competent trade policy to deal with the problems we face, we need to have accurate data. We have to have data that reflects reality, and there is a growing question amongst economists of all points of view about China and all points of view about the relevance of our trade deficit that we're not counting things in the best way that we could.

Of course, it's easy to say that. It's a lot harder to say what we should be doing as opposed to what we're doing wrong, but we look to the first panel for guidance on that point.

The challenges that U.S. companies face in their China ventures are, of course, varied and continue to evolve in response to policy choices, enforcement measures, and a shifting global context.

Our second panel will feature testimony from three U.S. businesses grappling with China trade challenges and will provide an opportunity to gain a fuller understanding of the scope and adequacy of enforcement avenues and tools that are currently available to businesses here and in China.

And we're all very grateful that we have three companies that were willing to come and appear. It's difficult for companies to fly in and make the time for us, and we greatly appreciate those that have been willing to come and tell their story because they are important stories, and we're looking forward to hearing them.

Our final panel will broach increasingly relevant and complex questions surrounding inbound Chinese investment, including the U.S. regulatory regime's capacity to address potential challenges and potential benefits, drawbacks and limitations of recently revived efforts to negotiate a bilateral investment treaty.

Chinese cumulative investment in the U.S. in 2011 was approximately \$15.9 billion. This was just a fraction of overall foreign investment in the U.S. last year, but China is a growing source of FDI.

Chinese investment holds huge potential for creating American jobs so encouraging it makes sense. It is also in the United States' interests to fully understand and seek to address transparency and accountability issues that may arise with this investment, particularly investment by Chinese state-owned enterprises.

This is a big debate that is going on in Europe as well, and we're grateful for that panel. We have two very distinguished experts who will be joining us for that.

Today we're going to ask all of our experts to shed light on these topics and provide recommendations. We'll do the first two panels before lunch. We'll adjourn at 12 for a lunch break, and we'll reconvene for the third panel at one o'clock.

I'm going to chair the first panel, and my colleague, Commissioner Slane, is going to chair the second and third panel. He'll make any remarks he wishes at that point. I want to thank everyone for joining us today, some of whom have come a long way, and we look forward to hearing from you.

I also want to thank Senator Ben Nelson and his staff for securing the room for us today. I know from what our staff had to go through, it was not easy to get the room. Apparently, there's a lot going on today, and so we're grateful for Senator Nelson and his staff's efforts on our behalf.

Now, as I said, the first panel will provide a look at the way we calculate the bilateral trade balance, including an understanding of the idea of value-added trade and new methodologies for determining true export value.

Our panelists will also discuss the implications of the bilateral trade balance, how that relationship has changed over the years, and where they feel it may be going in the future, at least we hope you will.

On this panel, we'll hear, first, from Dr. Judith Dean, Professor at Brandeis University's International Business School. Dr. Dean specializes in international trade and economic development, and her research focuses on the environmental effects of trade growth, foreign investment, and production fragmentation.

Some of her recent publications involve attempting to measure value-added trade by examining global supply chains.

Next, we'll have Dr. Shang-Jin Wei, a Professor of Finance and Economics and N.T. Wang Chair in Chinese Business and Economy at Columbia University's Graduate School of Business. He also serves as Director of the Jerome A. Chazen Institute of International Business at Columbia.

He has undertaken consulting work for both private companies and government organizations, including the Board of Governors of the Federal Reserve System, the World Bank, the Asia Development Bank, and the United Nations.

Finally, on this panel, we have Dr. Yingying Xu, Economist and Council Director for the Manufacturers Alliance for Productivity and Innovation.

Dr. Xu monitors all economic developments in Asia and authors MAPI's semiannual China Manufacturing Outlook. Her areas of expertise lie in economic analysis, China, economic growth, export, GDP and global manufacturing.

Witnesses, all your witness statements will be placed on the Web site in full so you don't need to worry about that. We do ask you to keep your oral statements to seven minutes to make sure that we have time for questions and answers, and if you've watched any of our hearings before, you know that our Commissioners have lots and lots of questions. So I'm looking forward to a vigorous dialogue.

Dr. Dean, let's begin with you, and then we'll go through in the order I introduced you.

Dr. Dean.



PREPARED STATEMENT OF COMMISSIONER WILLIAM A. REINSCH,  
HEARING CO-CHAIR



U.S.-CHINA ECONOMIC AND SECURITY  
REVIEW COMMISSION

Hearing on “The Evolving U.S.-China Trade & Investment Relationship”  
Opening Statement of Commissioner Bill Reinsch  
June 14, 2012  
Washington, DC

Good morning, and welcome to the final economic hearing of the U.S.-China Economic and Security Review Commission’s 2012 Annual Report cycle. I want to thank you all for joining us today. We appreciate your attendance. More information about the Commission, its annual report, and its hearings is available on the Commission's website at [www.USCC.gov](http://www.USCC.gov).

At today’s hearing, we will examine *The Evolving U.S.-China Trade & Investment Relationship*. In the first panel, we will consider how the bilateral trade balance has changed over time, and we will examine the potential policy implications of promising new methodologies for measuring and understanding the trade balance. Value added measurements of trade are drawing considerable attention for their potential to provide more precise information about the nature of our bilateral trade relationships. In an era when production chains are increasingly global and driven by different countries’ relative technological progress, production costs, access to resources and markets, and trade policies, value added trade data could greatly refine our understanding of the interdependencies in the U.S.-China relationship, and improve our policy choices for addressing competitive challenges.

The challenges that U.S. companies face in their China ventures are, of course, varied and continue to evolve in response to policy choices, enforcement measures, and a shifting global context. Our second panel will feature testimony from three U.S. businesses grappling with China trade challenges, and will provide an opportunity to gain a fuller understanding of the scope and adequacy of enforcement avenues and tools currently available to businesses here and in China.

Our final panel will broach increasingly relevant and complex questions surrounding inbound Chinese investment, including the U.S. regulatory regime’s capacity to address potential challenges and potential benefits, drawbacks and limitations of recently revived efforts to negotiate a bilateral investment treaty. Chinese cumulative investment in the U.S. in 2011 was approximately \$15.9 billion. This was just a fraction

of overall foreign investment in the U.S. last year, but China is a growing source of FDI. Chinese investment holds huge potential for creating American jobs so encouraging it makes sense, but it is also in the United States' interest to fully understand and seek to address transparency and accountability issues that may arise with this investment, particularly investment by Chinese state-owned enterprises.

Today, we will ask our expert witnesses to shed light on these topics and provide recommendations. We will hear from experts on the first and second panel before lunch. We will adjourn for a lunch break at 12:00, after which the hearing will resume in this room at 1:00.

Before I turn the floor over to my co-Chair for this hearing, Commissioner Slane, I would like to thank all of our witnesses for joining us today, some of whom have traveled considerable distances to share their insights with us. We look forward to hearing from each of you.

I would also like to thank Senator Ben Nelson and his staff for securing this room for us today.

**PANEL I - TRADE FLOWS AND THE EVOLVING  
BILATERAL TRADE BALANCE**

**OPENING STATEMENT OF DR. JUDITH DEAN  
PROFESSOR OF INTERNATIONAL ECONOMICS  
BRANDEIS UNIVERSITY**

DR. DEAN: Good morning and thank you for the invitation to come and speak to you today. If you bought an Apple iPod back in 2005, it would have been recorded as an import from China, but, interestingly, at that time, only about three percent of that iPod was actually made in China. Most of it was made in Japan and the United States.

In fact, numerous other countries were involved, including Thailand, Taiwan, Korea, Philippines and Singapore. This is because the iPod is one of the prime examples of a good produced in a global supply chain.

The iPod is not unusual. In our early work, we estimated that for most IT goods exported from China, between 63 and 95 percent of those goods were actually foreign--made in a foreign country, not China.

Now, this kind of global supply chain production can strengthen gains from trade, but it also changes the pattern of trade. Two things should be noted. We should expect to see: (1) trade more dominated by intermediate products (probably sequentially along the supply chain), and (2) more trade between industrial and developing countries, since that takes advantage of the differences in comparative advantage between the two.

For China, this is particularly important. If you look at their trade growth from the middle '90s all the way through the '00s, you find that more than 85 percent of it is due to global supply chain trade--what the Chinese call "processing trade." Much of it is done by foreign multinationals. Recent work (by both U.S. and Chinese researchers) confirms that China is usually at the end of these supply chains--doing more of the labor--intensive types of activities at the end.

Because of the importance of global supply chain trade for China, conventional trade statistics mask two things. They mask the origin of the value in a particular product, and so we get a wrong picture of things like trade balances between the United States and China and other countries. It also masks countries' interconnections or their interdependence with each other in producing products for consumption today. These are the two things that I want to highlight and then talk about why they matter for policy.

Just to be clear, value-added trade measures allow us to reveal how much of the value of a good originates in a particular country, is then exported to the next country in the chain, the next country in the chain, et cetera, so that we have an accurate account of where that value is coming from.

These measures can also highlight value added that returns to a country indirectly. For example, suppose the U.S. exports a product that's an intermediate good, and this intermediate is eventually embodied in a final good imported by the United States. We can recognize the U.S. value in that import if we use value-added trade measures.

Professor Wei and his colleagues have recently developed a very fine method of measuring value-added trade. Let me just highlight a couple of pieces of data for you that show why this matters.

In this work, Prof. Wei and coauthors find that about 37 percent of the value of China's global exports in 2004 were attributable to foreign origin. They also

find a lot of evidence of an Asian production network (which I also found in my earlier work) where a lot of intermediates come from Japan and the Four Dragons. Some intermediates also come from the United States. In fact, you might be interested to know that about 10-11 percent of inputs embodied in Chinese exports to the world actually comes from the U.S. and Europe.

These are the kinds of pieces of information that we can't see with conventional statistics.

The U.S. International Trade Commission recently did a very interesting study in which they looked at U.S. trade with various partners. They argue that China accounts for only 7.7 percent of U.S. imports rather than the 11.1 percent conventional statistics would suggest. This is because much of the value that's imported from China directly actually comes from other countries. Imports from Mexico and Canada also are overstated by conventional statistics.

On the other hand, U.S. imports from Europe and Japan are understated. That is because most of these countries are actually exporting indirectly through third or fourth countries, including China.

In contrast, the ITC report also highlights that U.S. exports themselves are mostly produced in the United States. About 87 percent of the value of U.S. exports originates here, suggesting that the U.S. is probably at the beginning of most of these global chains or many of them.

I think this highlights the fact that we have a better idea of the origin of our imports and exports through third and fourth countries if we use value-added trade measures.

As to the interdependence of nations, again, I will highlight results using Professor Wei's methodology. About 58 percent of Chinese value-added exports are final goods. Only about 23 percent are intermediates, used in final goods by direct importer, and about 19 percent additional are used as intermediates processed for further export. This really does suggest that China is at the end of a lot of value chains and not at the beginning or the middle.

Again, the ITC work highlighted in my testimony shows the variation of China's role in different products. For example, you see the Asian network at work when you look at value-added trade in electronic equipment as reported by the International Trade Commission in looking at U.S. imports from China and its other partners.

On the other hand, you see no evidence of such an East Asian network at all when you look at motor vehicles. That's dominated by very different countries when you look at the value-added trade, mostly Europe and Japan.

Why does all this matter? First of all, it matters for measuring bilateral deficits. If we look at the data with value-added rather than conventional statistics, the value-added measure suggests (according to the International Trade Commission) that the U.S. bilateral deficit with China is overstated by about 40 percent, whereas its bilateral deficits with Japan and Europe are significantly understated.

Secondly, this matters for understanding global interconnectedness. In the last decade, there was a lot of furor over the fact that China appeared to be exporting very high-tech products. This seemed to be inappropriate for China, given its comparative advantage. But in our work, we found that those Chinese exports were actually very high in foreign content. So if they were high-tech and looked like U.S. products, they usually were made up of inputs from Japan and Europe. Thus, they were not really made in China.

Instead of seeing these as high-tech imports from China, we should really see them as examples of global interconnectedness in producing high-tech goods.

Let me stop there.

**PREPARED STATEMENT OF DR. JUDITH DEAN  
PROFESSOR OF INTERNATIONAL ECONOMICS  
BRANDEIS UNIVERSITY**

**June 14, 2012**

**Testimony before the U.S.-China Economic and Security Review Commission  
Hearing on “The Evolving U.S.-China Trade and Investment Relationship”**

**Judith M. Dean  
Professor of International Economics  
Brandeis University**

**I. Introduction**

If you bought an Apple iPod in 2005, it would likely have been imported from China. But China would have contributed less than 3% of the value in that iPod. Most of its value would have been produced in Japan and the United States (Linden, Dedrick and Kraemer, 2009). This is because the iPod is produced in a global supply chain. While most of the R&D and design is done in the United States, firms in many other countries are involved in different stages of the production of the iPod. Among those countries are Japan, Thailand, Taiwan, Korea, Philippines, Singapore, and China (Linden, et al, 2009). This is not unique to the iPod. Dean, Fung and Wang (2011), for example, estimate that foreign content accounted for between 63% and 95% of the value of China’s IT-related exports in 2002.

Such “global supply chain” production is becoming increasingly prominent. “Instead of carrying out everything from ...R&D to delivery and retail within a single country, many industries are slicing up this process into stages or tasks (or “fragments”) that are then undertaken in many countries” (USITC, 011a). The ability to split the production process into tasks that can be done in different locations implies a change in the nature of specialization. Firms in different countries are now able to specialize in stages or tasks within the production of a good, based on comparative advantage. This strengthens all countries’ gains from trade, since goods can be produced more efficiently than if the entire process had to take place in a single location. This also changes the pattern of trade. Trade flows will increasingly be comprised of trade in intermediate goods, and reflect the sequential nature of these production chains. The volume of trade between industrial and developing countries is also likely to grow, since global supply chains make use of differences in comparative advantage when allocating tasks (Arndt and Kierzkowski, 2001).

The international fragmentation of production is particularly important for understanding China’s trade. Chinese Official Customs data records its supply chain trade—known as “processing trade” —separately from its normal trade. Based on these data, about half of China’s remarkable trade growth between 1995 and 2008 is attributable to processing trade (Dean, et al., 2011). On average, about 85% of this global supply chain manufacturing has been done through foreign multinational subsidiaries or joint ventures (Dean, Lovely, and Mora, 2009). Recent work by U.S. and Chinese researchers provides evidence that China is typically at the “end of the value chain,” engaged in low-skilled labor intensive activities in high-tech industries, such as pharmaceuticals and electronics (USITC, 2011b).

Because of the importance of these global supply chain relationships in China’s trade, conventional trade statistics will misattribute much of the value of a product to China, which is in fact produced elsewhere. Conventional trade statistics will also mask the interdependence between countries in carrying out global production. In contrast, value added (VA) trade measures can contribute greatly to a clearer understanding of global supply chain trade. In this testimony, I focus on two such contributions. VA trade measures can: (1) provide a more accurate view of the flow of value-added between countries; (2) reveal the interdependence of

countries involved in global production processes. I then illustrate how these two insights can help contribute to sound trade policy.

## II. What are VA trade measures?

How much of the value of a product is actually made in each country that participates in a global chain? Hummels, Ishii, and Yi (2001) took a step toward answering this question by linking a country's input-output table to its trade data, to measure the foreign content in a country's exports.<sup>1</sup> Hummels, et al., measured not only the imported inputs used directly in producing an export, but also the indirect use of imported inputs in domestic intermediate goods used to produce that export. A high foreign content indicated that imported intermediate goods made up a large proportion of the value of a country's exports. This potentially indicated that a country was involved in global production chains, and likely at the "end of the chain."

VA trade measures are much more extensive. Instead of focusing on a single country, they use global input-output data to map the sources and destination of value contributed by each country to a finished product. Thus they reveal how much of the value of a good originates in a particular country and is exported to another country, either directly, or indirectly through one or more additional countries. VA trade thus captures the complexity of today's supply chains, in which intermediate goods can cross borders multiple times before being exported as a final good by the country at the end of the chain. VA trade measures also reveal how much of a country's own value-added is reimported indirectly—embodied in imported intermediates or finished goods (Koopman, Powers, Wang and Wei, 2010; Johnson and Noguera, 2011).

## III. What are the benefits of VA trade measures?

### A. A more accurate view of the pattern of trade

Estimates of the foreign content in China's exports reveal the importance of global supply chains in China's trade. Dean, Fung and Wang (2011)<sup>2</sup> found evidence of an extensive Asian network of input suppliers to China. In 2002, for example, Japan and the Tigers accounted for half of China's directly imported intermediates, with an additional 10% from other East and Southeast Asian countries. A similar pattern emerged for processing intermediate imports, with nearly 80% of directly imported intermediates coming from this Asian network.<sup>3</sup> Using both the official Chinese input-output table, and separate input-output tables for processing and normal exports (developed by Koopman, Wang and Wei, 2012), Dean, et al, calculated the total foreign content in Chinese exports by destination and by industry.<sup>4</sup> They found that foreign content accounted for as much as 42% of China's 2002 global exports, and as much as 54% of China's exports to the United States.

Recent estimates of value-added trade provide a much fuller picture, allowing us to trace values flowing directly between trading partners, and indirectly through additional countries. Koopman, Powers, Wang, and Wei (2010) find that in 2004, about 35.7% of the value of China's global exports was of foreign origin. They, too, find China involved in an Asian production network, with Japan accounting for about 22% of this foreign value-added and the Four Tigers accounting for another 28%. However, their work also shows that the United States and the EU-15 accounted for 10% and 11%, respectively, of the foreign value in China's exports. Thus the United States and EU-15 share of foreign value-added embodied in China's exports was about the same as that of South Korea and Taiwan.

---

<sup>1</sup>The share of foreign content is also referred to as "vertical specialization (VS) share."

<sup>2</sup> Dean, Fung and Wang (2011) build on Hummels, et al. They developed an improved method of identifying intermediates using both Chinese processing trade data and the UN Broad Economic Classification.

<sup>3</sup> Dean, Lovely and Mora (2009) describe in more detail the types of imported intermediates sources from different supplier countries.

<sup>4</sup> The splitting of the input-output table into separate tables for processing and for normal exports allows for the relatively high imported intermediate intensity of processing exports compared to normal exports or domestic sales.

Together, these findings suggest that Japan, the United States, Europe and the Four Tigers export intermediates to China either directly or indirectly, for further processing. These goods then are exported by China, largely to final consumers.

Table 1 reproduces the USITC (2011a) estimates of 2004 U.S. imports, measured by conventional trade statistics and by value-added. Here we see that conventional trade statistics overstate U.S. imports from China. Using VA estimates, China accounts for only 7.7% of U.S. imports rather than 11.1% using conventional statistics. The roles of Mexico and Canada in U.S. imports are also overstated, though the differences between the two measures are smaller than for China. This overstatement occurs because these countries are more likely to be in the middle or end of global production chains, so their exports have a high foreign content. In contrast, conventional trade statistics understate the role of Europe and Japan in U.S. imports. This is because 17.6% of European and 26% of Japanese exports to the United States are exported indirectly, through at least one other country before reaching the United States. VA estimates also reveal that 8.3% of U.S. imports is actually U.S. value-added that is reimported indirectly through third countries.

In contrast, the USITC (2011a) reports that 87% of the value of U.S. exports is produced in the United States. To the extent that U.S. exports are produced in global chains, this suggests that the largest proportion of value-added is created in the United States, and that the United States is likely to be at the beginning of such chains. Of the remaining 13% of value-added, the largest contributors are Europe (3.3%) and Canada (1.7%). Only 0.8% of the value of U.S. exports originates in China.

### **B. A clearer view of the interdependence of nations**

Estimates of foreign content in Chinese exports are helpful in assessing China's role in global production. Dean, et al. (2011) find wide variation in foreign content of Chinese exports across industries (figure 1). Using separate input-output tables, for example, they find foreign content of over 90% for computers and telecommunications equipment—suggesting that China was at the end of the value chain in IT-related sectors. In contrast, foreign content in Chinese metal products, general industrial machinery, and paper (more capital-intensive sectors) was about 40-50%, and in textile production (a relatively labor-intensive sector) was only about 25%. These results correspond to China's comparative advantage, based on its relative scarcity of high-skilled labor and capital equipment, and its relative abundance of less-skilled labor, compared to industrial countries.<sup>5</sup>

VA exports from Koopman, et al. (2010) give further insight into China and many other countries' positions in global supply chains. They decompose the domestic value-added in a country's exports into four types: (1) final goods; (2) intermediate goods used by the direct importer to produce final goods for its own consumption; (3) intermediates that are further processed by the direct importer into final goods for export; (4) intermediate goods that are further processed by the direct importer for export. About 58% of China's VA exports are final goods. Only 23% are intermediates used in final goods by the direct importer, and about 19% are intermediates further processed by the direct importer and then exported. These results suggest that China is indeed near the end of many global supply chains. In contrast, only about 42% of Mexico's VA exports are final goods. Intermediates consumed by the direct importer constitute another 40%, and the remaining 18% are further

---

<sup>5</sup> Property rights also impact the extent and manner of involvement in global supply chains. Research by Antras (2005), Feenstra and Hanson (2005) and others suggests that if a product embodies extensive R&D or intellectual property, and is new, firms may be less likely to offshore tasks, or only do so through foreign affiliates. This is because of the risk of poor quality control and/or lack of contract enforcement. Dean and Fung (2009) find evidence of a negative correlation between R&D-intensity and Chinese processing activity in an industry. Processing exports in R&D intensive sectors also show high foreign content, suggesting that most of the value was created elsewhere. But the ability to produce with a foreign affiliate does increase processing exports in R&D-intensive industries.



processed by the direct importer for export. This suggests that Mexico may be more involved in middle stages of global supply chains.

USITC (2011a) estimates of 2004 VA trade by product help to reveal the variation in roles of many countries in producing U.S. imports and exports (tables 2 and 3). These tables show sectors in which global production chains play a significant role. In table 2, China accounts for 7.7% of overall U.S. VA imports. However, China accounts for lower shares of VA imports in products like chemicals, motor vehicles, and business services, and higher shares in apparel, electronic equipment, and machinery and equipment. In electronic equipment, the Asian network is evident. Nearly 30% of U.S. VA imports in this sector are from East Asia, with another 19% from Japan and 14% from China. In contrast, China has little role in motor vehicles and parts. Japan and the EU-15 each account for 23% of U.S. VA imports in this sector, and Canada 16%. U.S. value-added reimported accounts for another 19%.

Table 3 shows that on average the United States accounts for 87% of U.S. VA exports. With the exception of the electronic equipment sector, U.S. value-added was close to this average in all sectors listed, except electronic equipment (77%) and business services (95%). This suggests that the United States creates most of the value-added in its exports in these sectors. Unlike China, the United States has very little foreign content in its exports. Across the sectors, the largest contributor of foreign value-added to U.S. exports is actually Europe.

#### **IV. How can VA trade measures contribute to sound trade policy?**

During the last decade, international controversy and protectionist sentiment has arisen regarding U.S.-China trade. Two issues have been prominent in this controversy: (1) the idea that the U.S. bilateral trade deficit with China is disproportionately large; (2) the idea that China is suddenly competing directly with the United States and other industrial countries in high-tech, sophisticated exports. VA trade measures help shed light on both these issues, by providing a more accurate assessment of the U.S.-China bilateral trade balance, and by showing that China's export sophistication is a reflection of global supply chain trade.

As the evidence above shows, a significant share of the value of China's exports to the world, and to the United States, is produced in other countries. China is near the end of global production chains, with most of its VA exports being final goods. In contrast, U.S. exports have very low foreign content. Most of their value originates in the United States, suggesting that the United States is at the beginning of many global chains. This implies that conventional trade statistics significantly overstate the value-added actually exported by China to the United States, while only marginally overstating the value-added exported by the United States to China.

Thus, VA trade measures reveal a much smaller U.S.-China trade deficit than do conventional trade statistics. According to USITC (2011a) estimates (figure 2), the U.S. bilateral trade deficit with China is roughly 40% smaller using VA trade measures than using conventional trade statistics. The U.S. bilateral deficits are also smaller with Canada and Mexico. Because the exports of all three of these countries to the United States contain much value produced in other countries, the actual values imported from these countries are much smaller than conventional statistics would suggest. In contrast, VA trade measures reveal larger U.S. bilateral deficits with Europe and Japan than conventional statistics do. This is because a substantial amount of value produced by these countries is exported to the U.S. indirectly, through third countries.

Research by Rodrik (2006) and Schott (2008) suggested that the bundle of goods exported by China to the United States closely resembled the export bundles of higher income, OECD countries and not developing countries at similar income levels. This raised the concern that China had somehow leapfrogged over its traditional comparative advantage. But Dean, et al. (2011) and Koopman, et al. (2012) found that Chinese exports to richer countries had a higher foreign content than Chinese exports to poorer countries. In addition, they found that a large share of Chinese imported inputs were sourced from Japan, with additional smaller shares sourced from the EU and the United States. Thus, Chinese exports to the United States might resemble those of other OECD countries because much of their value originated in the OECD.

Examining exports to nearly 200 destinations in 1997 and 2002, Dean, et al. (2011), found that Chinese and OECD exports differed dramatically across destinations. Where Chinese exports were similar to those of the OECD, they had high foreign content (figure 3). Econometric testing revealed that a higher share of foreign content in Chinese exports had a significant, positive impact on the similarity between Chinese and OECD exports. The VA trade estimates from Koopman, et al. (2010) also suggests that much of the foreign value-added in Chinese exports is from Japan, the United States, and the EU-15, and that China is likely to be near the end of many global chains. Thus, China's export "sophistication" is likely to arise from its participation in global supply chain trade.

VA trade measures help us see the sources of value flowing between countries, particularly in goods produced in global supply chains. Here they helped reveal that the U.S.-China trade deficit is much smaller than it is thought to be, and that we mistakenly classify much European and Japanese value-added, as well as some U.S. value-added as coming from China. VA trade measures also help us to see why U.S.-China trade would grow so rapidly in higher-tech products. The answer is that these higher tech products actually embody mostly value-added from other industrial nations, and from the United States itself. Many nations are interconnected today, in their joint efforts to produce goods more efficiently for consumption in all nations. These insights underscore the importance of keeping markets open, so that intermediate goods can continue to move freely between countries, as they are processed into final goods. Doing so will allow the United States to continue to benefit from global supply chain trade, both as a producer and as a consumer.

## References

- Antras, P., 2005. "Incomplete Contracts and the Product Cycle," *American Economic Review* 95: 1054-1073.
- Arndt, Sven. and Henryk Kierzkowski, eds., 2001. *Fragmentation*. Oxford: Oxford University Press.
- Dean, Judith M., K. C. Fung, and Zhi Wang, 2011. "Measuring Vertical Specialization: the Case of China," *Review of International Economics*, 19:609-25.
- Dean, Judith M., Mary E. Lovely, and Jesse Mora, 2009. "Decomposing China–Japan–U.S. Trade: Vertical Specialization, Ownership, and Organizational Form." *Journal of Asian Economics* 20: 596-610.
- Dean, Judith M. and K.C. Fung, 2009. "Explaining China's Position in the Global Supply Chain," prepared for the Joint Symposium on U.S.-China Advanced Technology Trade and Industrial Development October 23-24, 2009, Tsinghua University (manuscript).
- Feenstra, Robert and Gordon Hanson, 2005. "Ownership and Control in Outsourcing to China: Estimating the Property-Rights Theory of the Firm," *Quarterly Journal of Economics*, May: 729-61.
- Hummels, David, Jun Ishii and Kei-mu Yi, 2011. "The Nature and Growth of Vertical Specialization in World Trade," *Journal of International Economics*, 54 (2001):75-96.
- Johnson, Robert, and Guillermo Noguera, 2011. "Accounting for Intermediates: Production Sharing and Trade in Value Added", Unpublished Manuscript, Dartmouth College.
- Koopman, Robert, Zhi Wang, and Shang-Jin Wei, 2012. "Estimating Domestic Content in Exports When Processing Trade is Pervasive," *Journal of Development Economics*, 99: 179-189.

- Koopman, Robert, William Powers, Zhi Wang, and Shang-Jin Wei, 2010. "Give Credit Where Credit is Due: Tracing Value-Added in Global Production Chains," NBER Working Paper No. 16426.
- Linden, Greg, Kenneth Kraemer, and Jason Dedrick, 2009. "Who Captures Value in a Global Innovation Network? The Case of Apple's iPod," *Communications of the ACM*, 52: 140-44.
- Rodrik, Dani, 2006. "What's So Special About China's Exports?" *China and the World Economy*, 14 :1-19.
- Schott, Peter, 2008. "The Relative Sophistication of Chinese Exports," *Economic Policy*, 53:5-40.
- USITC, 2011a. *The Economic Effects of Significant U.S. Import Restraints, Seventh Update* 2011. Washington, DC: USITC.
- USITC, 2011b. "Proceedings of the Joint Symposium on U.S.-China Advanced Technology Trade and Industrial Development," *Journal of International Commerce and Economics*, 3:1-239.

**Table 1. U.S. Imports and Value-Added Shares in U.S. Imports, 2004, by Source**

Region	Total imports Millions of \$	Share of	Share of value-	Share of value added passing
		general imports	added imports	through a third country before entering the United States
		Percent		
Europe	393,301	24.7	26.1	17.6
Canada	242,170	15.2	11.0	3.2
Japan	138,417	8.7	10.4	26.0
United States	—	0.0	8.3	100.0
China	176,879	11.1	7.7	14.8
Mexico	154,571	9.7	4.9	4.0
Rest of Americas <sup>a</sup>	76,183	4.8	4.7	13.2
Developing East Asia	79,250	5.0	4.5	32.4
Taiwan, Singapore, Hong Kong	73,066	4.6	4.3	36.7
Korea	51,707	3.3	3.3	31.8
Brazil	23,662	1.5	1.6	20.3
Australia and New Zealand	15,717	1.0	1.3	33.6
Russia	12,003	0.8	1.3	46.4
India	17,486	1.1	1.1	22.0
South Asia	9,557	0.6	0.5	10.2
Rest of world	120,320	7.6	8.5	23.5
<b>Total</b>	<b>1,590,124</b>	<b>100.0</b>	<b>100.0</b>	<b>25.8<sup>b</sup></b>

Source: Commission estimates.

<sup>a</sup>Including South American, Central American, and Caribbean countries other than Mexico and Brazil.

<sup>b</sup>U.S. average, weighted by U.S. imports from all sources.

Source: USITC (2011a)

**Table 2. Country or Regional Sources of Value Added in U.S. Imports, selected sectors, 2004 (%)**

Sector	U.S	East			Latin			Europe	Others	Total
	returned	China	Japan	Asia	Canada	Mexico	America			
<i>Total</i>	8.3	7.7	10.4	12.0	11.0	4.9	6.3	26.1	13.2	100.0
<i>Selected Sectors</i>										
Apparel	11.0	11.2	2.4	27.8	2.4	2.0	10.4	11.4	21.4	100.0
Chemicals, rubber and plastics	6.3	5.0	9.7	8.7	12.0	2.5	3.6	42.8	9.4	100.0
Motor vehicles and parts	19.1	2.5	23.0	7.2	16.0	3.8	1.9	23.1	3.4	100.0
Electronic equipment	8.6	14.4	19.0	29.6	2.4	9.3	1.3	11.4	3.9	100.0
Machinery and equipment	11.3	10.1	17.2	9.7	6.9	4.7	2.9	32.1	5.1	100.0
Business services	1.5	1.3	6.2	12.7	8.8	0.2	2.7	55.5	11.3	100.0

Source: Commission estimates.

Source: USITC (2011a)

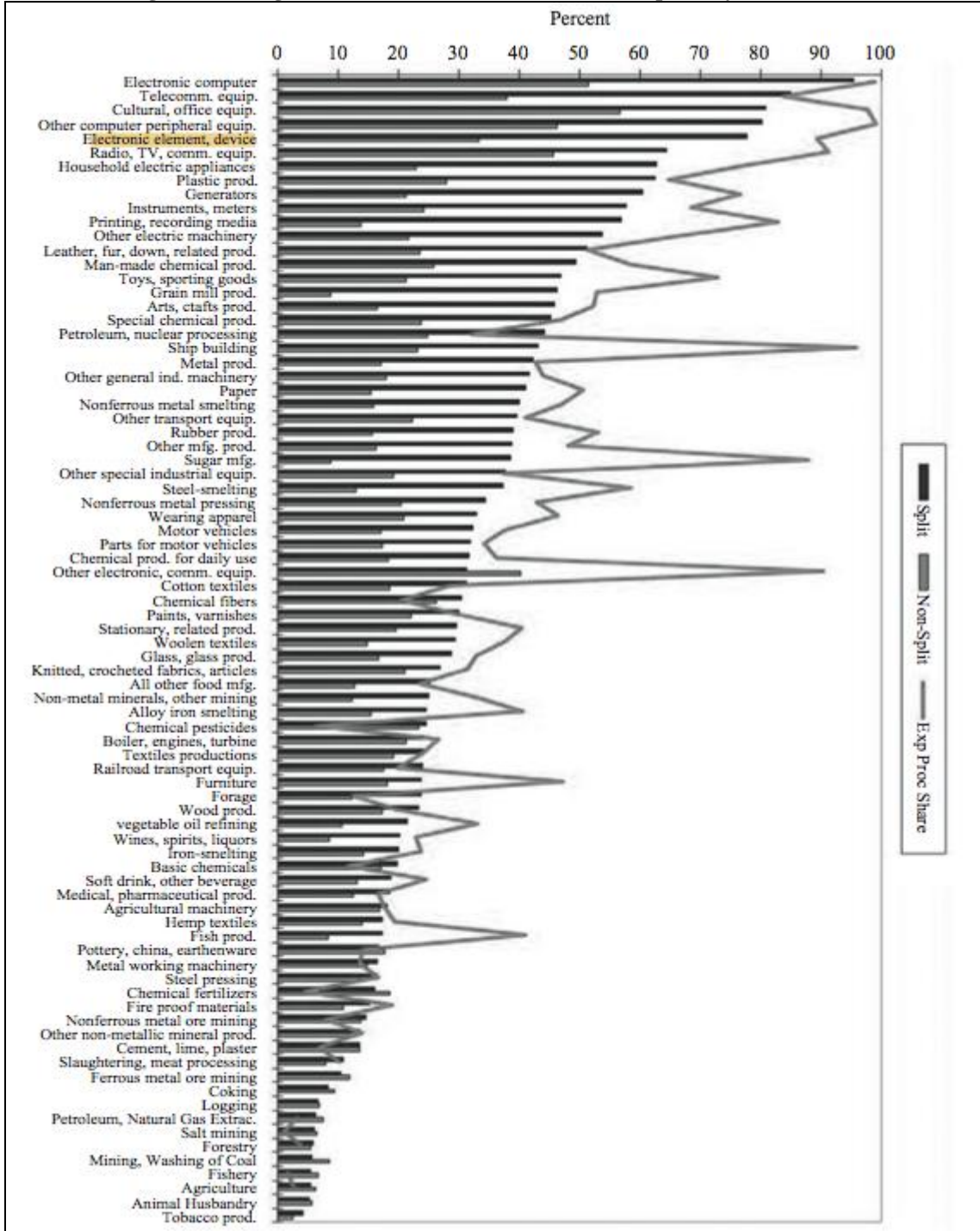
**Table 3. Country or Regional Sources of Value Added in U.S. Exports, selected sectors, 2004 (%)**

Sector	U.S.	East			Latin			Europe	Others	Total
		China	Japan	Asia	Canada	Mexico	America			
<i>Total</i>	87.1	0.8	1.3	1.5	1.7	0.9	1.1	3.3	2.1	100.0
<i>Selected sectors</i>										
Apparel	88.5	0.7	0.8	1.5	1.3	0.6	0.7	3.3	2.5	100.0
Chemicals, rubber and plastics	85.5	0.5	1.0	1.1	2.2	0.7	1.5	4.4	3.0	100.0
Motor vehicles and parts	81.5	1.3	3.0	1.9	3.0	1.3	1.3	4.7	2.0	100.0
Electronic equipment	76.9	2.7	3.7	5.1	1.6	2.2	1.0	4.7	2.0	100.0
Machinery and equipment	89.4	1.0	1.2	1.3	1.3	0.8	0.8	2.8	1.4	100.0
Business services	95.6	0.2	0.6	0.7	0.5	0.2	0.2	1.4	0.6	100.0

Source: Commission estimates.

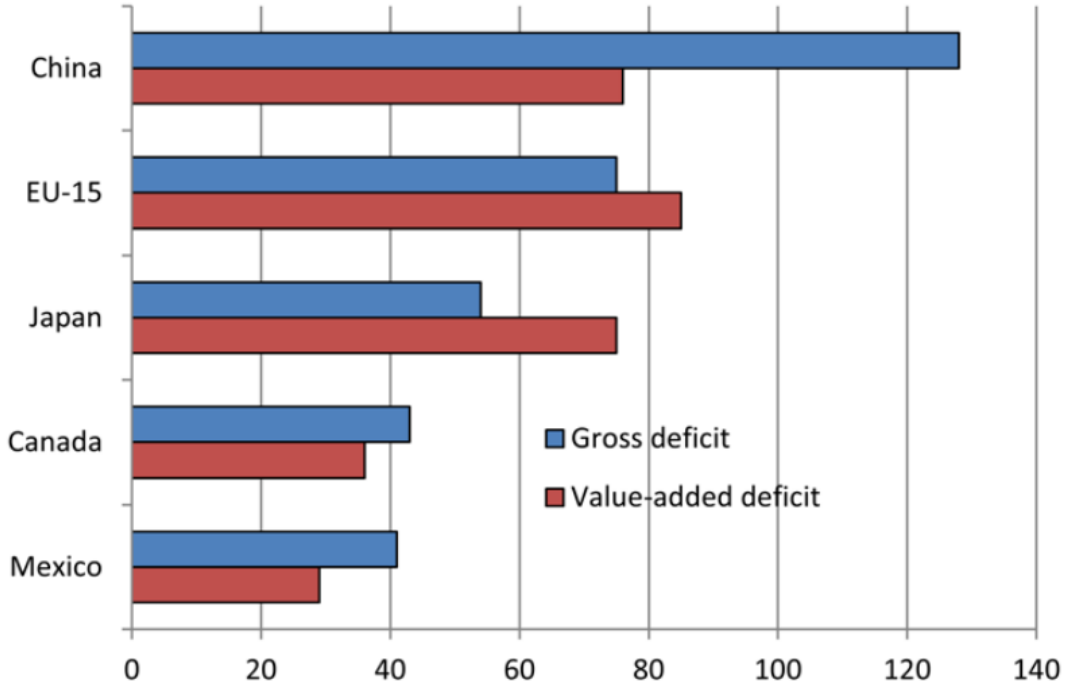
Source: USITC (2011a)

Figure 1. Foreign Content of Chinese Merchandise Exports by Sector, 2002



Source: Dean, Fung and Wang (2011)

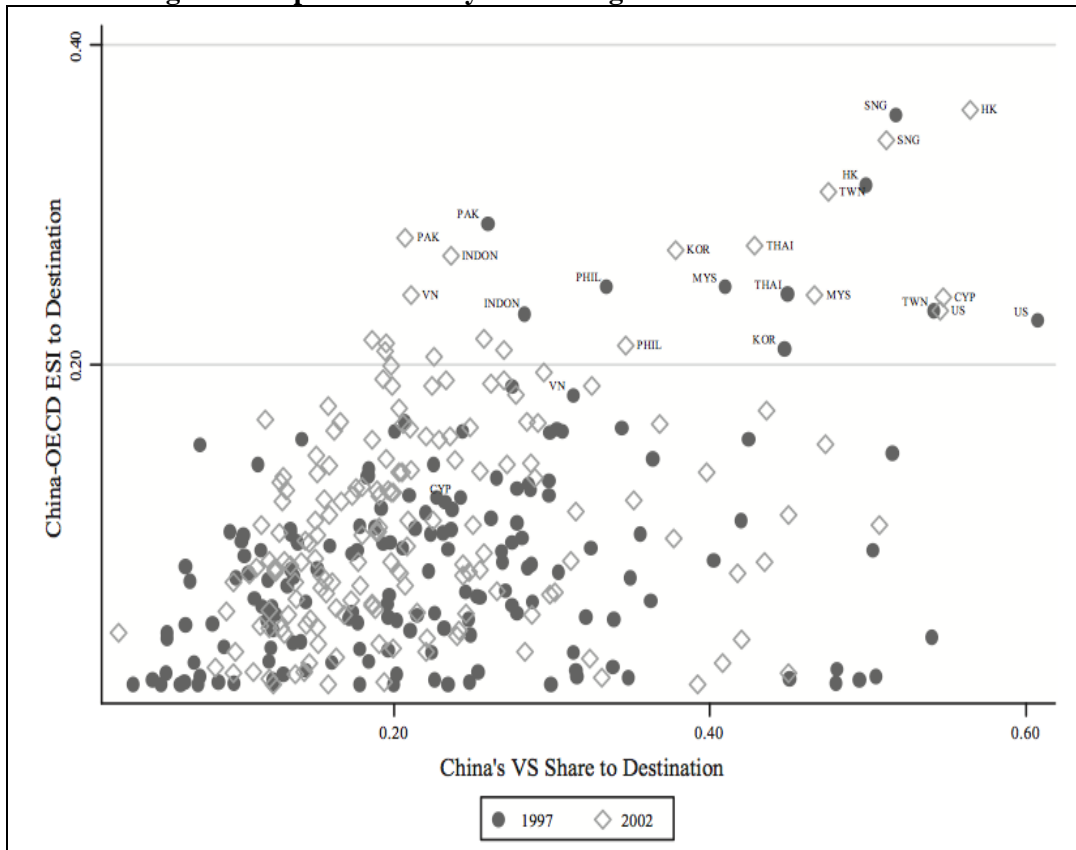
**Figure 2. US Bilateral Trade Deficits with Major Trading Partners (billions of dollars)**



Source: Commission estimates.

Source: USITC (2011a)

**Figure 3. Export Similarity and Foreign Content: 1997 and 2002**



Source: Dean, Fung and Wang 2011

VICE CHAIRMAN REINSCH: Thank you.  
Dr. Wei.

**OPENING STATEMENT OF DR. SHANG-JIN WEI  
N.T. WANG PROFESSOR OF CHINESE BUSINESS AND ECONOMY  
COLUMBIA UNIVERSITY**

DR. WEI: Good morning, Commissioners. It's a pleasure and privilege to testify in front of you.

When an American customer orders the next model of iPhone from China, the phone is going to be shipped from China by a Taiwanese owned company called Foxconn. The official trade data will record roughly \$200 per smartphone of Chinese exports to the U.S., but the phone, of course, is designed in California and uses components from Japan, Korea, and a number of other economies. Therefore, in this example, the export of Chinese value-added for that phone will be somewhere on the order of \$10, or roughly five percent of recorded export value. So, in this example, Chinese true export value-added will be overstated by the official data. At the same time, Japan and Korea also export to U.S. indirectly, but their exports will not show up in U.S. import data.

So in this example, in other words, the official data would provide a misleading picture of who produces for whom.

For a number of important policy questions, such as a country's true comparative advantage, bilateral trade balance, consequences of trade policies, one has to go beyond official trade statistics in order to understand the picture better.

So I want to summarize five findings from estimates of trade and value added that could have important policy implications.

Number one, the foreign content in China's exports generally is very high. Estimates by Koopman, Wang and myself suggest that this share of Chinese domestic value-added in Chinese exports was about 54 percent in '97 and 61 percent in 2007. So in other words, Chinese exports generally imbed very high share of imported content, not as high as the iPhone/iPad example on average but pretty high.

And over the period of this ten-year period, 1997 to 2007, the foreign content share declined.

And number two, seemingly sophisticated sectors are more likely to have a higher foreign content, and they include electronics, computers, synthetic materials, and so on.

Looking ahead, the share of foreign content in Chinese exports could either go up or go down depending on several opposing forces. On the one hand, as Chinese domestic input supplies become better and as more multinational firms move their input upstream production to China, exporting firms in the country are more likely to source from local producers.

On the other hand, with further liberalization and reduction in import barriers, exporting firms could also use more imported inputs so the trend depends on the balance of these forces.

Number three, the Chinese exports to the U.S. tend to contain higher foreign content than Chinese exports on average. That's because exports to the U.S. tend to use more processing trade and also the sectoral composition is such that that also reinforces that picture.

The lower, relatively lower, share of Chinese domestic value-added in Chinese exports to the U.S. might be partially responsible for why Chinese exports continue their rapid expansion in the U.S. market despite a 22 percent appreciation of the RMB against dollar since 2005.

And number four, bilateral trade balances from the official data could be misleading. As China is the final assembler in a large number of global production



chains, it uses components from many other countries, especially East Asian countries, as well as the U.S. production chain is very different. As a result, Chinese trade surplus with the U.S. and Western Europe measured in trade value-added terms would be 40 percent to 50 percent lower compared to when they are measured in official data.

At the same time, Japan's surplus against both the U.S. and Europe would be 40 percent and 30 percent higher when measured in value-added terms respectively.

It's important to point out that, however, the calculations of trade in value added do not alter a country's multilateral or overall trade balance. It simply redistributes the surplus of balances across trading partners. In other words, neither China's nor America's overall trade balance is affected by the computation of trade in value added.

Number five, it's important to be aware of the possibility of self-inflicted injuries from trade policies with an understanding of global production chains. Because the United States and other high-income countries tend to specialize in the upstream part of global production chains, the imports from developing countries tend to contain their own value-added. For example, for imports by the U.S., our estimate is that about eight percent of U.S. recorded imports, in fact, are U.S. value added. In comparison, for imports by China, less than one percent of Chinese imports reflect its own value added.

The structure of a trade in value added implies that the same kind of increase in trade barriers potentially could do more damage to domestic upstream firms for high income countries than for typical developing countries.

Because China's production factors, skill sets and wage rates are more similar to other developing countries in Asia and elsewhere than to the United States, if U.S. trade policy was successful in reducing imports from China, the same production that used to be done in China is more likely to move to other developing countries than to come to the U.S.

In this sense, a part of the U.S. deficit vis-a-vis China can be replaced by higher deficits vis-a-vis other developing countries. To the extent that other developing countries are higher cost producers than the Chinese, their costs, the export increase might not be as big as the reduction in China's exports. As a result, the U.S. exports of business services, equipment and other upstream inputs to the relevant global production chains could also fall in proportion.

Thank you.

**PREPARED STATEMENT OF DR. SHANG-JIN WEI  
N.T. WANG PROFESSOR OF CHINESE BUSINESS AND ECONOMY  
COLUMBIA UNIVERSITY**

June 14, 2012

Shang-Jin Wei

Professor of Finance and Economics, and N.T. Wang Professor of Chinese Business and Economy, Graduate  
School of Business, Columbia University

**Testimony before the U.S.-China Economics and Security Review Commission  
Hearing on the Evolving U.S.-China Trade and Investment Relationship**

**1. Motivation: What can go wrong with standard trade statistics?**

When an American customer orders the next model of iPhone from Apple's online store, the phone will be shipped out of China by a Taiwanese-owned company called Foxconn. The official trade statistics will record an export by China to the United States on the order of \$200 per smart phone (the retail price will be higher due to a fat sales margin charged by Apple). Of course, the product is designed in California and uses many components from Japan, Korea and other economies. In fact, the Chinese value added that is exported will be on the order of only \$10, or about 5% of the recorded export value. At the same time, via the shipment of iPhone from China, Japan and Korea also export their value added to the United States, even though such exports do not show up in the US official customs data. In this example, the standard trade statistics exaggerate the true exports of value added from China to the United States, and miss the exports of value added from Japan and Korea to the United States. In other words, the standard trade statistics may provide a misleading picture of who produces for whom.

As we will see, the extent of imported inputs embedded in China's iPhone exports turns out to be extreme, not representative of most of China's exports. Nonetheless, the pattern that China's exports to the United States embed certain amount of inputs from other countries is relatively common. In contrast, the U.S. exports to China embed comparatively less foreign content. As a result, the true Chinese trade surplus against the United States in value added terms is smaller by about 40% than what is recorded in official trade statistics.

For a number of important questions, such as a country's true comparative advantage, bilateral trade balance, and consequences of trade policies, one has to go beyond standard trade data and make use of estimates on trade in value added.

Below, after briefly summarizing three approaches to estimating trade in value added, I will devote most space to discussing some main findings and implications for trade policies.

**2. Corrective actions: How to estimate true value added in trade?**

There are three approaches to extract exports of true value added: (a) case studies of individual products or industries, (b) decomposition of a country's gross exports into exports in value added and other "double counted" terms by using a combination of input-output data and official trade statistics, and (c) a survey of exporting firms on their use of domestically produced and imported inputs.

2.1 Case studies

Case studies on global value chains based on detailed micro data for a single product or a single sector in industries such as electronics, apparel, and motor vehicles have provided detailed examples of the discrepancy between gross and value-added trade. According to a commonly cited study of the Apple iPod (Dedrick, Kraemer, and Linden, 2008), while the Chinese factory gate price of an assembled iPod is \$144, only \$4 constitutes Chinese value added. Other case studies of specific products show similar discrepancies. Case studies, while enhance our intuitive understanding of global production chains in particular industries, cannot offer a comprehensive picture of the gap between value added and gross trade and an economy's participation in cross-border production chains.

2.2 Extracting domestic value added in trade from input-output tables and official trade statistics

A more systematic approach to decompose a country's exports into domestic and foreign value added has to use the country's input-output table together with official trade statistics. The input-output table provides information on how the production in any sector uses inputs from all other domestic sectors and from foreign sources. Instead of focusing on a single product or a single sector, one can obtain information for all sectors.

The first attempt to isolate foreign and domestic content via this way was by Hummels, Ishii, and Yi (2001) (HIY in subsequent discussion). They suggested that a country can participate in vertical specialization in two ways: (a) uses imported intermediate inputs to produce exports; (b) exports intermediate goods that are used as inputs by another country to produce goods for exports. However, a key assumption in the HIY approach is that the intensity in the use of imported inputs is the same between production for exports and production for domestic sales. This assumption doesn't hold in general. For many countries, for any given sector, more imported inputs tend to be used in the production for exports than that for domestic sales. Such a violation is particularly severe for countries like China, Mexico, and Vietnam, for which a significant portion of exports is done through what is called "processing exports." Firms that produce for "processing exports" can usually receive tariff exemptions on the imported inputs they use. Taking advantage of this favorable tariff treatment, they tend to use substantially more imported inputs than firms that produce the same or similar products but primarily for the domestic market.

A generalization of the HIY approach that explicitly allows for potentially different input-output coefficients for production for exports versus production for domestic sales has been developed by Koopman, Wang, and Wei (2012). They then apply the new methodology to decompose China exports into China's value added and foreign value added in 1997, 2002, and 2007 – 2007 is the latest year for which a Chinese input-output table is available. This allows one to see both the level and the time trend in the share of domestic value added in China's exports. We will summarize some of the key findings later.

There are other attempts to extract information on trade in value added by first estimating an inter-country input-output table using data on a group of countries' individual input-output tables and their bilateral official trade statistics. Such an attempt include Daudin, Riffart, and Schweisguth (2011), Johnson and Noguera (2012), and Koopman, Power, Wang and Wei (2010).

The approach by Koopman, Power, Wang, and Wei (2010) provides a systematic way to further decompose foreign value added in a country's exports into terms that can be attributed to individual foreign countries and sectors, rather than simply excluding foreign value added from official trade statistics. (It also decomposes domestic value added into different domestic sectors.) The framework thus makes it possible to estimate at which stage "double counted" foreign value added terms enter into a country's production and official exports statistics. Relative to the other approaches, this additional information on the structure of the double counted items provides a way to quantify the extent to which a country's participation in the global production chain in a given sector is more likely to be at the upstream or the downstream. This will turn out to be useful to think (or re-think) about who will bear the ultimate burden of a given trade policy action by an importing country.

### 2.3 Firm-level information

Another approach is to directly work with firm-level information. The idea is simple. If one can ask all exporting firms which inputs they import and which inputs they source from domestic firms, one can compute the foreign content share in exports as the ratio of the imported input values to firm exports. A clear advantage of this approach is that one can avoid assuming that exporting firms have the same propensity to use imported inputs as firms that sell mainly in the home market.

However, this approach has its shortcomings. Many of the inputs purchased from domestic firms can contain imported content. In fact, most small and medium exporting firms buy inputs from domestic wholesalers, and do not have a reliable way to estimate the share of foreign content in the inputs they buy. On the other hand, some of the imported inputs can contain domestic value added. The latter is especially important for firms in a high-income country that specializes in the upstream of a global production chain.

## **3. Key insight: What do the new estimates say about trade patterns and trade policies?**

### 3.1 Low but increasing domestic value added in China's total exports

Table 1 presents the results from Koopman, Wang, and Wei (2012) on the decomposition of China's aggregate exports into foreign and domestic value-added shares in 1997, 2002 and 2007. The estimated aggregate domestic value added share in China's merchandise exports was 54% in 1997, and 60.6% in 2007. In other words,

in China's exports, the foreign content, or the indirect exports by other countries through China, is substantial (about 39.4% in 2007). Over time, however, the share of foreign value added in China declines.

Kee and Tang (2012) complement the above analysis by using firm-level data on exports and imports for Chinese processing exporters over 2000-2006. They find that the average share of domestic value added has risen from 52% in 2000 to 60% in 2006.

Whether the share of domestic content in China's exports should increase or decrease over time is not pre-ordained. There are conflicting forces at work. On the one hand, as domestic input suppliers increase their quality over time, and multinationals move more and more of their upstream production into China, exporting firms may decide to increase local sourcing of their inputs. On the other hand, reductions in the country's trade barriers especially since China's accession to the WTO a decade ago also encourage exporting firms to use more imported inputs. These two opposing forces partially offset each other. However, on net, the domestic content share in China's exports appears to be on the rise. Looking ahead, the share of imported content in exports could fall or rise, depending on the relative speed with which domestic input suppliers and multinationals can step up their quality and variety versus the extent of additional reductions in the cost of using imported inputs.

### 3.2 Seemingly sophisticated sectors are more likely to have a high foreign content share

In Table 2, we can see the top 10 sectors in terms of the share of foreign content in China's exports. The table also reports the shares of processing and foreign invested enterprises exports in each sector's exports as they tend to drive the patterns on the relative use of imported inputs. These have a share of foreign value-added in their exports at 50 percent or more; they collectively account for about 32 percent of China's total merchandise exports. Interestingly, the high foreign content sectors are concentrated in high-tech sectors.

Over time, however, sectors with a relatively high domestic content tend to rise in relative importance. This is true for some capital intensive industries such as automobile, industrial machinery and rolling steel. This suggests that China's industrial upgrade is real. Multinational firms play an important role in this process as they move some of their upstream production to China.

### 3.3 The Chinese exports to USA contain a higher foreign content share

Not all destinations in the Chinese exports have the same domestic/foreign content, partly because exports to different countries vary by sector and by the relative importance of processing exports. Hong Kong, the United States, Singapore, Taiwan and Malaysia are the top 5 destinations in terms of the share of foreign value added in China's exports, with less than 60 percent of China's domestic value-added embodied in its exports in 2007 (Koopman, Wang, and Wei, 2012). The lower domestic value-added share in its exports to the U.S. may partially explain why Chinese exports have continued their rapid expansion in the U.S. market despite an appreciating RMB since July 2005.

### 3.4 Revealed comparative advantage needs to be based on trade in value added

The concept of revealed comparative advantage (RCA for short), proposed by Balassa (1965), is useful in many policy applications. In standard applications, it is defined as the share of a sector in a country's total gross exports relative to the world average of the same sector in world exports. When the RCA exceeds one, the country is said to have a revealed comparative advantage in that sector; when the RCA is below one, the country is said to have a revealed comparative disadvantage in that sector. The problem of multiple counting of certain value added components in the official trade statistics suggests that the traditional computation of RCA could be noisy and misleading.

Computing RCA based on trade in value added can change our views about comparative advantage in some instances. As an illustration, we select two sectors ("finished metal products" and "business services") (the detail can be found in Koopman, Power, Wang, and Wei, 2010). In Figure 1, we report the two sets of RCA indices for the finished metal products sector. Using gross exports data, both China and India show a strong revealed comparative advantage (ranked the first and fourth, respectively, among the set of countries in our database, and with the absolute values of RCA at 1.94 and 1.29, respectively). However, when looking at domestic value added in that sector's exports, both countries ranking in RCA drop precipitously to 7<sup>th</sup> and 15<sup>th</sup> place, respectively. In fact, for India, the sector has switched from being labeled as a comparative advantage sector to a comparative disadvantage sector. Unsurprisingly, the ranking for some other countries moves up. For example, for the United States, not only its RCA ranking moves up from 10<sup>th</sup> place under the conventional

calculation to the 3<sup>rd</sup> place under the new calculation, finished metal products industry also switches from being labeled as a comparative disadvantage sector to a comparative advantage sector.

For the “business services” sector, using official data on gross exports, India exhibits a strong revealed comparative advantage in that sector on the strength of its unusually high share of business services exports in its overall exports. However, once we compute RCA using domestic value added in exports, the same sector becomes a comparative disadvantage sector for India! One key reason for the change is that business services in advanced countries are often exported indirectly by being embedded in these countries manufacturing exports. Indeed, the RCA rankings for this sector in the United States, the European Union and Japan all move up using data on the domestic value added in exports. Therefore, compared to the share of this sector in other countries’ exports (after taking into account indirect value added exports), the Indian share of the sector in its exports becomes much less impressive.

### 3.5 Bilateral trade balances from the standard trade data are misleading

Because a country’s gross exports embeds value added from other countries, bilateral trade balance in value added terms can be very different from bilateral balance in gross trade terms. While this point is already well understood qualitatively, the exports decomposition results allow us to quantify the difference.

Figure 2 provides a scatter plot of the trade balance in value added terms against the trade balance in standard trade statistics for all bilateral country-pairs based on the calculations in Koopman, Power, Wang and Wei (2010). Without loss of generality, the two countries in any pair are always ordered in such a way that the trade balance in gross term is non-negative. A negative value-added to gross BOT ratio indicates there is a sign change between BOT measured in gross and value-added terms. All observations that lie below the 45 degree line have their bilateral trade imbalances smaller in value-added terms than those in gross terms, and vice versa for observations that lie above the 45 degree line.

Value-added flows give a much different picture of the contributions of China and Japan to the U.S. and Western EU countries’ trade deficits. Because China is the final assembler in a large number of global supply chains, and it uses components from many other countries, especially East Asian countries, its trade surplus with US and Western EU countries measured in value-added term is 41% and 49% less than that measured in gross terms. In contrast, Japan’s trade surplus with the U.S. and Western EU countries are 40% and 31% larger measured in value-added terms, because Japan exports parts and components to countries throughout Asia that are eventually assembled into final products and exported to the United States and Western EU countries. The true trade pattern for Korea is similar to that for Japan.

Zooming in near the origin shows that the trade balances of a number of country pairs even have opposite signs measured in value-added and gross terms. For example, Japan’s trade balance vis-à-vis China is switched from surplus to deficit in value added terms. This is because some of Japan’s exports of components to China are actually indirect exports to the United States and the European Union. Once these component exports are excluded, Japan runs a deficit against China.

It is important to point out that the calculations of trade in value added do not alter a country’s multilateral or overall trade balance; it simply redistributes the multilateral balance among the trading partners. Therefore, neither China’s, nor America’s overall trade balance is affected by the computation of trade in value added.

### 3.6 Be Aware of self-inflicted injuries from trade policies

Because the United States and many other high-income countries tend to specialize in the upstream of the global production chains, their imports from developing countries often contain a relatively high share of their own value added (and those from other high-income countries). For example, for imports by the United States, 8.3% of the value reflects its own value added (which are embedded in US exports of intermediate goods to other countries that, in turn, returned home in other countries’ exports). In comparison, for imports by China, only 0.9% of the import value reflects its own value added (Koopman, Power, Wang, and Wei, 2010).

This structure of value added implies that an increase in trade barriers in a typical high-income country tends to hurt domestic upstream firms and firms in other high-income countries as collateral damage. The self-inflicted injuries are more likely to take place for trade policies in a high-income country that specializes in the upstream of a global production chain than a developing country that specializes in the downstream.

Because China’s production factors, skill sets, and wage rates are more similar to other developing countries in Asia and elsewhere than to the United States, if a US trade policy change were successful in reducing

the Chinese exports, the same production that used to be done in China is more likely to move to other developing countries than to come to the United States. In this sense, a part of the US deficit against China can be replaced by a higher deficit against other developing countries.

To the extent that other developing countries are higher-cost producers than China, their exports increase may not be as big as the reduction in China's exports. The US exports of business services, equipment, and other upstream inputs to the relevant global production chains would also fall in proportion.

## References

Balassa, Bela. 1965. "Trade Liberalization and 'Revealed' Comparative Advantage." *Manchester School of Economic and Social Studies*, 33, 99–123.

Daudin, Guillaume, Christine Riffart, and Danielle Schweisguth. 2011. "Who Produces for Whom in the World Economy?" *Canadian Journal of Economics* 44(4):1409-1538, November.

Dean, Judy, K.C. Fang and Zhi Wang "How Vertically Specialized is Chinese Trade," *Review of International Economics*, 19(4):609-625, 2011.

Dedrick, Jason, Kenneth L. Kraemer, and Greg Linden. 2008. "Who Profits from Innovation in Global Value Chains? A Study of the iPod and notebook PCs." Paper presented at the Sloan Industry Studies Annual Conference, Boston, MA, May.

Hummels, D., J. Ishii, and K. Yi. 2001. "The Nature and Growth of Vertical Specialization in World Trade." *Journal of International Economics* 54:75–96.

Johnson, Robert, and Guillermo Noguera. 2012. "Accounting for Intermediates: Production Sharing and Trade in Value-added," *Journal of International Economics*.

Koopman, Robert, Zhi Wang, and Shang-Jin Wei. 2008. "Estimating Domestic Value Added in Exports When Processing Trade is Prevalent," NBER Working Paper 14109, and *Journal of Development Economics*, 2012.

Robert Koopman, William Powers, Zhi Wang, Shang-Jin Wei, 2010, "Give Credit Where Credit Is Due: Tracing Value Added in Global Production Chains." NBER Working Paper No. 16426.

**Table 1 Shares of domestic and foreign value added in China's total exports (%)**

	1997	2002	2007
Total Foreign value-added	46.0	46.1	39.4
Total Domestic Value-added	54.0	53.9	60.6

**Source:** Estimation by Koopman, Wang, and Wei (2012).

**Table 2: Top 10 Sectors with the Highest Imported Value Added in China's Exports, 2007**

IO Industry description	Decomposition		processing exports as % of total exports	Share of exports by foreign-invested firms
	Foreign value added as % of exports	Domestic value added as % of exports		
Electronic Components	67.7	32.3	83.1	89.8
Household Audiovisual Apparatus	67.4	32.6	93.4	79.1
Electronic computers	66.2	33.9	97.9	93.3
Cultural and office equipment	63.5	36.5	91.7	86.4
Other electronic and communication equipment	60.3	39.7	84.8	81.6
Telecommunication equipment	56.4	43.6	79.3	83.6
Shipbuilding	56.2	43.8	89.4	16.5
Petroleum feline and Nuclear Fuel	55.6	44.4	50.1	27.3
Measuring Instruments	54.2	45.8	81.2	73.3
Synthetic Materials	52.4	47.7	67.7	66.1
Average over all exports	39.4	60.6	50.1	55.7

**Source:** Koopman, Wang, and Wei (2012).

**Figure 1: Value-added-adjusted Revealed Comparative Advantage Indicators**  
 Source: Koopman, Power, Wang, and Wei (2010)

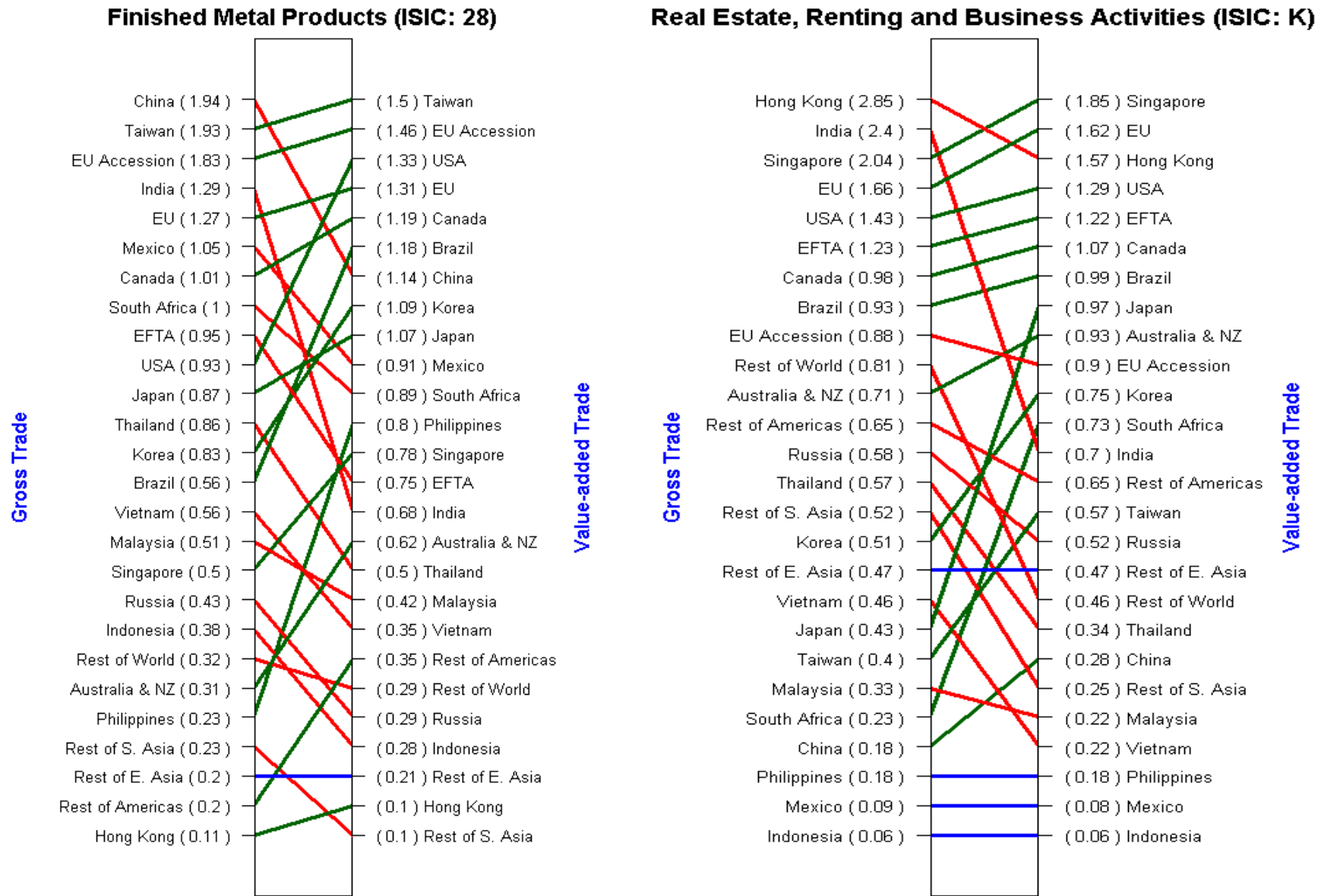
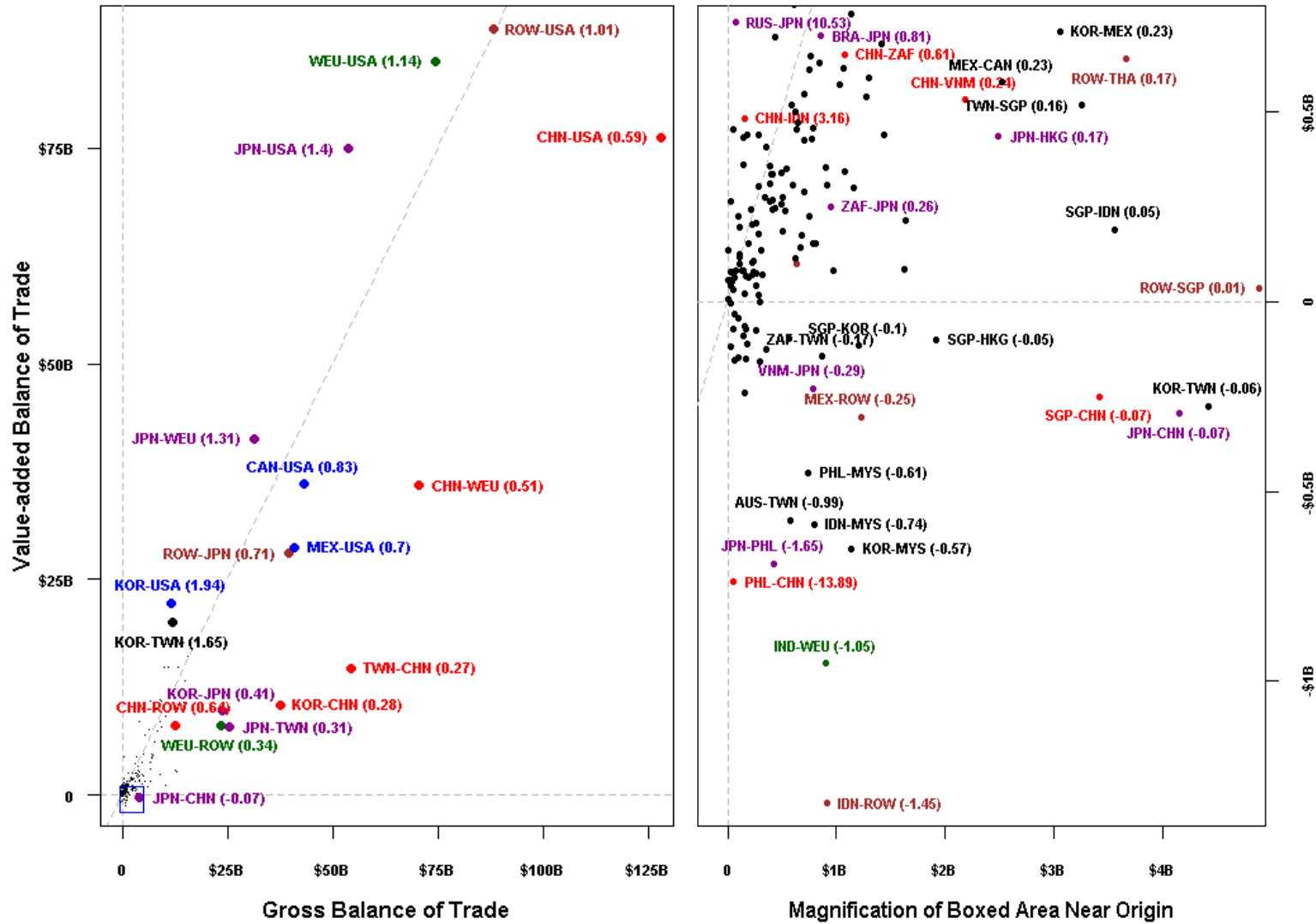




Figure 2: Bilateral Balances of Trade in Official Data versus in Value Added Terms, 2004

Source: Koopman, Power, Wang, and Wei (2010)



Note: The first country labeled in each pair is the surplus country while the second runs a deficit. Numbers in parentheses are the ratio of value-added to gross surplus.



VICE CHAIRMAN REINSCH: Thank you.  
Dr. Xu.

**OPENING STATEMENT OF DR. YINGYING XU  
ECONOMIST AND COUNCIL DIRECTOR  
MANUFACTURERS ALLIANCE FOR PRODUCTIVITY AND INNOVATION (MAPI)**

DR. XU: Good morning. I would like to thank the Commissioners for inviting me here. I will focus my remarks to the challenges that international production sharing has created for understanding international trade flows and specifically what does it mean for the U.S.-China trade relationship.

The past two decades have seen significant acceleration in global production sharing. What it means is various stages of production for one kind of product can now be performed in various countries. This has created challenges for measuring international trade from the traditional customs-based method.

I think the challenges mainly come from three perspectives. First of all, when intermediate inputs cross national borders several times for processing, before they're reaching their final destination, their values are implicitly counted several times in a traditional trade statistics. So this "double counting" problem means that conventional export statistics can overstate the domestic content of exports from a country.

Secondly, by assigning the total commercial value of an import to the last country of origin, import statistics might not only overstate the degree of competition that comes from one's trading partners, but also understates the benefits that the importing country's firms can get from trade if part of their exports are already incorporated into the imported intermediate inputs.

In addition, because of the need to link and to hold the global production chain together, the service content of manufactured goods has been rising over time, but conventional trade statistics do not reflect the use of services as inputs in manufactured goods, and therefore would not necessarily be able to reveal those sectors of the economy where value added originates.

This is especially troublesome for industrial countries where services generated by manufacturing, such as marketing, finance, transportation, distribution, are gaining importance in a product's final price and can be a significant share of the domestic content of a manufactured product by the time it reaches the final user.

Both Professor Dean and Professor Wei mentioned Apple's products as an example. Here I want to use Apple's iPod products as example to show the problems created from these traditional trade statistics.

The major suppliers of iPod components include ten companies from Japan, South Korea, Taiwan and the U.S. In 2007, the ten companies combined accounted for 85 percent of the total manufacturing costs of iPod, which is \$145. All components are eventually shipped to mainland China for final assembly where Chinese workers only added a few dollars, or two percent of the total manufacturing cost, to each iPod.

But when a ready-to-use iPod is exported from China to the U.S., the traditional method for measuring trade records all of the \$145 as U.S. imports

from China when most of the value should be attributed to parts from countries that precede the final assembly line.

And also the retail price for a typical 30 gigabyte iPod in the U.S. was \$299 in 2007 so there is \$155 markup between manufacturing costs and the retail price. So that \$155 can be separated into \$75 for distribution and retail, and \$80 for Apple's design and R&D, which is the biggest share in the whole supply chain.

Global production sharing is particularly important in understanding China's trade performance since a large part of China's trade involves contracting manufacturing for goods that actually are designed elsewhere. This phenomenon is known as "processing trade." It includes the imports that enter the country duty-free and then are either transformed or assembled in China before being reexported to foreign countries.

Compared to ordinary trade, which mostly uses local inputs for production, China's domestic value added in processing trade tends to be much lower than ordinary trade.

During the past two decades, the nominal value of China's exports has risen by more than 20 times, but the share of processing exports in China's total exports doesn't change much. In 2011, it still accounted for about 44 percent of China's total exports.

The pervasiveness of processing trade in China has often led to misunderstandings about China's competitiveness in high-tech manufacturing and also the bilateral trade relationship between China and the U.S. and other major trading partners.

Professor Dean and Professor Wei have mentioned that the value-added analysis already provided some evidence to show that although the share of domestic content in China's total manufacturing exports has been rising over time, the rise is concentrated in the low-tech, labor-intensive industries.

China's domestic value added in high-tech manufacturing exports is still relatively low and largely reflects foreign firms bringing more capital and skill-intensive processing imports into China, which are then assembled for exports.

The bilateral trade flows and the value added analyses show very different patterns from that of traditional trade statistics as well.

From a policy perspective, I think this demonstrates that value-added trade can provide a more accurate measure of bilateral trade balance, and we can also better assess the real impact of exchange rate adjustment on global rebalancing. Overall, while global production sharing has benefited both industrial and developing countries in the past, it raises many important challenges for all engaged countries.

One thing I think that needs to be pointed out is that those industries that have experienced rapid global production sharing in the past typically have products that are relatively small, lightweight, valuable and produced in high volume, making them very suitable to a long global supply chain.

But these characteristics are not necessarily applicable to other manufacturing products, especially for those that are heavyweight and not so easily divisible. In some cases, the benefits to have assembling operations close to R&D and the engineers are neglected, and the impact of physical location on

manufacturing operations on firms' overall competitiveness has not been fully realized. So a greater understanding of global sourcing of intermediate components and where value is added will help us better understand the benefits and challenges created from the global value chain.

But I think one thing for sure is it is increasingly difficult for industrial countries to compete with developing countries, like China, India, in products that are labor intensive but do not require cutting-edge technology.

They will have to rely more on a high-skilled and knowledge-based workforce, incorporate more technology into the products, and bring intangible assets that are not easily replicated in other countries to make their manufacturing sector more competitive.

**PREPARED STATEMENT OF DR. YINGYING XU  
ECONOMIST AND COUNCIL DIRECTOR  
MANUFACTURERS ALLIANCE FOR PRODUCTIVITY AND INNOVATION (MAPI)**

June 14, 2012

**Testimony before the U.S.-China Economic and Security Review Commission Hearing  
the Value-added Approach to Understand International Trade**

Dr. Yingying Xu

Economist and Council Director, Manufacturers Alliance for Productivity and Innovation (MAPI)

**Introduction**

The past two decades have seen a significant acceleration in the globalization of production process, thanks mainly to trade policy reforms and technology-led decline in transportation and communication cost. As a result of the fragmentation of the production chain across borders, intermediate inputs, including both goods and services that are incorporated into other products, usually cross national borders several times before being transformed into a final product. Therefore, trade in intermediate inputs has been growing steadily and represented about two-thirds of global trade flows in recent years, and the share varies greatly by country (Figure 1).<sup>1</sup>

As more and more products are effectively “made in the world”, traditional customs-based trade statistics—which record the full value of trade flows at each border crossing (rather than the net value-added)—have become less reliable as a measure for understanding the importance of trade as a source of economic growth. There is increasingly widespread agreement among researchers and policy makers around the world that focusing on the value-added part of trade flows can distinguish the foreign and domestic content in gross exports and better reflect the contribution of trade to economic growth and job creation. However, a systematic and accurate assessment of value-added in trade has remained a challenge since it requires cross-country cooperation in order to construct a consistent and systematic global input-output (IO) table.<sup>2</sup> Truly global analysis of value-added in trade has become possible only in recent years with the development of World Input-Output Database (WIOD) and Global Trade Analysis Project (GTAP), which help unravel the long global supply chain and identify the origin and the use of intermediate inputs produced and traded among countries and industries.<sup>3</sup> Although many statistical and methodological issues remain unresolved under this approach, various studies have already offered preliminary results on different aspects of value-added trade to help better explain the global trade pattern and how a country fits into the integrated world economy.<sup>4</sup>

---

<sup>1</sup> See Sébastien Miroudot, Rainer Lanz, and Alexandros Ragoussis, “Trade in Intermediate Goods and Services,” OECD Trade Policy Working Paper No. 93, TAD/TC/WP(2009)1, Paris, November 2009

<sup>2</sup> For a detailed discussion about the related challenges, see the National Research Council’s 2006 report, “Analyzing the U.S. Content of Imports and the Foreign Content of Exports,” [www.nap.edu/openbook.php?record\\_id=11612](http://www.nap.edu/openbook.php?record_id=11612).

<sup>3</sup> The OECD and the WTO have been collaborating on this issue since early 2009 and have launched the Made in the World initiative and the Global Forum on Trade Statistics. An inter-country IO table covering 50 countries for three benchmark years (1995, 2000, and 2005) is under construction. A worldwide time series of multi-country IO tables called the World IO Database (WIOD) have been made available to public in early 2012 as well; it includes 27 EU members and 13 other major economies and runs from 1995 to 2009. Four international organizations (United Nations Statistics Division, Eurostat, WTO, and United Nations Conference on Trade and Development) set ambitious goals for 2020, including establishing a specialized satellite account of trade in value-added.

<sup>4</sup> Guillaume Daudin, Christine Riffart, and Danielle Schweisguth, “Who produces for whom in the world economy?” *Canadian Journal of Economics* 44, no. 4 (November 2011): 1403-37; Robert C. Johnson and Guillermo Noguera, “Accounting for Intermediates: Production Sharing and Trade in Value Added,” *Journal of International Economics* (October 2011); Abdul Azeez Erumban, Bart Los, Robert Stehrer,

This testimony will first use case studies to explain problems with current trade statistics in the environment of global production sharing, and then focus on how value-added trade can enhance our understanding of issues related with China's trade, especially the U.S. - China bilateral trade relationship. Policy implications will be briefly discussed in the end.

### Issues with Gross Trade Statistics

In a globalized production network, various stages of production are regularly performed in different countries. At each stage, a producer purchases inputs and adds value which is included in the cost of the next stage of production. As intermediate inputs cross national borders several times for further processing before reaching their final destination, their values are implicitly counted multiple times in traditional trade statistics. This has created three major problems for current trade statistics:

1) This well-known "double counting" problem implicates that the conventional export statistics, which includes trade in both intermediate and final goods, will overstate the domestic value-added content of exports, making it difficult to identify the real contribution that exports can make to economic growth and employment in a country. According to a recent study from the IMF, the foreign content embedded in global gross exports has increased on average from 18 percent in 1970 to 27 percent in 1995 and 33 percent in 2005.<sup>5</sup> The gap between gross and value-added exports varies greatly by country, and can indicate a country's position in the global value chain. Compared to advanced countries, emerging countries tend to have relatively low domestic content in their exports since they largely use imported raw materials and intermediates to assemble final goods for exports. Such processing trade currently accounts for about half of exports from China, which, together with several other developing countries in the region, serves as a downstream hub in the Asian supply chain. Mexico and Eastern European countries have somewhat similar roles in North America and European markets respectively (Figure 2).

2) Meanwhile, by assigning the total commercial value of an import to the last country of origin, import statistics might not only overstate the degree of competition that comes from one's trading partners, leading to miscalculations about the economic dimension of bilateral trade imbalances, but also understate the degree to which the importing country's own firms benefit from trade if part of their output are already incorporated in the goods.

Case studies on this issue date back to the 1990s, and well-known examples include products from toys, apparel, and automobile industries.<sup>6</sup> More recent studies on Apple's popular iPhones have received lots of attention. The production of iPhone primarily takes place outside the U.S. though it is designed and marketed by Apple. The major producers and suppliers of iPhone parts and components include eight companies from Japan, Korea, Germany, and the U.S.; in 2009, they accounted for 70 percent of the \$179 total manufacturing cost. All components were eventually shipped to mainland China for final assembly, where Chinese workers added only \$6.50 to each iPhone, less than 4 percent of the total manufacturing cost. However, when a ready-to-use iPhone is exported from China to the U.S., the

---

Marcel Timmer, and Gaaitzen de Vries, "Slicing Up Global Value Chains: The Role of China," The Fragmentation of Global Production and Trade in Value-Added—Developing New Measures of Cross Border Trade, World Bank Trade Workshop, June 2011, <http://bit.ly/zwqxQN>.

For a summary of these empirical studies, see Yingying Xu, "Understanding International Trade in an Era of Globalization: A Value-added Approach", PA-105, MAPI, March 2012

<sup>5</sup> Riad, Errico, Henn, Saborowski, Saito, Turunen and Jarkko, "Changing Patterns of Global Trade", Departmental Paper No. 12/01, January 2012

<sup>6</sup> For more about other case studies, see Rone Tempest, "Barbie and the World Economy," *LA Times*, September 22, 1996, [http://articles.latimes.com/1996-09-22/news/mn-46610\\_1\\_hong-kong](http://articles.latimes.com/1996-09-22/news/mn-46610_1_hong-kong); Peter Burrows, "The Global Chip Payoff," *BusinessWeek*, August 7, 1995,

[www.businessweek.com/archives/1995/b3436126.arc.htm](http://www.businessweek.com/archives/1995/b3436126.arc.htm); Pietra Rivoli, *The Travels of a T-Shirt in the Global Economy: An Economist Examines the Markets, Power, and Politics of World Trade* (Wiley, 2005); Gene M. Grossman and Esteban Rossi-Hansberg, "Task Trade between Similar Countries," Princeton University, August 2011, [www.princeton.edu/~grossman/TTSC081111.pdf](http://www.princeton.edu/~grossman/TTSC081111.pdf).

traditional method of measuring trade records all of the \$179 as a U.S. import from China when most of the value should be attributed to parts and components from countries that precede the final assembly. Breaking down the value-added along the manufacturing value chain suggests that of the US\$2 billion worth of iPhones exported to the U.S. from China, 96 percent in fact should be attributed to Germany (18 percent), Japan (36 percent), Korea (14 percent) and other countries (29 percent). China only contributed US\$73 million, or 3.6 percent, of the US\$2 billion trade deficit that the U.S. had for importing iPhone (Table 1).<sup>7</sup>

3) In addition, because of the need to link and hold the global production chain together, the service content of manufactured goods has been rising over time. However, official trade data are not necessarily able to reveal those sectors of the economy where value-added originates. This is especially troublesome for industrial countries where the so-called “multiplier effect”—services generated by manufacturing, including marketing, transport, distribution, finance, and even intellectual property rights—are gaining importance in a product’s final price and can be a significant share of the domestic content of a manufactured product by the time it reaches the final user. Disentangle the domestic value chain into its sectoral components can therefore shed new light on the sources of international competitiveness and the direct and indirect employment impacts of trade.

Use another popular Apple device iPod as an example. In 2007, the total manufacturing cost (including components and assembly) for a 30GB model was estimated at \$144 while the U.S. retail price was \$299. The \$155 markup can be separated into \$75 for distribution and retail in the U.S. and \$80 for Apple’s design and R&D, which is the largest piece of value-added in the entire supply chain.<sup>8</sup> In fact, for many electronic products, if the value-added at each stage of the supply chain is plotted in a chart, it follows the shape of a “smile of value” curve, which was named after the U-shaped arc of a smiley face. It starts “high for branding and product concept, swoops down for manufacturing, and rises again in the retail and servicing stages.”<sup>9</sup> Typically, Western companies’ activities are at the two ends of the curve and capture the majority of the value in a globalized supply chain.

As for the impact on employment, the iPod line is estimated to support 41,000 jobs worldwide in 2006, of which about one-third were located in the U.S. While the Asia-Pacific region accounted for almost all of the low-wage production jobs, the U.S. workers held more than 60 percent of the high-wage professional jobs in management, engineering, computer support, and retail, and earned about \$750 million—three-quarters of the \$1 billion total earnings for all iPod-related jobs (Table 2: iPod related job).

However, one thing that needs to be pointed out is that consumer electronics are relatively small, lightweight, high value, and produced in high volume, which makes them suitable for a long global supply chain. These characteristics are not necessarily applicable to other manufactured products, especially for those that are heavyweight and not so easily divisible. In some cases, the benefits to have assembly operation close to R&D and software engineers are neglected and the impact of physical location of manufacturing operations on firms’ overall competitiveness has not been fully realized. A greater understanding of global sourcing of intermediate components and where value is added will help us better understand the benefits and challenges created from the global value chain.

### **Understanding U.S.-China Trade Relations from an Value-added Perspective**

<sup>7</sup> Yuqing Xing and Neal Detert (2010), “How the iPhone Widens the United States Trade Deficit with the People’s Republic of China,” Asian Development Bank Institute Working Paper No. 257, December 2010, <http://adbi.org/files/2010.12.14.wp257.iphone.widens.us.trade.deficit.prc.pdf>.

<sup>8</sup> For a detailed discussion about the distribution of value-added in the iPod’s supply chain, see Greg Linden, Kenneth Kraemer, and Jason Dedrick, “Who Captures Value in a Global Innovation Network? The Case of Apple’s iPod,” *Communications of the ACM* 52, no. 3 (March 2009), <http://pcic.merage.uci.edu/papers/2008/WhoCapturesValue.pdf>.

<sup>9</sup> James Fallows, “China Makes, The World Takes,” *The Atlantic*, July/August 2007, [www.theatlantic.com/doc/200707/shenzhen](http://www.theatlantic.com/doc/200707/shenzhen).



After three decades of rapid growth, China has grown from having a negligible role in world trade to being the world's largest exporters, and is on its way to become the world's largest importer as well. However, a less well-known fact is that a large part of China's trade involves contracting manufacturing for goods that are designed elsewhere, and this phenomenon is known as "processing trade". Compared to "ordinary trade" which includes imports that are subject to general tariff rates and exports that are based on local inputs, processing trade encompasses imports that enter the country duty-free and are assembled or transformed in China and then re-exported to foreign countries. Combined together, these two categories account for more than 90 percent of China's exports and over 80 percent of its imports.<sup>10</sup> Although the nominal value of China's exports has risen by more than twenty times from 1992-2011, the share of processing export in total exports does not change much, and it rose from 47 percent in 1992 to 57 percent in 1999 and then fell back to 44 percent by 2011. On the import side, the share of processing trade rose to almost 50 percent of total imports before the financial crisis in 1997-1998 and was surpassed by ordinary imports after that because of the rapid decline in tariff rates and the anti-smuggling measures implemented by the government. Since 2007, the share started to decline rapidly when China imported large amounts of raw materials and high-end equipment to fuel its investment boom in infrastructure and property market, and by 2011 it only accounted for 27 percent of China's total imports (Figure 3).

The pervasiveness of processing trade in China has often led to distorted views about China's competitiveness in high-tech manufacturing industries and the bilateral trade imbalances between China and its major trading partners.

#### 1) China's Role in Global Production Sharing

Lots of literature has demonstrated that international production sharing has become an essential part of all major East and Southeast Asian countries since 1990s, and China became a major production hub in the region's production and distribution network with its 2001 accession to the WTO. More specifically, advanced East Asian countries such as Japan and the Newly Industrialized Economies (NIE)<sup>11</sup>, who used to export finished goods directly to the western markets, have gradually moved their production capacity to overseas export platforms located in the less developed neighboring countries. At the end of last century, the displacement of alternative supply sources in the region mainly focused on labor-intensive industries, and in early 2000s, a similar process began to work at more capital- and technology-intensive industries.<sup>12</sup>

As a result, China's export structure has transformed dramatically over the past two decades. The share of agriculture and traditional labor-intensive manufacturing products such as textiles, apparel and toys fell from about two-thirds of China's total exports in 1992 to about 30 percent in 2011<sup>13</sup> while the share of capital- and technology-intensive manufacturing products, such as industrial machines, chemicals and metals, grew from less than 40 percent to more than 70 percent. The strongest overall export growth has been in machinery, among which information and communication equipment, electrical machinery and office machines have experienced the highest growth and make up the largest shares in this category (Figure 4). As a result, China's share in the U.S. imports of all "Advanced Technology Products" (ATP)

<sup>10</sup> There are also international aid flows, contracting projects, goods on lease, barter trade, and other categories of trade flows.

<sup>11</sup> The NIEs include South Korea, Taiwan, Singapore and Hong Kong.

<sup>12</sup> Lee Branstetter and Nicholas Lardy, "China's Embrace of Globalization", Published in "*China's Economic Transition: Origins, Mechanisms, and Consequences*", Cambridge University Press, 2008; Guillaume Gaulier, Françoise Lemoine and Deniz Ünal-Kesenci, "China's Integration in East Asia: Production Sharing, FDI and High-tech Trade," CEPII Working Paper No 2005-09, June 2005

<sup>13</sup> It includes industries classified as 1-4 (Agriculture and Raw Materials) and 8 (miscellaneous Manufacturers) in Standard International Trade Classification (SITC) system.

more than tripled over the past decade, up from 10 percent in 2002 to 34 percent in 2011, and led to \$109 billion trade surplus for China.<sup>14</sup>

Foreign-invested enterprises (FIEs), including both joint venture and wholly-owned affiliates of foreign multinationals, have played a vital role in the rising importance of China in the global production chain. While FIEs' share in China's ordinary exports has increased from 5 percent in 1992 to 28 percent in 2011, it accounted for 84 percent of China's processing exports and 82 percent of China's processing imports in 2011, up from 39 percent and 42 percent respectively in 1992 (Figure 5). In recent years, there has been a shift in the ownership from joint venture to wholly-owned as well, with wholly-owned foreign enterprises (FOEs) taking up more than three quarters of processing exports and about 80 percent of processing imports from all FIEs. FIEs are also responsible for the changing structure of China's exports, and have generated more than 90 percent of all Chinese ATP exports over the past decade. FIE firms are the largest contributors to Chinese ATP trade surplus with the United States while China's collective and private firms contributed very little to the ATP trade surplus, and the state-owned firms had an ATP trade deficit with the U.S.<sup>15</sup>

## 2) Value-added Perspective on China's Export Competitiveness

The increasing sophistication of China's exports has drawn considerable attention from the public. On the surface, it appears to suggest that the skill content of China's exports is rising and China's export structure increasingly resembles that from industrial countries. This could represent competitive pressure for producers in developed countries, and a major concern is whether it poses a serious challenge to U.S. commercial and security interests.

There is no question about China's enlarged market shares in the world market, with China's share in global manufacturing exports up from 2 percent to 14 percent during the past two decades. However, a closer examination of China's trade data reveals that if processing trade is taken into consideration in which the value added is the difference between processing exports and processing imports and hence less than for ordinary trade, the share of domestic content in China's overall manufactured exports is estimated to be around 50 percent, meaning that only half of value in China's exports is generated domestically. Although the overall foreign content in China's exports has steadily declined over the past two decades, the decline is concentrated at the traditional labor-intensive industries such as toys, sports products, and textiles, in which the domestic share of value-added can be as high as 70 percent. As the skill-intensity of exports rises, the percentage of value-added in the final products that derives from imported components rises sharply. For those sectors that are usually labeled as high skill-intensive, including computers, telecom equipment and electronic devices, processing trade accounted for over two-thirds of the industry trade. The majority of the value embedded in China's exports came from parts and components imported from foreign countries, mainly Japan, the U.S., and Europe, and China's domestic value-added in those exports is estimated to be particularly low, about 30 percent or less.<sup>16</sup>

These findings are consistent with conclusions from other studies which have shown that there is a sizable gap between China's ATP exports and imports. Chinese ATP imports from the U.S. consist of

---

<sup>14</sup> ATP includes products in biotechnology, life science, Opto-Electronics, Information & Communications, Electronics, Flexible Manufacturing, Advanced Materials, Aerospace, Weapons, Nuclear Technology. A detailed description can be found at <http://www.census.gov/foreign-trade/reference/glossary/a/atp.htm>.

<sup>15</sup> Ferrantino, Koopman, Wang, Yiung, Chen, Que and Wang, "Classification and Statistical Reconciliation of Trade in Advanced Technology Products: The Case of China and the United States", Joint Working Paper on U.S.-China Trade in Advanced Technology Products, US International Trade Commission, 2010

<sup>16</sup> Koopman, Wang and Wei, "How much of Chinese exports Is Really Made in China? Assessing Foreign and Domestic Value-added in Gross Exports," NBER Working Paper 14109; Koopman, Wang and Wei, "A World Factory in Global Production Chinas. Estimating Imported Value-added in Chinese Exports", Center for Economic Policy Research, UK, Discussion Paper 7430, September 2009,

large-scale, sophisticated, high-valued equipment and devices, whereas China's ATP exports to the U.S. are small-scale products or components in the low-end of the ATP value-added chain.<sup>17</sup>

Therefore, the increase in the sophistication of China's exports over the past two decades largely represents FIEs bring more capital- and skill-intensive processing imports into China which are then assembled for exports. Even though the final product is classified as skill-intensive when it shows up at the customs, Chinese producers could still specialize in the labor-intensive and low value-added stage in the production process, therefore would not compete directly with producers in developed countries.

### 3) Value-added Perspective on the U.S.-China Trade Imbalance

In recent years, the bilateral trade relations between China and the U.S. have become increasingly strained and one major concern is the large and growing U.S. trade deficit with China, which rose from \$84 billion in 1990 to \$296 billion in 2011, accounting for more than 40 percent of the U.S. overall trade deficit in goods.

The fast rise of trade balance between these two countries is closely related with the global production sharing and the "triangular trade pattern" formed in East and Southeast Asia in which China became a mediator between advanced countries in the region and western markets. It helps us to explain the simultaneous rise of China and falling of Japan and the NIEs in their relative importance in U.S. imports data. The share of total U.S. imports in goods that came from East and Southeast Asian countries remained relatively stable during the past decade, down only slightly from 36 percent in 1998 to 34 percent in 2011, while China's share went up from 8 percent to 18 percent. In other words, while China was becoming an increasingly important source for U.S. imports in goods, the relative importance of other countries in the region was declining (Figure 6). Therefore, China's trade surplus with the United States and, to a lesser extent, Europe, largely reflects its large deficit with its trading partners in East Asia. In 2011, China's trade deficit with Japan and NIEs, excluding Hong Kong, was about \$216 billion while its trade surplus with the U.S. was about \$203 billion.

Recent value-added analysis on international trade not only provides further evidence that bilateral trade statistics can be scaled down in value-added terms relative to gross terms, but also was able to calculate the gap between gross and value-added trade. In general, the more connected two countries are in production sharing, the bigger the gap is. Various studies find that the U.S. bilateral value-added trade with its trading partners in East Asia (Japan, South Korea, Taiwan and China) and NAFTA (Canada and Mexico) is usually 30-50 percent lower than gross trade. As a result, its trade deficit with China is 20-40 percent smaller when measured on a value-added basis while its deficits with Japan and Korea are underestimated at similar magnitudes. Its trade deficit with Mexico and Canada falls as well after adjusting for production-sharing (Figure 7).<sup>18</sup>

The dominate presence of FIEs in China's processing trade also has importance implications for understanding China's growing trade surplus. A closer look at China's growing trade surplus by custom regime reveals that the main source of China's trade surplus is still processing trade even though the share of ordinary trade in both China's imports and exports has been rising. In 2000, China obtained \$5 billion and \$45 billion trade surplus from ordinary trade and processing trade respectively. In 2011, the trade surplus obtained from the processing trade reached \$367 billion compared with the \$90 billion trade deficit recorded from the ordinary trade (Figure 8). The trade surplus generated by FOEs alone reached

<sup>17</sup> Ferrantino, Koopman, Wang, Yiung, Chen, Que and Wang, *op.cit*

<sup>18</sup> Robert Koopman, Zhi Wang, and Shang-Jin Wei, "A World Factory in Global Production Chains: Estimating Imported Value-Added in Exports by the People's Republic of China," in *Costs and Benefits of Economic Integration in Asia*, eds. Robert J. Barro and Jong-Wha Lee (Oxford University Press, January 2011); Johnson and Noguera, "Accounting for Intermediates: Production Sharing and Trade in Value-added", *Journal of International Economics*, Oct. 2011

\$105 billion, more than two thirds of China's total trade surplus.<sup>19</sup> One common misconception about the U.S.-based multinationals operating in China is that U.S. affiliates are contributing to the large U.S. trade deficit by producing there and selling back to the U.S. However, the data illustrates that over the past decade, the role of foreign affiliates has not changed much and they continue to serve as a means for U.S.-parents to access foreign markets rather than as a low cost base of production from which to sell to their U.S. customers. In both 1999 and 2009, about 90 percent of the goods and services produced by foreign affiliates were sold to foreign customers, and the scale remains small compared to the size of the U.S. trade deficit.<sup>20</sup> The majority of FIEs in China are indeed from Taiwan, Hong Kong and South Korea.

### Policy Implications

The insights we have gained from measuring international trade on a value-added basis have important policy implications.

1) Recognizing the discrepancies between gross and value-added exports can help avoid overestimating the importance of exports as a driver of short-term demand and underestimating the importance of trade and specialization as sources of increased efficiency in the longer term. This is especially the case for emerging markets, which tend to be downstream in the global supply chain and have large shares of imported content in their exports, therefore haven't benefited nearly as much as shown in the top-line trade data (Figure 9). Take China as an example. While gross exports accounted for more than 40 percent of its GDP growth since the 1990s, only half of its exports represented domestic value-added, which contributed to 19 percent of total GDP growth in 2008.<sup>21</sup>

2) It is important to state that analyzing trade flows and reassigning the value-added contribution to different countries in the supply chain does not change the top-line U.S. trade deficit, which is ultimately the result of the larger macroeconomic imbalance that comes from low saving (particularly large federal budget deficits) relative to investment. However, value-added trade data demonstrates that acting on bilateral imbalances without addressing the underlying causes of the aggregate imbalance simply redistributes that imbalance across trading partners. In addition, the real impact of exchange rate adjustment on global rebalancing can be better assessed with value-added, rather than, gross trade data.

3) While the globalization of production chains helps firms in industrial countries to enormously improve efficiency and gain access to new emerging markets, and provides a new option for developing countries to quickly participate in global trade and enter global markets, it raises many important challenges for all countries that are engaged in the global production chain. For developing countries that are nearly at the end of the value chain and mainly engaged in low-skilled labor-intensive activities in most industries (including the high-tech industries such as electronics and telecommunications<sup>22</sup>), the gains from the

---

<sup>19</sup> China's reported processing trade may be exaggerated due to some firms desire to evade tariffs on the domestic sale of imported inputs. For detailed discussion, see Fisman and Wei, "Tax rates and tax evasion: Evidence

from "missing trade" in China", *Journal of Political Economy* 112 (2): 471– 96, 2004; Fisman, Moustakierski and Wei, "Outsourcing tariff evasion: A new explanation for entrepot trade", *Review of Economics and Statistics*, 2008

<sup>20</sup> Barefoot and Mataloni, "Operations of U.S. Multinational Companies in the United States and Abroad", U.S. Bureau of Economic Analysis, Nov. 2011

<sup>21</sup> John Horn, Vivien Singer, and Jonathan Woetzel, "A truer picture of China's export machine," *McKinsey Quarterly*, September 2010, [www.mckinseyquarterly.com/A\\_truer\\_picture\\_of\\_Chinas\\_export\\_machine\\_2676](http://www.mckinseyquarterly.com/A_truer_picture_of_Chinas_export_machine_2676).

<sup>22</sup> Empirical studies have found evidence that China's exports in high-tech industries, including machinery and telecommunications, have high foreign content that is sourced from Japan, Korea, the U.S., and the EU. For details, see Judith M. Dean and K.C. Fung, "Explaining China's Position in the Global Supply

labor division on the global value chain are gradually falling and the profit space of their enterprises continues to dwindle when labor and land get more expensive and pollution and other environmental damage can no longer be overlooked. To move up the value chain, it will be necessary for these countries to develop their own technological capabilities, which requires not only increasing spending on R&D but also creating a supportive environment for innovation, including stronger intellectual property rights protection and improved compliance with international standards.

It is increasingly difficult for developed countries to compete with developing countries in products that are labor-intensive but do not require cutting-edge technology. Advanced economies have to rely more on a high-skilled and knowledge-based workforce, incorporate more technology into their products, and bring intangible assets that are not easily replicated in other countries to make their manufacturing sector competitive. The primary benefit to trade for a nation is that the expanded competition forces domestic industries to continuously reinvent themselves, employ new technology, create innovative products and processes, design new management methods, and increase productivity in order to lower costs. Superior productivity growth in manufacturing is ultimately passed on to the consumer in the form of less inflation in manufactured goods and thus a higher standard of living.

Table 1: 2009 U.S. Trade Balance in iPhones, in Million US\$

	China, P.R.	Japan	South Korea	Germany	ROW	World
Gross	-1901	0	0	0	0	-1901
Value-added	-73	-685	-259	-341	-543	-1901

Source: WTO, Global Forum on Trade Statistics April 2011

Table 2: iPod-related jobs by country and category

	Engineering and other Professional	Production	Retail and other non-professional
Total	9366	19190	12614
Share, %			
U.S.	65	0	62
China	6	61	-
Japan	12	4	-
Korea	6	3	-
Taiwan	3	0	-
Singapore	1	4	-
Philippines	3	23	-
Thailand	1	4	-
Other	3	0	38*
Total	100	100	100

\* Includes all non-U.S. retail and other non-professional

Source: Linden, Kraemer and Dedrick (2011)

## PANEL I – QUESTION & ANSWER

VICE CHAIRMAN REINSCH: Okay. Thank you very much, all of you. Let's go to questions. Commissioner D'Amato.

COMMISSIONER D'AMATO: Thank you, Mr. Chairman, and I thank the panel for your testimony today. It's in some ways very provocative and interesting, and I think it bears our attention to what this analysis means.

I have two quick questions for the panel. The first is what's the most important new implication for U.S. trade policy that you take away from this for us--this value added analysis? And how would that translate into any recommendations for a trade policy on the part of the Congress?

But, secondly, we've had the implications of the fragmentation of trade. We've had other explanations here before the Commission. The fragmentation, illustrated as you describe it, seems to be rather mechanical add-ons, but we've heard of innovation at various stages of this fragmentation process by the Chinese, and that attention to this kind of innovative capacity by the Chinese is something that we haven't paid enough attention to, and the Chinese, after all, what is all the transfer of intellectual property about if they're going to be just an add-on.

So the second question is a more difficult one. What is the relative importance in this analysis of just the question of value added versus infusion of new innovative capacity by the Chinese at various stages in the production process and in the process of creating more sophisticated goods?

So the question is value added is one thing; where is all the intellectual property going; and what's the relative importance of Chinese innovation at the various stages of this process?

You can start, Ms. Dean. Thank you.

DR. DEAN: Okay. Regarding new implications, I think this is not quite new, but perhaps not widely known. If we think about the fact that value in the production process is being transferred across borders numerous times, and at each stage more value is added (depending on where you are in that chain), this highlights the critical nature of keeping markets open. When we receive products at the end of the day, we want to be sure that costs are not artificially inflated or their ability to produce in a production chain is not dampened by numerous barriers between countries.

There's a lot of evidence that trade barriers actually have a magnified effect on costs of production in these global chains, because goods cross so many borders in the process of completing the good. So trade barriers between each country in a chain can have a really magnified effect on production costs for firms both in the United States and in every partner in the chain.

Your second question has a lot of dimensions to it. Maybe I can just highlight one. In our study of where China's position in global supply chains in different products, we found that in very R&D-intensive production (especially for products where the innovation is new), most of that production is done by multinational corporations and tends to have a very high foreign content. So it looks to us as though firms really do a lot of the high-tech production themselves and only shave off a little bit to China.

Intellectual property plays a role there. Product quality control also plays a role, since very little production will be done in a country where intellectual property is weak, or quality control is weak.

As those things improve, a multinational corporation may choose to do more in that country. So there may be an incentive on China's part to improve its IPR and improve its quality control so that multinationals will find China more conducive to producing different tasks in the chain.

DR. WEI: Thank you.

In terms of new implications, let me highlight two. One is effectiveness of exchange rates. To understand that question, one must take into account if Chinese exports have lot of imported content, relative rewarding, which everything is sourced domestically, given change in exchange rates tends to have a smaller effect on Chinese balance, given that when the Chinese exchange rate appreciates, while it makes Chinese export products more expensive abroad, but it also makes the inputs that Chinese producers import from abroad cheaper, and there's partial offsets from that global production chain aspect. So, therefore, given exchange rate change will have a smaller effect on Chinese trade balance.

The second implication has to do with the collateral damage aspect of a given trade policy. Because higher and lower income countries tend to specialize in different parts of the global production chain, the U.S. and other developed countries tend to be on the upper end, and developing countries tend to be on the lower end, given increase, given change in policy that succeeds in reducing imports from China, for example, has collateral damage.

It has collateral damage on production in Japan, Korea and European Union to the extent they provide inputs to China and other developing countries. It has collateral damage to U.S. upstream firms to the extent they provide inputs into the production of Chinese exports. So those effects need to be taken into account.

In terms of fragmentation or innovation, you're right, the fragmentation obviously is not mechanical; it's a choice by firms, and one that has implications for firms in the U.S. and firms in China.

For firms in U.S., one of the implications is that without global production chains, or fragmentation production patterns, with relatively high labor costs and production costs, sometimes U.S. firms may be forced to give up a product and a sector.

With the possibility of specializing in a part of the global production chains, the firm can, rather than giving up a product/a sector entirely, can choose to stay with the part of the production chain it has had particular advantage in, and these tend to be higher-paying jobs, and allow the more labor-intensive part to be produced elsewhere, and therefore the firm can continue to stay a leading firm in the world.

From the developing country side, because they get to specialize in a piece in global production, even if they have relatively low skill to start with, they get to be part of this production. So assembly of the iPhone is a relatively low skill job. iPhones would not be assembled in China, exported by China, if there was no production chain pattern.



On the other hand, precisely because production of the same product gets sliced up into different pieces, it also facilitates firms in those countries to move up because it's easier to learn the technology piece because once you are good at doing assembly, you look at the next piece, it requires slightly more skills, and you may learn to do that.

That kind of learning process may be a bit easier than trying to master the entire production process. So the production fragmentation pattern also encourages firms to learn and to innovate on the things they could innovate.

DR. XU: I think Professor Wei and Professor Dean have been pretty thorough in covering all the policy implications since basically value-added analysis can provide a more accurate assessment of bilateral trade balance, and also the real impact of exchange rate adjustment, and also some trade from tariff perspective. Raising the tariff for one country does not necessarily mean that that will address the fundamental reasons, the problems that caused the trade imbalance from first perspective.

I want to add a little bit of my own understanding about the intellectual property rights and also the competition between developing countries and developed countries. I think it's not really surprising in China, I can say it's probably the fact that China is really trying to climb up the value chain, in a global value chain.

It's one challenge that developing countries have to face. You can't get stuck in the bottom of the value chain all the time when the living standards are improving in China, the labor is getting more expensive, the land is getting more expensive. Also, the cost for economic development in terms of environmental problems, at some point you have to take all that into consideration for production. So that will definitely raise the production cost over time.

So that's the reason why developing countries have to climb up the value chain, and that's what China is doing. Actually since 2006, the Chinese government has been raising their R&D expenditures. Ten years ago, the R&D share in GDP was less than one percent, and now it's more than two percent.

But the intellectual property or the innovation is a pretty hard thing to do. Raising R&D expenditures is not enough to improve one country's innovation capability. You have to have the whole system to support that, and I think that the U.S. is still one of the best countries to do that.

From a U.S. perspective, there are lots of reports about multinational firms who actually move their R&D center from the U.S. to China and other developing countries like India, but I think there is a little bit of misunderstanding in that story. According to the Census Bureau's analysis, in 2009, that's the most recent available data, more than 80 percent of multinational firms' sales, production R&D are still performed in the U.S., in U.S. based multinationals. They still perform the majority of their activities in U.S.

The one thing they do have especially for some big multinational companies, they do open new R&D centers in China, in India, in other developing countries, but you have to think from the perspective that for multinational firms, their goal is to get access to new markets. They have to--when you go to the market, because China's market, in general, for developing countries' markets, they're very different from Western markets. You have to study local

customers' needs, what they want, and they had to some R&D to develop new types of products catering to local needs.

So when the market is getting bigger, it's very natural for the R&D in the markets to get bigger. I think that's just market driven. It doesn't necessarily mean that's a replacement; you close one R&D center in the U.S., and you open an R&D center in developing countries. It's not a substitute. For me, I think it's more a complement. That's where the market is.

For the past two, for the past decade, the industrial production in advanced companies only increased six percent, but for developing countries as a whole, it increased 180 percent. For China alone, industrial production in the past decade increased more than 500 percent. So that's where the market is. When the market is getting bigger, the market share for multinational firms, if they get more of their sales from overseas markets, they have to study local markets. They have to put more resources there. That's just market driven.

VICE CHAIRMAN REINSCH: Okay. Thank you.

DR. XU: But it's true. When developing countries have to move up the value chain and then it increases the competition pressure, but it's just to win or to gain the global, in an era of globalization, you have to be more competitive. You have to do the best and try to be more competitive.

VICE CHAIRMAN REINSCH: Okay. Thank you very much.  
Commissioner Wessel.

COMMISSIONER WESSEL: Thank you for those answers.

I think this is a much anticipated panel. We've been having an internal discussion in the Commission probably for a year or two about some of these issues. I have to say I'm a little troubled that our panelists seem to be of all one view, and none of us here, I believe, are technically trained as economists. So the ability to discuss with you some of the more technical issues might be limited. I'd like to have more balance with somebody on the panel who understands more than I might.

I don't want to overstate--I don't think I can overstate the importance of what you're talking about. It reminds me many years ago of the debate about the CPI, the consumer price index, and was it being calculated accurately, a very technical issue, as you know, that goes to baskets of goods that people purchase, their propensity to buy as income rises, et cetera.

But, ultimately, the impact of any change in CPI from a public policy perspective is dramatic on some people who can least afford it. Diminishing the CPI would mean that some of our most important programs that are based on CPI, Social Security, et cetera, leave many people behind, and what I have not heard today is the implications of what you're saying on what it means to U.S. production and jobs.

You've talked about maximizing at firm level, the returns to capital and the importance of that, and how the globalization of supply chains may create efficiencies.

Dr. Wei, I believe it was, and I apologize if I'm misquoting anyone, talking about this is simply shifting the location of production but not necessarily the overall U.S. trade balance, notwithstanding the question where the value is provided, et cetera.

We're in a jobs crisis here in the United States; we're in an income crisis. Everything that I have seen from an economic perspective is that the share of gains have increased to capital and have gone down for labor and wages over the last 20 or 30 years.

The discussion earlier about, Dr. Xu, about the governmental data, as I recall, looking at 2009 in the BEA report, I think it was, U.S. multinationals decreased their employment here in the U.S. over that ten-year period by 2.9 million and increased overseas employment by 2.4.

So the implications of what you were talking about are not simply about some esoteric value chains and valuation. It goes to the core issues of where the jobs are, where are the wages going to occur, where is the growth, where is the innovation?

And I'd like, to the extent you've thought about it, the implications of what this means for U.S. jobs, U.S. wages, looking at vector price analysis on both export and import related jobs, et cetera. What we're talking about here really goes to the core of what our trade policy needs to be going forward. And I think it needs a lot more debate than a one panel or one point of view.

Dr. Dean, do you want to start?

DR. DEAN: Just to be clear, most of us here were discussing value-added measures and why they matter. So we didn't present data on jobs.

COMMISSIONER WESSEL: No, no, I understand. But I'm saying, you know, we're not economists here.

DR. DEAN: Right.

COMMISSIONER WESSEL: So when somebody may look at this and say, well, you know, the bilateral balance with China is overstated, and in the heart of the debates that you know we're having at all levels, including at the presidential level, of whether we should have a tough or a more liberal policy to China, it's a lot more than just the question of where the value is being created.

It's a lot more than whether it's, I don't remember, three percent, eight percent, for iPad, et cetera. There's much more in that, you know, the products you were talking about, many of them are industrial tourists that are going from country to country as they get put into a product. But the ultimate impact of this is that jobs are being--in my opinion--jobs are being lost here, and the return to labor is going down, the return to capital is increasing. The supply chains are helping the companies, but they're not helping the people.

There is some benefit for consumers. Don't get me wrong. I understand that. But to be a consumer, you also have to produce something. So what I'm trying to do is put your comments in context and ask whether you've thought about the implications of it?

DR. DEAN: Yes.

COMMISSIONER WESSEL: Thank you. Okay. Good.

DR. DEAN: Okay. Let me make three quick points so that my colleagues also have a chance to weigh in.

First of all, what I find really exciting about this global supply chain trade is that companies get involved in it because it's better for them. It's better because it's more efficient for producing the product. That efficiency means U.S. companies, let's say, at the beginning of that chain, do better. They're doing

better. They grow faster because they're producing in a more efficient way. That means if they're growing, we should see increased jobs in those companies.

COMMISSIONER WESSEL: But the BEA data says that they're increasing their jobs offshore, not here.

DR. DEAN: Both. I don't think it's an either/or; it's a both/and. As the company here strengthens because it's specializing more in the parts of the chain that it does really well, it can grow those kinds of jobs and have some of the other jobs--in other parts of the chain where they're not as good--be done elsewhere. So I don't think it's sort of a win/lose. It's more of a win/win in terms of jobs elsewhere and jobs here, but different kinds of jobs.

In the U.S., I would say firms would expand the more highly skilled jobs or technical jobs as opposed to the very low-skill labor-intensive jobs.

Secondly, as Professor Wei pointed out, firms are involved for survival. There may be some industries in which production of the entire good here would actually mean the firm is no longer profitable. But if it can shave off a few of the pieces at the end of the chain to another country, then the rest of the firm's activities can thrive. So I would say it's opening up a new alternative for survival of firms that didn't exist before, both in our country and elsewhere.

And then finally firms are involved because of new markets. As Yingying was pointing out, a lot of this trade is done by multinational corporations. There are two things to note here: (1) as they see growth because they're operating in other markets and that expands their sales base as well. They have new markets to sell in that again strengthens the company back at home in the United States.

There is also some research that suggests that growth overseas strengthens the headquarters jobs. A good example of this would be logistics, in managing the whole chain. Most of that is done by a couple of lead firms, usually at the beginning of a chain. Once again that brings us back to U.S. firms that are often at the beginning of the chain leading the logistical planning and everything else.

So I'd say different sorts of jobs also are created in conjunction with that. So I see a lot of avenues of benefit for U.S. employment

COMMISSIONER WESSEL: I apologize. I see my time has run out. If we have another round, maybe we can continue that.

VICE CHAIRMAN REINSCH: That's fine. Yes, I think we'll have time for that.

Commissioner Wortzel.

COMMISSIONER WORTZEL: We got interested in this and thought it would be very useful to explore because some of the articles we've read in the press reflect what Dr. Wei has said. It might be 40 percent lower. The trade balance might be 40 percent, but certainly it might be lower. But when I looked at Dr. Xu's--you did an MAPI article on value-added trade, you didn't even include China in that, as I remember.

And Dr. Dean, you have in an article you did with K.C. Fung and Zhi Wang a vertical specialization chart, and when I look at that, 60 percent of the vertical specialization shares of China's merchandise exports go to Hong Kong, and a little over 50 go to Singapore and about 50 go to Taiwan.

Now, that doesn't stay in Hong Kong, Singapore or Taiwan, and what I haven't seen that would probably change Dr. Wei's 40 percent number, is where that goes after that. There's only seven million people in Hong Kong, three million in Singapore, 23 million in Taiwan. They're not consuming everything that they do. So it seems to me that you really haven't done enough, and that your 40 percent is sort of a gross figure that might be right. It might be up, it might be down a little. But if you figured in what this vertical specialization did and where all that stuff went, it would give you a very different view of trade balance.

DR. WEI: I could clarify. The value added balance data includes this. So when you compute the bilateral balance in relative terms, what you do is you look at Chinese direct exports value-added to U.S. plus indirect exports of value-added to U.S. by Hong Kong, Japan or other countries, minus U.S. direct exports to China and indirect exports to China through all other channels. And that's how the value-added thing is computed. So Hong Kong is part of this calculation.

COMMISSIONER WORTZEL: That helps a lot. Then my follow-up question to you is very similar to Commissioner Wessel's. Even if you have more clarity on the value-added trade values, what does that do for manufacturing and jobs here in the U.S.?

DR. WEI: So that's a very good question. Let me complement what Dr. Dean said. In terms of implications for the U.S. wage picture, there are two conflicting effects. There is a competition effect; there's a potential survival and skill effect. Competition effect means the more jobs get offshored abroad, the more it alters the relative wages to high-skilled parts of labor force related to low-skill part of labor force. On balance, relatively lower-skill part of the jobs are more offshorable, not always, but on average. That's the case, and therefore the global production chain or the increasing participation of firms from U.S. and elsewhere in global production chains tends to reinforce the relative pay to skilled workers in the country relative to unskilled workers in the country. That's the competition effect.

There's a skill effect that could go in the opposite direction. One part of the skill effect is the extent to which firms can survive relative to otherwise being phased out, workers of all skill levels could benefit from having the company still around.

Moreover, by being profitable and through offshoring part of these things, the firm generally becomes bigger. You don't just offshore part of your jobs abroad and stay where you are. You generally expand. Most firms do expand.

Apple would probably not be as large as it is today if everything was done in California. When a company expands, it tends to employ workers of different skill levels and that tends to raise the wages, and the ultimate effect on wages and the distribution of wages depends on the balance of these opposing forces.

In terms of effect on employment, there's also dissimilar competition versus skill effects. It is useful to separate the short-run effect versus long-run effects. In the short run, at the moment, in the month following, you know, reorganizing your production and sending certain stage of production to Mexico or China or elsewhere, in the short-run, of course, workers who used to do something don't have this job.

In the long run, the effect could be different because the company expands and because even if this company doesn't expand as much, there are other companies that supply inputs to the global production chains, their skills extend; they start to employ more workers.

And you might not get the picture if one only talks to a company that's doing the offshoring, but there are other companies they expand as a result of someone that's doing the offshoring. Therefore, the overall effect on employment in the long run, I think, is relatively little affected by the way this production is organized.

For the U.S. as a whole, we know there's a trend increase in offshoring, but there is no actual trend increase in unemployment rate. We're now in the middle of a crisis. We see this. But unemployment could be very relatively low in times when offshoring was very vigorous.

Unemployment could be high when the rate of offshoring increased. So that suggests to me that over the long run, the impact on quantity of jobs is not as big.

VICE CHAIRMAN REINSCH: Okay. Commissioner Slane is next.

HEARING CO-CHAIR SLANE: Thank you very much for taking the time to come here. It's been very, very helpful.

My question involves U.S. trade policy, and we've had a lot of testimony and documents from economists who have stated that our trade deficit is unsustainable. We are losing an enormous amount of jobs as a result of it. We are consuming more than we are producing, and something should be done to balance our trade.

The focus has been on China, which is at least on the surface the majority of our trade deficit, and listening to you it's obviously a lot more complicated than that. My question is should we balance our trade and how would we go about doing that in view of your research and findings?

DR. DEAN: You've asked a good question and a very large question. So let me reply to maybe a small part of it. First of all, I think most economists would generally agree that the current account of the United States rather than the trade balance is a better signal of whether or not there's a health problem in the economy.

Looking at the current account, which includes our trade in services where we're a major exporter and other parts of international trade, you have a different picture than you would if you just focused on the trade balance. So I'd say, first of all, I'd use a different measure. I'd look at the current account.

I also think generally economists would agree that when the current account is in deficit, it may be a problem. Not always, but it may be. If it is, the source of the problem is macroeconomic. It's more about our consumption, or rather our savings relative to our income relative to our investment. It's a bigger picture.

It's not really a trade issue; it's more of a macroeconomic issue. So I would think we'd want to look more at our savings, as you mentioned, rather than trade or trade with a specific country, Instead back up and ask what's going on in terms of savings and investment balances in the United States.

I think Shang-Jin can add to that.

DR. WEI: Indeed, I would say there is no strong presumption that balanced trade or current account represents higher level of national wealth. There is no mechanical relationship between them. It depends. There are certainly times where being able to run a deficit also perhaps gives you more flexibilities. You know, when an earthquake hits a country, if you don't run a deficit, which is to temporarily borrow from the rest of the world, you have to tighten up your belt much, much more than you otherwise would. So sometimes deficits could be a help. It depends on the sources of this.

My view of underlying causes of both Chinese surplus and U.S. deficits do have a lot to do with two countries' respective saving investment pictures, and trade policy perhaps plays a smaller role than sometimes assumed. Of course, some of the increase in Chinese savings over the last decade represents some kind of distortions, not all of them related to exchange rate, but they may be distortions nonetheless.

Some of the increase in U.S. deficit represents distortions as well. If U.S. were forced to run a balanced current account year after year, cost of capital and cost of borrowing by the U.S. Treasury will be substantially higher, and it will translate into higher cost of borrowing by firms, by households, and so on. Therefore, that also has implications about what kind of adjustments we want to have.

VICE CHAIRMAN REINSCH: Commissioner Fiedler.

COMMISSIONER FIEDLER: I'd like to get less theoretical for a moment. So the policy, trade policy, by the way, is sort of made in a very ugly way. The rhetoric of balance of trade may be most prominent, but it is not, in my view, a determining factor on how trade is made. If that were the case, if just a balance drove things, we would have changed our policy vis-a-vis China a long time ago.

I am deeply concerned about the reliability of statistics. Here in your case, Dr. Dean, you said three percent on the--everybody uses the iPad and/or iPod, and you said three percent, and you said five. That's a 60 percent difference just right here.

So the input question, we cannot get from the U.S. government, and the Defense Department, and we've said this publicly in many hearings, anybody to tell us where the components of our weapons systems come from, much less the value of them. So that shoots to me the reliability question of value-added statistics, and it seems to me you need the entire world to get on board with that reporting system.

Now, so if we have a double counting problem--I'm going to get mathematical here--we have a double counting problem, and we have an extrapolation problem, we look at it mathematically and say I'm quite content to say the trade statistics are inaccurate, and let's agree that they're inaccurate by ten percent, 20 percent with this country for that reason, and we discount them from a policy point of view.

I don't need to burden the world with giving me this costs five cents, this costs five cents, this is value added, this is not, this is blah-blah. It's an accurate number so let's look at the problem, disaggregate it, and from a policy point of view say, okay, it's wrong by ten percent. Because policy is enforced. You're talking iPads. Let's talk steel. I know that their import is 100 percent,

and they're dumping it into the United States. We enforce that separately. And I got a simple value-added proposition.

Let's take something simpler--shoes. We raise cattle, more cattle than anybody else. We send it elsewhere--we don't produce any shoes or handbags. So we send all the hides to China. And I don't know where they get the glue or where they get the chrome to treat the hides because it's too dangerous in the United States environmentally to deal with chrome and the glue is toxic and noxious to workers and kills them, but they let it happen in China. I don't know how to calculate that value in the value added.

But it's a pretty simple calculation in the end. So some are complicated; some are simple. I think we're overcomplicating this problem and its impact on policy. I know it's fun for you as theoretical economists, but I'm trying to understand whether this is an important discussion from a policy point of view. I'm unpersuaded; persuade me that this is an important discussion.

DR. DEAN: Okay. I'll take a stab at that. First of all, just a point of clarification. The different numbers on the iPod were from two different years. That's why they were slightly different, and there's also a difference between percentage of value added versus percentage of retail price. So there are a couple of reasons why the numbers were different.

COMMISSIONER FIEDLER: They are different.

DR. DEAN: Easy to explain. Well, what I tried to do in my testimony here was to ponder two reasons why I think value-added trade measures are important for policy; why they are significant.

One reason is that in my years in Washington(which were many) it seemed to me that there was a lot of misunderstanding about our trade relations with different countries based on trade balance data. I agree with you, the trade balance data shouldn't be driving things--

COMMISSIONER FIEDLER: I don't think it is.

DR. DEAN: --but many people perceived that this was the measure used to assess our trade policy. We might as well get that right if people are going to pay attention to it. I think it's important that we have those numbers right.

You're correct that you need the world to get on board with this. That's why the new methodology with value-added tries to use the input-output data from many, many countries--linking these data together with trade data across the globe. That's one of the benefits of this new methodology.

Yes, it has issues.

COMMISSIONER FIEDLER: It has reliability questions, and each and every country knocking it off "X" percent, and then pretty soon it's exponential.

DR. DEAN: Well, I think our methodology is actually simpler than it may appear, and in that sense, it may avoid some of the issues that you raise. So I think simplicity has some benefit here. I agree with you on that.

So the second point I was trying to make earlier is that I think we need to understand better how our production is actually interconnected with many nations' production. Since it is, and since it's often sequentially done via many countries taking roles in a supply chain, this really does argue for facilitating more open trade so that this production can be done efficiently and not produce collateral damage--



COMMISSIONER FIEDLER: I actually think everybody understands that the world is complicated now and stuff is produced everywhere. Even the average person understands that intuitively now. So I don't know that from a policy point of view that anybody misunderstands it.

DR. DEAN: Well, perhaps you're right, but I think there is still a lot of room to open global markets, and this is one way for us to help people see why it's important.

COMMISSIONER FIEDLER: Is there a problem between the United States and China in the openness of markets?

DR. DEAN: In some goods, yes.

COMMISSIONER FIEDLER: That we think is driven by a statistical problem here in how we state trade balances?

DR. DEAN: Possibly.

COMMISSIONER FIEDLER: Give me an example.

DR. DEAN: Let me think about it while I turn over the microphone.

DR. WEI: If I could just add, there are certainly policy discussions that are strongly motivated by the kind of a trade balance one reads in the data. There were discussions about, for example, across the board increasing tariffs, discussions about exchange rates. Lots of discussions are certainly colored by one's interpretation of trade balance and others.

So there is certainly a concrete area in which we hear, you know, real officials talking about real policies in that context, potentially the quality of the policy option discussion could be helped by improved understanding about the true trade pictures.

On the point about, data reliabilities, there is more, I think, consensus and agreement on, ways to estimate the value added and what those measures are relative to official data.

The iPhone/iPod were mentioned as examples because these are tangible products one can hold in your hand and one can imagine this. But the actual estimate, the state-of-art of a work in this field goes beyond case studies, goes beyond careful study of products.

COMMISSIONER FIEDLER: Yeah.

DR. WEI: One has to take advantage simultaneously of input/output tables and trade data, as well as input/output tables of other countries to get at this, and therefore the estimates are across the board, by sector, by countries, not just individual product level, and also takes into account indirect sources of trading value added. Therefore, the methodology is not perfect because data, necessary data collection is not perfect yet, and there are, suggestions about improvement in that area as well.

But with the current data, we already have a much better understanding about what the true picture looks like related to what official data suggests. So what I'm saying is this is not a hopeless area.

COMMISSIONER FIEDLER: Thank you. I'm sorry.

DR. XU: Can I?

VICE CHAIRMAN REINSCH: Dr. Xu, briefly.

DR. XU: I agree with Professor Dean and Professor Wei. It's true that I agree with you that even for statistics, sometimes we have to make lots of assumptions to do this analysis. But we have to start from somewhere. Five or,

even five, even three or four years ago, we couldn't do this type of value-added analysis because we don't have this international input/output table that's actually compiled by WTO, by OECD.

So we have, ten years ago, in the '90s, we have this type of case study for global production sharing. At the time, it was T-shirts, and it was toys. We had case studies at that time, but we didn't really have a systematic or comprehensive picture on what's going on in global production sharing.

So now with this international input/output table, we can connect all the trade data with input/output tables so we can have a more complete picture of what's going on for each industry now, not just some products. We do have to make some assumptions in analysis, but unfortunately I don't think the researchers have come up with more accurate way to measure it.

There are technical challenges to really measure the value added analysis 100 percent accurately. That's very unfortunate, but in the ideal world, you can ask firms to report what inputs they get, where they get inputs, what's their value added, but in reality that's not very practical.

COMMISSIONER FIEDLER: That's my point.

DR. XU: So--

VICE CHAIRMAN REINSCH: Yes, thank you.

Commissioner Blumenthal.

COMMISSIONER BLUMENTHAL: Thank you all very much. Fascinating testimony, and like Commissioner Wessel said, something we've been discussing internally for some time.

I think all of us have similar questions in terms of taking it as true that the U.S. remains at the top of the production chain, let's say, in iPods. That's what people seem to have studied. I don't know if there have been studies in other, biomedical or other high-tech areas, but I think we're all still trying to figure out how this does or doesn't relate to the continued sluggish growth in the U.S. and unemployment in the U.S.

I mean is it--obviously I'm far from an economist, but it's very difficult to take those job losses in construction and move everyone into the tablet business. That must be part of it. I think there is any political leader on any side of the spectrum would say, well, the U.S. has to be more innovative and so on and so forth.

But what one can conclude from what you're saying is that more innovative this and more productivity doesn't necessarily lead to job gains. I mean that's not what you're saying, but that's what we're seeing, I suppose. And, again, I'm trying to take another stab at that because we're still at an effective rate of 15 percent unemployment or something like that even though we're at the top on tablets.

And the converse, I guess, if I'm using that word correctly, is when China goes higher up on the supply chain eventually, are they going to start to see higher productivity mean lower employment? Is China going to start to face some of the same issues as they have to shift huge amount of workers from low skilled to tablet making or whatever else it might be?

I mean it's great that we're productive and so on, but why isn't it translating? Why is it seemingly translating into still sluggish growth and still sluggish employment and all the rest of it, and will we see the same in China?

DR. DEAN: Let me at least try and start to answer your question. I think perhaps a different way of asking the question that might shed a bit more light is to ask: if there had been no global production chain type production prior to the financial crisis, would we be better off or worse off?

I would say you don't want to attribute the job loss that we are currently dealing with, which is a vestige of the 2008-2009 enormous global shock, to the presence or absence of global supply chains. In my view, the flexibility introduced and the efficiency introduced by global supply chain production probably means that we have less job loss now than we would have otherwise had, given the same crisis.

I think that you were asking about whether or not moving up the value chain somehow produces less jobs. I don't think so.

COMMISSIONER BLUMENTHAL: From a common sense perspective, I mean the job losses even with this shock, as far as I understand them, you know, and the failure to seek new jobs, is it would require moving a lot of people from one sector and one industry into something completely different that has to do with the new global supply chains and so on.

And so I'm just saying that we haven't seemed to be able to do that at enough of a scale to take advantage of these productivity gains we're seeing from being at the top of the supply chain.

DR. DEAN: Okay. I think I understand your question. I think actually the presence of this kind of production tends to alleviate the problem you're talking about rather than make it worse. In the past, when you had to produce the entire product in the same location, it would be more likely that in order to reemploy people, you would need to shift them to a totally different industry or totally different set of skills.

Now, that's not necessarily the case. There are opportunities for firms to move people that may have lost a job from say a medium skill activity in Industry X to a medium skill activity in Industry Y. You can take the same set of skills and move them to another industry. They don't have to retool. Or you can take people and train them within the same industry to work at a slightly higher skill task.

So there's more flexibility because the tasks in the chain can be done either here or abroad. You don't have such an extreme change. People can actually shift within a sector or within an industry to a different task.

COMMISSIONER BLUMENTHAL: Is part of the problem in the U.S., is it--I mean we're all looking at the iPod, and you all nodded your heads when I'm saying we've looked at other, you've looked at other high-value products, and so on. Is part of the problem just that it's not scaled enough? In other words, we don't have enough innovative industries that would be able to absorb labor?

I mean do we need to create, you know, 25,000 new breakthrough tablets or biomedical or whatever it is? Is that part of the unemployment problem here?

DR. WEI: I mean one way to reflect on this question is to think about the example of another high-income country, so Germany. In spite of the fact that Germany, you know, Europe is in the midst of terrible financial crisis, most numbers, including unemployment numbers, for Germany look not that far from pre-crisis period. So Germany is doing well, and also in this global production

chain pattern, Germany, like the U.S., specializes in the upper end of the production chain, because I think other policies are going in the right direction.

Germany had very vigorous reforms in the 1990s. You know, Germany actually benefits substantially from the fact that it's part of the top of the production chain. Most things that, you know, Eastern European countries and China exports often have to use equipment imported from high-income country, right, so just in this respect, this happened to be the case, Germany is better taking advantage of this than some other countries.

But it's very difficult for U.S. to get all the jobs currently in China back to U.S. We don't really want those jobs. These are low-paying jobs, but it's entirely conceivable whatever Germany is doing and doing well, there's no fundamental reason why Americans cannot do the same thing or do as well or even better. So that's sort of a more comparable example, but Germany is an example of a country that indicates that moving up the scale doesn't imply loss of jobs.

VICE CHAIRMAN REINSCH: Okay. Thank you.  
Commissioner Shea.

CHAIRMAN SHEA: Thank you all for being here. Very interesting testimony.

My questions are basically going to be follow-ups to questions that have already been asked, but I read all three of your testimonies, and I've listened to you all today, and as noted before by Commissioner Wessel, it sounds like you all agree with each other, and I just want to make sure I'm not making an assumption.

Is there anything on which you disagree? I mean I assume you've all heard each other speak today, and maybe you've read each other's testimonies. Are there any differences among the three of you on any of these issues?

DR. WEI: Maybe, I mean certainly we have--I think broadly probably we do agree. In terms of discrepancies between us--

CHAIRMAN SHEA: I'm just trying to get--

DR. WEI: But there may be differences in terms of estimation of how one gets at those numbers. I, you know, there are studies. We mentioned iPods/iPhones. My personal bias is that there's a limitation to case studies and looking at products and so on.

Not only is it difficult to generalize, but just as important, even if you look at iPhone/iPad things, it's different--when an input is bought from a foreign supplier, the foreign supplier could use value added from your country. The converse is also true. When I buy something, as a firm, if I buy something from local producers, it's also possible that local producers used some of the imported inputs. So one needs a much systematic way to do this.

CHAIRMAN SHEA: Okay.

DR. WEI: Input/output kind of things allow one to do this. That's a difference in methodologies.

CHAIRMAN SHEA: Okay. So the reason why say the United States government has not adopted the value-added approach, what is the reason why the United States government has not adopted the value-added approach? And in your conversations with other economists who may disagree with you, what do they say is the source of disagreement?

Or maybe nobody disagrees with you. But I assume you have interactions with other economists on these issues, and do they raise--I'm asking you to point out the problems with your analysis. I may be putting you in an uncomfortable situation, unfair--

DR. WEI: No, no. I can start with my perception about where is the consensus--

CHAIRMAN SHEA: Sure.

DR. WEI: --where is the disagreement.

CHAIRMAN SHEA: Right.

DR. WEI: I think there is a virtual consensus on the shortcomings associated with official trade statistics for the questions we've talked about. There's a virtual consensus on the need to get at the value-added trade for a broad range of questions.

There's less agreement on the most cost-effective way and where to look for the way to improve existing data so that that will facilitate computation of trade in value-added. And there are several parallel cultures right now being pursued by WTO, World Bank and OECD and other organizations.

But I think there's a broad agreement that that's the direction we want to go to. National statistical agencies for very good reasons generally want to look carefully about, you know, can you afford additional change, what needs to be done, and so on. But I think in terms of the broad direction, there's less agreement, less disagreement.

And so far, there are several agencies, as well as academics, that are working together to try to identify relatively cost-effective ways and to look for international cooperation so that national agencies by adding small number of additional items in their data collection agencies can facilitate more accurate computation of value added. I think there's more agreement than disagreement in this topic.

CHAIRMAN SHEA: Okay. Maybe I'm going to venture into territory that's going to get me into trouble because I'm not an economist by any stretch of the imagination. But we talked about numbers being important, statistics being important. As a veteran of a political campaign, statistics are used in political campaigns, and simple statistics are used to make policy or as the basis for making policy.

This notion that trade deficits don't matter, it's my understanding one important statistic that we commonly throw around and talk about is the Gross Domestic Product, GDP, and, as I understand it, one approach or the predominant approach of measuring GDP is the sum of consumption, investment, government spending and net exports, which suggests that trade deficits do matter if GDP is being calculated using the notion of net exports.

I was wondering if you could respond to that?

DR. DEAN: Sure. Actually, that's probably a shortcoming of most of our textbooks that write it that way as well. Typically, the GDP calculation, the net export difference should be the current account. In other words, it should include exports of goods and services, imports of goods and services, as well as grants and transfers. These are the components of the current account. That's what's normally put in there.

However, trade balance literally is just the exports and imports of goods. So it misses out a whole bunch of important trade, especially for the United States that has always been strong in services trade.

CHAIRMAN SHEA: So when we talk about GDP, when the U.S. Department of Commerce releases GDP statistics, I assume, are they talking about just the broader current account? Is the calculation using the broader figure as opposed to the narrower figure?

DR. DEAN: Yes. In other words, in the GDP calculation, exports would include exports of goods and services, for example. In the trade balance data, services are omitted. Yes.

CHAIRMAN SHEA: Okay.

DR. DEAN: Yes.

DR. WEI: Also, in terms of effect of net trade on GDP, one has to make a distinction between effect on demand versus effect on supply. Why the definition of GDP includes trade balance. In the Keynesian way of thinking about the world, one thinks cutting down trade deficit would promote demand for GDP. To the extent the economy is constrained by demand, this could be helpful, but over long run, GDP growth is almost always driven by productivities.

In that sense, the trade balance, change in trade balance would not directly, would not affect the long-run GDP growth so this distinction is important to bear in mind.

VICE CHAIRMAN REINSCH: Thank you.

Commissioner Bartholomew.

COMMISSIONER BARTHOLOMEW: Thanks very much, and thank you to all of our witnesses. I also want to thank you for your patience and good humor with the questions that we are asking. I suspect you were asked to address a fairly narrow set of questions, and we obviously have some broader issues on our minds. So the fault in terms of preparation lies with us, not with any of you.

Dr. Dean, in particular, but for any of you, you talk about openness in markets, and I think what I'm trying to understand is what would be compelling in a shift to this value-added analysis that would argue for China to open its markets because its markets are significantly more closed than our markets are? So how would that play out? If there is a shift, how does that argue to China that it should be opening its markets?

DR. DEAN: That's a good question and one, one that I have not thought about explicitly. In Chinese processing trade (as the Chinese call it), as Professor Wei pointed out, imports used in global supply chain production in China are actually duty free. So China has an incentive on the import side clearly to keep the flow of imports coming in so that they can be used to produce final products at the other end. So actually China's imported intermediates market is quite open.

I agree with you that there needs to be more progress on their imports of final goods. There has been quite a bit of progress in the last decade. China really has brought down a lot of its barriers, but there is still a longer way to go.

I think one way to think about it is this. China's participation is so vast in this kind of production that it really is contributing a lot to its overall

income. Given that its income is rising, China's local markets will be demanding many more final goods than they could before. That's definitely an incentive to keep the market for final goods open as well. This would certainly allow in more exports from all of the OECD countries and other developing countries, as well.

COMMISSIONER BARTHOLOMEW: Right. But those incentives are there irrespective of how you do this analysis, if I'm hearing you correctly.

DR. DEAN: Yes. I guess what I'm saying is the incentives are there because of China's participation in the kind of global supply chain trade we're describing. What we're trying to say here I think is that the value-added measures can help us see that global supply chain much better than we can with conventional statistics.

COMMISSIONER BARTHOLOMEW: Dr. Wei or Dr. Xu, any thoughts on this?

DR. WEI: China is a major participant of the global production chains. It knows it. It certainly benefits from this. The global production chain picture implies that any given irritant or sand in this wheel has a multiplying effect on overall costs. And therefore it is in China's interests for that reason to also keep barriers as low as possible because it facilitates the overall cost of production. I think that the direction there is clear.

But because this value-added trade analysis does not change the overall current account surplus or deficit picture this is not so much about what we do with the overall deficit or trade. So it's more about what does this imply in terms of what kind of sectors we need to participate in the production chains more beneficially.

DR. XU: I agree with Dr. Wei. China has been pretty open to their domestic market to foreign firms, but in the past several years, we heard from members that there is a trend that seems like the government tried to promote indigenous innovation.

For some industries, there is a sense of protection and trying to nurture the domestic innovation. It's especially obvious in those industries dominated by state-owned enterprises, especially in telecommunications, finance, some strategic industries defined by the central government.

But I think in the future, I don't personally agree with that type of strategy. I don't think a state-owned enterprise is going to be as efficient as a private firm. I think it's not just the challenge for foreign firms; it's a challenge for China's domestic private firms as well.

In the future, I think that should be the direction, to free those industries, to let them compete in the market instead of control by state-owned enterprises, but it's a challenge, not just for foreign firms.

COMMISSIONER BARTHOLOMEW: Right.

DR. XU: For China's domestic firms as well.

COMMISSIONER BARTHOLOMEW: So the policy prescription is that China should be opening its markets regardless of whether we do value-added analysis or any other one. I think what I'm trying to see is what you guys are talking about is a very, it's an analytical tool, but I'm having difficulty seeing it as something that gets translated into policy that addresses the very questions that we're having.

I mean it is an analytical tool, but the need for China to open its markets is there whether we do value-added analysis or not.

DR. WEI: I think I was not saying that. I would say depending on the policies, there are certain policies whose evaluation will be very much altered by this, and other policies for which this is not the relevant tool that will alter understanding.

So going back to the example of exchange rate, exchange rate reform is very important for China. Greater flexibility could help China, which turned out to be more beneficial to relatively disadvantaged part of the society so it's a very important thing to do.

But in terms of changing Chinese bilateral balance or even multilateral balance, the fact that a lot of imported inputs are into the production, both for people in China and in the U.S., should make one realize that it would not have as big an effect on bilateral trade balance as otherwise would be the case. That's certainly relevant for the policy discussion, for that particular policy discussion, so therefore this is a tool that has more implications for some policies and less for others.

VICE CHAIRMAN REINSCH: Okay. Thank you.

COMMISSIONER BARTHOLOMEW: Thank you.

VICE CHAIRMAN REINSCH: We've had two Commissioners request another round. I think we'll have time for an abbreviated second round. I did want to weigh in briefly because I haven't so far.

This has been really cool, and I thank you for this. I think to follow on what Commissioner Bartholomew just said, it is about an analytical tool. I think Dr. Wei is right. I think there is a consensus amongst economists over the merits of this approach and the deficiencies of the current approach. That doesn't necessarily lead to policy implications.

And I also think there may be a consensus amongst economists. I don't think there is a consensus among politicians and other observers, and you saw some of that reflected here today. It seemed to me this would be a useful panel to start that debate going in a non-economic environment to get politicians, or political people, people who function in other venues, to start thinking about this question.

I'm particularly happy at the questions that Commissioner Fiedler and Commissioner Shea asked because they're also relevant. This is a useful academic discussion of which is a more realistic way to count, but at the end of the day, if nobody wants to count this way, it doesn't really matter. You know, if the world continues to compile statistics the conventional way, you all can continue to write monographs, but policymakers are not going to be better informed than they are now.

And one of the questions I had, --which I think Dr. Wei alluded to briefly, but maybe you can put a slightly finer point on it--was what is the likelihood that there's going to be an evolution in national statistical agencies or are nations beginning to count their current account balances based on a value-added methodology?

We, in a way, are disadvantaged. We are one of the few countries in the world that doesn't have a value-added tax. So we don't do a lot of value-added calculation domestically for other purposes. Most countries do. It's a



familiar concept with them. Yet, nobody has adopted this methodology, and I suspect nobody will unless they all decide to leap together.

Otherwise, you're going to have a very confused statistical framework in which some countries calculate their deficit one way, and other countries calculate their deficit a different way, in which case we would all be confused.

What is the likelihood that, five, ten years down the road, globally, we're going to convert to a value-added methodology?

DR. WEI: I would, if I could start, make two comments. One, why U.S. does not have value-added tax. Well, sales tax is a form of value-added tax, but GDP is a value-added concept. The GDP is sum of value-added in various things. So therefore U.S. routinely does value-added computation.

Moreover, I'm more optimistic. Given that there's an increasing consensus that the existing data is misleading for many policy questions, one would have to move towards a different system, at least improvement over existing system. But, like any policy change, it won't happen overnight. You know, GDP accounting was introduced I think it was in the '40s or something, but the recognition that the old way of counting output was inadequate took place much earlier than that.

And certainly, you know, all of the--what we are used to, how they are counted today, didn't start that way in 1776; right. So, therefore, I think what this reflects is that for the society as a whole, we are in relatively early stage of learning process, and also most national data collection agencies are also cash constrained. So, therefore, there is need for more understanding and need for opportune time when improvement can be adopted.

VICE CHAIRMAN REINSCH: Well, I think, I appreciate that. I think what this means is I'm going to be dead before this happens.

[Laughter.]

VICE CHAIRMAN REINSCH: But those of you that are younger are not. Or intellectually it may already have happened.

COMMISSIONER FIEDLER: That's not a value added equation.

[Laughter.]

VICE CHAIRMAN REINSCH: Any way, Commissioner Wessel and Commissioner Wortzel each asked for one round. If you can confine yourselves just to a couple of minutes each, then we'll be fine.

Commissioner Wessel.

COMMISSIONER WESSEL: I will do that, and I also want to apologize both to the panel as well as to our two co-chairs if--my frustration about this is number one, and they both asked my input on other panelists. There are not many economists who are looking at this issue from defending the traditional approach.

My concern is putting what you're saying in context, which is what I tried to raise. There are some, I think, Susan Houseman and Michael Mandel are looking at this from, only from a bilateral sense. I don't know whether you've looked at their work regarding the question of the impact of imports on our domestic manufacturing base.

So, for example, since our consumption is measured in dollars, if a U.S. company produced an item for a dollar, and then the import comes in at 50

cents a product, there is twice as much coming in, which will displace more jobs, not necessarily one for one in their calculations. But the statistical concerns, the importance of the economic analysis is not limited to the question of how much value is an iPad or an iPod or anything else, but for us and for the people we report to, Congress, the issue is what are its implications for policy?

So I want to apologize if I was trying to impugn what you're doing. In fact, your research is very important looking at this long term. So, number one.

But number two, I'd like to get also the issue that's been raised about where this is going. The WTO is now involved in a measurement exercise, as far as I understand it. They've, in fact, asked for papers. They're working with their membership. So this is not confined to the work of you three economists. The WTO is looking at, as are other agencies, about how do we evaluate the gains from trade, the cost of trade, efficiencies, everything else?

So this does have big implications, and I would simply urge you, if you can help us, since you, I assume, are members of all the associations, et cetera, both to help us understand how others are looking at your information. I think Commissioner Shea said does any--do you disagree with each other? Are there others who look at this data differently that we should be aware of, number one?

And number two, you talked about the data and how the data has improved, working with the White House, vis-a-vis trade negotiations we've been trying to understand our trade data better. My understanding, for example, is you cannot harmonize UNCTAD data versus our current statistical data because the relationship of the HTS codes is off so that you can't necessarily look at multilateral trade with great confidence because the designation of the products is different.

So not for today, but if you could provide us some guidance on what recommendations you would have for how do we do a better job understanding this data; are there things we should be doing to simply, before we go to the overall question of what the methodology is, are we well-served by the data that we have?

VICE CHAIRMAN REINSCH: The answer to that question is yes. You will provide; yes?

COMMISSIONER WESSEL: No, I--

VICE CHAIRMAN REINSCH: Yes?

COMMISSIONER WESSEL: Yes, that's what I meant.

VICE CHAIRMAN REINSCH: Good.

COMMISSIONER WESSEL: Yes.

VICE CHAIRMAN REINSCH: Commissioner Wortzel.

COMMISSIONER WORTZEL: Well, I'm still left with kind of a big "so what?" I mean I don't understand the policy implications of this. So if you can, briefly, in terms of taxation and tax policy here in the United States and other countries, in terms of tariffs and duties, in terms of WTO rules and international trade agreements, if you went to a value-added approach, what policies, regulations and measures would have to change and how would that affect existing trade agreements?

DR. DEAN: Let me give you one example. I promised I would think of examples. I've come up with one. A few years ago (something I noted in my testimony) there was a big flurry of concern over countries like China because they were exporting very high-tech things that looked like goods the OECD trades--the United States, Europe, et cetera.

This was perceived as evidence that China might be using some kind of unfair trade policy, because they were leapfrogging into these very sophisticated products which they don't have a comparative advantage.

So the perception was unfair trade, and there was discussion of what to do about it? What kind of policy response should we have to stop this kind of unfair trade? Here's where the value-added measure helps because it revealed that there was no odd unfair trade policy appearing here. This really is OECD or industrial country trade embodied in Chinese goods, but through the global chain. So value-added trade measures shed a whole different light on that issue. They allowed us to be able to see, that these looked like products from the U.S. and Europe because much of them were. They were products from the U.S. and Europe, but this was not visible in the conventional trade data otherwise. I hope that's helpful.

COMMISSIONER WORTZEL: Yeah, that's very helpful. Thank you.

DR. DEAN: Okay.

VICE CHAIRMAN REINSCH: That does, of course, leave the question of the significance of the technology that's been transferred, but that's a topic for a different panel and a different day.

All right. Thank you very much. We've gone a little bit over time. Thank you to this panel. This was really cool.

We'll take a five minute break, if that's okay with Mr. Slane, and then we'll start the next panel.

Thank you.

[Whereupon, a short recess was taken.]

**OPENING STATEMENT OF COMMISSIONER DANIEL SLANE  
HEARING CO-CHAIR**

HEARING CO-CHAIR SLANE: We're back in session for the second panel. Our second panel's discussion will bring to light some of the challenges faced by companies doing business in China in the realm of enforcement.

Our panelists will give their personal experiences and answer questions to lend insight to the Commission on the broader issues facing all U.S. companies investing or doing business in China.

Our first panelist is Michael McCarthy, Chief Legal and Administrative Officer for Infinera Corporation. Infinera is a company invested in China in the technology and telecommunications field. They own very valuable exclusive intellectual property in the area of digital optical networking and opened their first Chinese office in Beijing in 2008.

Next, we'll hear the experience of James Fellowes, Chairman and CEO for Fellowes Company, a major U.S. office products manufacturer. Fellowes expanded into China beginning with a deal in 1998, which eventually led to a deal with Jiangsu Manufacturing involving a major technology transfer to enable the Chinese facilities to produce Fellowes top-of-the-line shredders.

This included nearly ten million of research and development product, exclusive intellectual property, and the culmination of decades of trade secret developments.

Finally, we will hear from Ahmed Siddiqui, developer for and CEO of Go Go Mongo!. Mr. Siddiqui is a tech entrepreneur with a focus in educational gaming for children. His first game, Go Go Mongo! features a chubby monster named Mongo that loves to eat sugary foods. Children need to teach Mongo how to eat healthier through a fun and engaging game available globally on the Apple iTunes App Store.

Ahmed also coordinates Startup Weekend Events for the San Francisco Bay Area encouraging first-time entrepreneurs.

Welcome to all three of you. Thank you for coming, and we'll start with Mr. McCarthy.

**PANEL II - TRADE ENFORCEMENT CHALLENGES****OPENING STATEMENT OF MICHAEL McCARTHY  
CHIEF LEGAL COUNSEL, INFINERA CORPORATION**

MR. McCARTHY: Good morning. First, I would like to thank the Committee for giving me the opportunity to share some of the observations and experiences of my company, Infinera Corporation, on the topic of the evolving U.S.-China trade relationship.

I would note that I have a few more pages so I'll try and move quickly to get through my material in the seven minutes that's been allotted. I've been with Infinera for almost a decade. I would like to provide you with some of the information on the optical communications market and the threat to this market and to U.S. innovation generally posed by the concerted efforts of the Chinese government and Chinese optical equipment vendors.

I'll briefly spend a couple minutes talking about optical communications and who is Infinera. Then I'll move into the heart of the discussion.

Optical networks have come to represent one of the core elements of our modern infrastructure. These networks provide the backbone for the information highway that connects people and systems together and transports the many trillions of bits of information that we use each day.

Optical networking equipment carries digital information using light waves over fiber optic networks. The advent of wave division multiplexing, or WDM, has enabled the transmission of large amounts of data by using multiple colors of wavelengths of light over a single optical fiber.

Service providers use optical networks to carry most types of data, from conventional long distance telephone calls, to e-mails and Web sessions, to high definition video streaming, and to applications that are served on the mobile service.

As service traffic grows, service providers add transmission capacity to existing optical networks or purchase and deploy additional systems to keep pace with the capacity requirements and service expansion.

As mentioned, Infinera is a U.S.-based company that was founded in Sunnyvale, California, with the vision of increasing the functionality and improving the economics of optical transmission systems. Infinera raised over \$300 million as a private company and has been publicly traded since 2007. We employ over 1,200 people globally, a majority of which are in Silicon Valley.

We provide our optical networking systems, software and services to a variety of service providers around the globe, including to regional and national service providers, Internet content providers, cable operators and subsea network operators.

In the optical transport business, our key competitors include U.S.-based Ciena Corporation, European-based Alcatel-Lucent Corporation, Ericsson Corporation and Nokia Siemens, and Chinese-based Huawei Technologies and ZTE Corporation. There are a number of other competitors in the market, but these are the largest of the competitors.

Many of our customers are large communications providers that have substantial purchasing power and leverage to negotiate contractual arrangements with the suppliers or the optical vendors. As a result, as you can imagine, competition in the optical transport business is intense, and historically market share gains were seen by companies such as Nortel and Ciena that were able to capitalize on technology innovation to gain market share.

However, over the last few years, we've seen enormous market share gains by Huawei and ZTE. In particular, ZTE's annual revenues have more than tripled from 2006 to 2011, growing to \$204 billion RMB. I'm sorry. That's Huawei's. ZTE's annual sales revenues have also more than tripled, rising to \$86 billion RMB.

In 2011, Huawei overtook Alcatel-Lucent to become the top optical network equipment vendor in the world. During this period, ZTE became the world's fourth-largest optical vendor.

What is important to note about the exponential growth of market share gains realized by both ZTE and Huawei is that they were not tied to any unique technology development. Rather, they were largely the result of three factors. The first was extremely aggressive and, in some cases, illegal business practices by the Chinese vendors. Second was aggressive pricing that was often coupled with vendor financing for the products. And the third was the policies and practices of the Chinese government, which provided massive financial support for the Chinese vendors while closing the Chinese market to foreign vendors.

Let me spend a few minutes providing you with more details on these components of the Chinese government support. First, the Chinese government has stated that its plan is to provide strong support for the Chinese optical vendors. As noted by this Commission in its 2011 report, Huawei has been designated as a national champion. China has designated its telecom sector as a strategic industry and has spent significant resources to promote national champions with the aim of growing this industry by 35 percent a year between now and 2015.

Second, the Chinese government has closed China to non-Chinese optical vendors. In most countries, telecom service providers are independent entities that make their own decisions regarding procurement. In China, however, the big three, China Mobile, China Telecom and China Unicom, are all state-owned enterprises. There are numerous reports indicating that procurement by the Chinese telecom operators has been a major factor fueling the success of Huawei and ZTE and their ability to finance their resource and development and to penetrate foreign markets.

The three Chinese telecom companies spent nearly 400 billion RMB on capital expenditures in 2009 and domestic equipment manufacturers are the dominant suppliers to these markets. In fact, in 2011, Huawei and ZTE dominated the Chinese optical transport market and accounted for over 90 percent of all optical transport products sold in China.

A small percentage of business that remained was allocated to foreign vendors like Alcatel-Lucent that had made significant investments in China, namely, through the purchase of Shanghai Bell.

Third, the Chinese optical vendors are provided with significant export credits. China is the leading provider of export credits, and Huawei and ZTE have been major beneficiaries of this generous export support.

For example, in 2009, Huawei received a \$30 billion U.S. line of credit from the China Development Bank. Huawei describes the credit line as an export buyer's credit that is financing available to Huawei for overseas customers to finance the purchase of equipment from Huawei. The terms are not public but are reported to be extremely favorable.

Similarly, in 2009, ZTE secured a line of credit from the China Export-Import Bank totaling 10 billion U.S. and a line of credit from the China Development Bank of 15 billion U.S.

While ZTE reports that the interest rates on loans to these banks range from three to four percent, it is likely that the loans have the same favorable deferred payment terms that Huawei loans are reported to have.

Finally, state-owned China banks have also supported ZTE and Huawei by conditioning loan packages to foreign telecom operators on the procurement of Chinese equipment. In 2010, for example, Indian mobile Reliance Communications secured a 1.1 billion U.S. line of financing from a consortium of state-owned banks. The loans which were provided over a seven-year term of five percent required Rcom to use 600 million of financing to acquire network equipment from ZTE and Huawei.

Let me spend a minute or 32 seconds discussing some of the examples of the trade tactics of Huawei and ZTE that we've observed. As I mentioned above, over the last several years, we've seen Huawei and ZTE targeting strategic accounts through a combination of vendor financing typically in the form of three-year financing and extremely aggressive prices.

Huawei's practice of engaging any means necessary to win business has often been coupled with other activities. For example, recently, both Huawei and ZTE have been found guilty of money laundering and paying bribes to obtain business with Algeria Telecom. As a result of these activities, alleged to have occurred over a three-year period, three Chinese company officials were sentenced in absentia to ten years in jail, and Huawei and ZTE were banned from participating in public contracts in Algeria.

We've also seen some recent examples, for example, in 2010, Huawei won a large European carrier's nationwide optical network with a projected value of several tens of millions of euros with a bid that we understand was less than 100 euros.

Similarly, in another projected multi-million dollar optical network bid with another European customer, Huawei won the business with a final bid of ten cents. We understand that ZTE wound up second and was displeased with its bid of \$1. Apparently, they couldn't figure out how to bid a fraction of a dollar.

Finally, we note Huawei's concern about the market shares that Infinera has demonstrated over the last couple years, and recently approached one of our customers. Their sales pitch to this customer was to offer 25 percent less than whatever Infinera was offering. This was done without them seeing the bill of material for the network. Their approach appears to indicate that neither cost nor price matters as long as they win market share.

ZTE has taken similar approach where they have won a recent European carrier's projected multi-million dollar nationwide build-out with a bid of one euro, and in another example, ZTE was able to win another nationwide optical network build-out with free equipment and five years of free support.

Since I'm running over, let me skip to the conclusion. The rapid growth of China's optical equipment suppliers fueled by protectionist government policies at home poses a threat to our national security and to American innovation and job creation. I would note the approach taken by Australia and Germany, both of which countries have banned ZTE even though Australia is China's biggest trading partner.

Australia, in fact, said that there was no doubt that Huawei partnered with Chinese espionage services, and that was the reason for the ban.

China's intentions are clear. They've announced their intention to intensify government support for the optical networking industry and to make their national champions world market leaders.

Our response must be equally clear to ensure that the competition in this vital sector is not based on which government is willing to lavish the most aid to their producers, but rather on the quality of the products and the strength of the innovation and productivity of its workers.

Thank you.



**PREPARED STATEMENT OF MICHAEL McCARTHY  
CHIEF LEGAL COUNSEL, INFINERA CORPORATION**

**BACKGROUND MATERIAL FOR US-CHINA  
ECONOMIC AND SECURITY REVIEW COMMISSION  
JUNE 6, 2012**

**For Testimony by:  
Michael O. McCarthy  
Chief Legal & Administrative Officer  
Infinera Corporation  
169 Java Drive  
Sunnyvale, CA**

**OUTLINE OF PRESENTATION**

- A. Background**
  - what is optical communications?
  - who is Infinera?
  
- B. Who Are Huawei and ZTE; how are they supported by the Chinese Government**
  - China's Closed Telecommunications Equipment Market
  - State Funding through Low-Cost Loans and Insurance
  - Other Chinese Government Subsidies to Huawei and ZTE
  
- C. What is the Impact of the rise of these Government Supported Entities?**
  - impact to US Economy and Optical Industry
  - security risks
  
- D. Concluding Remarks**

## A. BACKGROUND

### What is Optical Communications?

Optical networks have come to represent one of the core elements for our modern infrastructure. These networks provide the backbone for the information highway that connects people and systems together and transport the many trillions of bits of information that we use each day.

Optical networking equipment carries digital information using light waves over fiber optic networks. The advent of wavelength division multiplexing (“WDM”) systems has enabled the transmission of larger amounts of data by using multiple colors or wavelengths of light over a single optical fiber. Service Providers often use WDM systems to carry communications traffic between cities, referred to as long-haul networks, and within large metropolitan areas, referred to as metro networks. Optical networks are generally capable of carrying most types of communications traffic, from conventional long-distance telephone calls to e-mails and web sessions to high-definition video streaming. As service traffic grows, Service Providers add transmission capacity to existing optical networks or purchase and deploy additional systems to keep pace with capacity requirements and service expansion.

### Who is Infinera?

Infinera is a US based company was founded in Sunnyvale California in 2001 with a vision of increasing the functionality and improving the economics of optical transport systems. Infinera has been a publicly-traded company since 2007 and employs approximately 1,200 people globally, most of them in Silicon Valley. Infinera also has facilities in Allentown, Pennsylvania Annapolis Junction, Maryland and overseas.

Infinera provides optical networking equipment, software and services to a variety of service providers, including regional and national services providers, internet content providers, cable operators and subsea network operators across the globe.

Infinera manufactures what we believe to be the world’s only commercially-deployed, large scale Photonic Integrated Circuits or “PICs”. Our current generation of PICs transmit and receive 100 billion bits per second of optical transmission capacity and incorporate the functionality of over 60 discrete optical functions into a pair of chips approximately the size of a fingernail. Our next generation PICs will transmit 500 Gigabits of optical transmission capacity and incorporate over 600 discrete optical functions into a pair of chips.

Similar to the way in which silicon integrated circuits changed the dynamics of the computing industry by increasing computing performance and reliability while reducing physical size, power consumption and heat dissipation, we believe that Infinera’s PICs have changed the dynamics of the optical network industry by increasing optical performance and reliability while reducing physical size, power consumption and heat dissipation. We fabricate our PICs in California and develop the hardware and software that together comprises our optical network platforms that we sell to our customers.

## B. WHO ARE HUAWEI AND ZTE; HOW ARE THEY SUPPORTED BY THE CHINESE GOVERNMENT

China has designated its telecommunications sector as a “strategic industry,” and it is expending significant resources to promote “national champions” in the industry both at home and abroad. The 12<sup>th</sup> Five-Year Plan approved by the Government of China in March of 2011 also identifies next generation information technology as one of seven “strategic and emerging industries” for priority government support.<sup>1</sup> The GOC aims for these seven industries to grow from their current output of 3 percent of GDP

---

<sup>1</sup> People’s Republic of China, *Twelfth Five-Year Plan for National Economic and Social Development* (March 14,

to 8 percent in 2015 and 15 percent in 2020, a plan that would require the industries to grow by 35 percent each year between now and 2015.<sup>2</sup> By 2030, China’s goal is to be a global leader in each of the seven industries.<sup>3</sup>

To reach this goal, China is reportedly aiming to invest \$1.5 trillion in the seven industries over the next five years.<sup>4</sup> The Government aims to intensify government support for the industries through the establishment of special development funds, preferential tax policies, and the provision of increased credit support.<sup>5</sup> While the Government aims to aggressively expand the dissemination of information technology within China as part of the 12<sup>th</sup> Five-Year Plan, allocating a reported RMB 2 trillion (over \$300 billion) in developing the country’s telecommunications infrastructure over the plan period,<sup>6</sup> it is also focused on expanding the international presence of key firms in the sector. One of the key goals of the 12<sup>th</sup> Five-Year Plan is to support the “multinational operations” of enterprises in the seven strategic industries, to be achieved by “[i]mproving export credit, insurance, and related policies, [and] actively giving support to the exploration of international markets for key products, technologies, and services from the emerging industries of strategic importance together with outbound aid ....”<sup>7</sup>

This aggressive program over the twelfth five-year plan period builds on many years of government support for the telecommunications equipment industry. In 2008, the Government of China included telecommunications infrastructure improvements as one of three megaprojects that cumulatively received RMB 27 billion of the central government’s stimulus funds in order to “accelerate” the projects’ progress.<sup>8</sup> In 2009, the State Council issued an Electronic Information Industry Restructuring and Revitalization Plan as part of its stimulus policies responding to the global recession.<sup>9</sup> The plan aimed to nurture backbone enterprises in the industry and to “intensify fiscal, taxation, and financial supporting policies” for the industry.<sup>10</sup> The policy also called for increased governmental support through state-owned bank financing and credits at “preferential rates” from the China Export-Import Bank.<sup>11</sup> The policy also called for increases in export tax rebates and more use of export credit insurance by the industry.<sup>12</sup>

---

2011), Chapter Ten.

<sup>2</sup> *Emerging Strategic Industries: Aggressive Growth Targets*, China Strategy, HSBC Global Research (October 19, 2010).

<sup>3</sup> *Id.*

<sup>4</sup> “More Loans for Key Industries,” china.org.cn (March 7, 2011).

<sup>5</sup> People’s Republic of China, *Twelfth Five-Year Plan for National Economic and Social Development* (March 14, 2011), Chapter Ten. See also *Decision of the State Council on Accelerating the Fostering and Development of Emerging Industries of Strategic Importance* (October 10, 2010) at Section VII (I) – (III).

<sup>6</sup> People’s Republic of China, *Twelfth Five-Year Plan for National Economic and Social Development* (March 14, 2011), Chapter Thirteen. See also “China Telecom to Build World’s Largest Fiber Optic Network,” People’s Daily Online (March 2, 2011).

<sup>7</sup> *Decision of the State Council on Accelerating the Fostering and Development of Emerging Industries of Strategic Importance* (October 10, 2010) at Section VII (I) – (III).

<sup>8</sup> Micah Springut, et al., *China’s Program for Science and Technology Modernization: Implications for American Competitiveness*, prepared by CENTRA Technology, Inc. for the U.S.-China Economic and Security Review Commission, 44 (January 2011).

<sup>9</sup> State Council, *Electronic Information Industry Restructuring and Revitalization Plan* (April 15, 2009).

<sup>10</sup> *Id.* at II.B.

<sup>11</sup> *Id.* at IV.D.

<sup>12</sup> *Id.* at IV.F.

China has also included many telecommunications products in its *2006 Catalogue of Chinese High-Tech Products*, its *2006 Catalogue of Chinese High-Tech Products for Export*, and its list of “encouraged” projects in the 2011 *Directory Catalogue on Readjustment of Industrial Structure*. Inclusion on these lists comes with a number of benefits for firms that manufacture the items, including preferential tax rates, low-interest loans from state-owned banks, and subsidized export credit insurance. Examples of the telecommunications equipment listed in the catalogues include optical network routers, switches, concentrators, and base stations, wavelength division multiplexers, and other network equipment, including network equipment based on the TD-SCDMA standard.

China’s top telecommunications equipment manufacturers, led by Huawei Technologies and ZTE Corporation, have grown exponentially as a result of this aggressive government support. As noted by the Commission in its 2011 report on the national security implications of the growth of these firms, Huawei has been designated as a national champion by the Government of China despite its insistence that it is a private firm that is independent of the state.<sup>13</sup> The Government of China has protected and promoted these firms by requiring its state-owned telecom monopoly to discriminate in favor of domestic equipment suppliers and their domestic technology – as funds to expand domestic telecommunications infrastructure increases, so do the enormous advantages domestic equipment suppliers enjoy. With this solid foundation in the domestic market, the Government of China has targeted the firms with aggressive support to expand internationally, including through the provision of massive amounts of export credits and export credit insurance. Finally, the firms enjoy a wide array of other government benefits, including preferential tax treatment, government grants, and other forms of support. The following three sections provide more details on these components of China’s support for Huawei and ZTE.

### **1. China’s Closed Telecommunications Equipment Market**

The government is the owner, operator, and regulator of the telecommunications sector in China, and decisions regarding the procurement of telecommunications equipment are made accordingly. The three big telecommunications operators in China – China Mobile, China Telecom, and China Unicom – are all state-owned enterprises (“SOEs”). While SOEs would theoretically not be bound by the domestic preferences in China’s government procurement law, there are reports that the big three are nonetheless encouraged or required to purchase domestic equipment where possible.

The U.S. Trade Representative reports that the Ministry of Industry and Information Technology (“MIIT”), which regulates the big three telecom operators, “reportedly has still not rescinded an internal circular issued in 1998 instructing telecommunications companies to buy components and equipment from domestic sources.”<sup>14</sup> This is confirmed by independent industry sources. The Telecommunications Industry Association reports that, in some procurements by the big three, “companies are ignoring published criteria for bid evaluation, resulting in the selection of ‘national’ champions.”<sup>15</sup> An investment advisory on China’s telecom market states that MIIT “has encouraged Chinese operators to purchase telecommunications equipment from Chinese manufacturers, including leading suppliers such as Huawei, ZTE, Datang and Great Dragon.”<sup>16</sup> A 2005 article notes that “Restrictive and confusing policies toward foreign manufacturers, in the form of foreign ownership and percentage of local components when bidding for major tenders, also ensured that local firms like Huawei and ZTE ... continued to dominate the local telecommunications equipment market.”

<sup>13</sup> *The National Security Implications of Investments and Products from the People’s Republic of China in the Telecommunications Sector*, U.S.-China Economic and Security Review Commission Staff Report (Jan. 2011) at 11.

<sup>14</sup> U.S. Trade Representative, *2012 National Trade Estimate Report on Foreign Trade Barriers* (2012) at 69.

<sup>15</sup> Telecommunications Industry Association Comments on the U.S. Trade Representative’s 2011 Section 1377 report (Dec. 17, 2010) at 3.

<sup>16</sup> The JIJ Group, “China Telecom Market: Opportunities for Foreign Investors.”

Inclusion of optical network equipment in the list of high-tech products eligible for designation as indigenous innovation products creates another mandate for telecom operators to give preference for domestic equipment, as China has aggressively pushed for a focus on indigenous innovation products in its policies to expand and upgrade its domestic telecommunications infrastructure. When China consolidated its telecommunications operators into the big three state-owned companies in 2008, it declared that one of the two central aspects of reform of the telecom sector is “adherence to indigenous innovation,” with goals that include realizing “scale application of indigenous innovation results, continuous development of follow-up technologies, [and] significant improvement of indigenous innovation capability.”<sup>17</sup> In particular, the notice “encourages relevant departments, enterprises, and institutions to give priority to indigenously innovated products,” and “state-owned assets management departments shall use indigenous innovation as a key criterion in assessing telecom operators.”<sup>18</sup> Finally, the notice directs financial institutions to increase support for indigenous innovation and directs relevant government departments to “use concessional loans, free aid, and other export policies to promote the international development of indigenously innovated products.”<sup>19</sup> The Electronic Information Industry Restructuring and Revitalization Plan issued by the State Council in 2009 also seeks to enhance and accelerate indigenous innovation, calling for the “systemic application” of indigenously innovated products, and directing the industry to “strengthen the interaction between equipment manufacturing enterprises and telecommunication operators” and to “spur the development of the communications equipment industry through large-scale application.”<sup>20</sup>

In 2009, the Government of China included MSTP optical transmission systems, SDH optical fiber transmission systems, and optical wavelength division multiplexers among the list of products eligible to apply for accreditation as indigenous innovation products.<sup>21</sup> While the government has reportedly not developed a central-level catalogue of indigenous innovation products, optical network equipment is listed in indigenous innovation catalogues that have been developed by provincial and municipal level governments.<sup>22</sup> The U.S. has attempted to address China’s use of indigenous standards to promote domestic technology through the Joint Commission on Commerce and Trade and the Strategic and Economic Dialogue processes. In late 2010, China committed that it would take an “open and transparent” approach to telecom operators’ selection of technology, and that it would not interfere in operators’ free choice of preferred technologies for new communications networks.<sup>23</sup> These commitments were reiterated by President Hu Jintao in a January 2011 visit to the White House.<sup>24</sup> Nevertheless, the 2008 and 2009 policies cited above appear to remain in effect.

The practice of state-owned telecom companies to give preference to domestic equipment suppliers is further evidenced by statements in the telecom operators’ recent annual reports. Both China

---

<sup>17</sup> *Notice on Deepening the Telecom Reform, Ministry of Industry and Information Technology, National Development and Reform Commission, Ministry of Finance* (May 24, 2008) at Section II.

<sup>18</sup> *Id.* at Section III.

<sup>19</sup> *Id.*

<sup>20</sup> State Council, *Electronic Information Industry Restructuring and Revitalization Plan* (April 15, 2009) at II.B and III.C.

<sup>21</sup> *Notification Regarding the Launch of National Indigenous Innovation Product Accreditation Work for 2009* at Section III and Appendix 2 (limiting eligibility to products listed in the 2006 Catalogue of New- and High-Technology Products).

<sup>22</sup> The local catalogues are available in Chinese only.

<sup>23</sup> U.S. Trade Representative, “21<sup>st</sup> U.S.-China Joint Commission on Commerce and Trade: Fact Sheet,” USTR Fact Sheet (December 15, 2011).

<sup>24</sup> The U.S.-China Business Council, *China’s JCCT Commitments, 2004-10* (January 21, 2011).

Telecom and China Unicom, for example, have disclosed arrangements with their state-owned parent companies (who are not publicly traded and thus not subject to the same disclosure obligations) under which the state-owned parent performs all of the equipment procurement for the telecom operator.<sup>25</sup> Indeed, in one financial statement China Unicom described the arrangement as a risk to other shareholders:

Our controlling shareholder, Unicom Group, can exert influence on us and cause us to make decisions that may not always be in the best interests of our other shareholders .... As our controlling shareholder, it is able to influence our major business decisions through its control of our board of directors. All of our executive directors and executive officers also serve as directors or executive officers of Unicom Group. In addition, our operations depend on a number of services provided by Unicom Group. For example, Unicom Group ... provides equipment procurement services ... to us .... The interests of Unicom Group and our interests in these transactions may differ and Unicom Group may cause us to make decisions that conflict with the interests of our other shareholders.<sup>26</sup>

One feature of the procurement services contracts that China Telecom and China Unicom have with their state-owned parents is a two-tiered fee system that differentiates between procurements of imported and domestic telecommunications equipment. China Telecom and China Unicom pay a concession fee to their state-owned parents for the procurement of equipment – the maximum concession fee for the procurement of imported equipment is one percent of the contract value, while the maximum concession fee for the procurement of domestic equipment is three percent of the contract value.<sup>27</sup>

These arrangements require the telecom operators to provide three times as much financial support to their state-owned parents when they purchase domestic equipment as when they purchase imported equipment. This additional financing creates a strong incentive for state-owned parents to procure domestic, rather than imported, equipment on behalf of their telecom operator subsidiaries. The differentiation may also be designed to allow the state-owned parents to pay higher prices for domestic telecommunications equipment than they would pay for imported equipment in order to support domestic equipment manufacturers. In fact, the average selling price for WDM optical communication systems in China is the highest in the world. As a result, Huawei and ZTE are afforded above market pricing in their protected home market so that they can sell below market overseas.

There are numerous reports indicating that procurement by the Chinese telecom operators has been a major factor fueling the success of Huawei and ZTE and their ability to grow, finance research and development, and penetrate foreign markets. The three telecom companies spent nearly 400 billion RMB on capital expenditures in 2009, and domestic equipment manufacturers are the dominant suppliers for these projects.<sup>28</sup> In 2010, for example, ZTE and Huawei received massive equipment purchases from China Mobile for the rollout of its first Package Transport Network, with each company getting a 35% share of the revenue.<sup>29</sup> As one financial analysts' report summarizes the dynamic, "Strong domestic sales

---

<sup>25</sup> China Telecom 2011 Annual Report at 45, China Unicom 2011 Annual Report at 69.

<sup>26</sup> China Unicom 2008 Form 20-F at 10.

<sup>27</sup> China Telecom 2011 Annual Report at 45, China Unicom 2011 Annual Report at 69.

<sup>28</sup> DBS Research Group, "China Telecom Sector" (Feb. 24, 2010) at 5, 31.

<sup>29</sup> ZTE, *ZTE and Huawei Claim Lion's Share of China Mobile's PTN Purchasing*, ZTE: Media Focus.

have given Chinese equipment vendors ammunition to overtake global rivals to sustain long-term growth.”<sup>30</sup>

## 2. State Funding through Low-Cost Loans and Insurance

With a strong domestic customer base made possible through discriminatory procurement policies, Huawei and ZTE have built the foundation to enable them to penetrate telecommunications markets around the world. This overseas expansion has been aggressively supported by the provision of low-cost financing from the Government of China, particularly in the form of subsidized export credits and export credit insurance.

As mentioned above, a number of categories of telecommunications hardware are listed in the *2006 Catalogue of Chinese High-Tech Products*. Being listed in the catalogue makes the item eligible for preferential interest rates on export credits from China’s Export-Import Bank and the China Development Bank. In addition, the State Council’s 2009 Electronic Information Industry Restructuring and Revitalization Plan also called for increased availability of preferential export credits and export credit insurance to the industry as part of the government’s stimulus plan.

China is the world’s leading provider of export credits. In 2010, the U.S. ExIm Bank estimates that China ExIm issued \$45 billion in new medium- and long-term export credits, more than three times the value of such credits newly issued by the U.S. ExIm Bank.<sup>31</sup> U.S. ExIm Bank estimates that total export credit financing from the Chinese government, including credits from China ExIm and the China Development Bank, likely exceeds \$100 billion per year.<sup>32</sup> China is not, however, a member of the OECD arrangement on export credits. While China ExIm Bank and the China Development Bank reveal little about the terms on which their export credits are offered information about these programs, there are various second-hand reports indicating that the terms of this financing are highly concessional, and below the rates at which OECD member export credit agencies provide financing.<sup>33</sup> In addition, circulars issued by the People’s Bank of China indicate that interest rates on credits for products listed in the *2006 Catalogue of Chinese High-Tech Products* are typically two percentage points below the People’s Bank’s normal benchmark rate.<sup>34</sup> The U.S. ExIm Bank has concluded: “Most of the terms and conditions of their [China ExIm Bank’s] financing did not and do not fit within the OECD guidelines.”<sup>35</sup>

Huawei and ZTE have been major beneficiaries of generous export credit support from the Government of China. The companies have received tens of billions of dollars in credit lines from China ExIm and the China Development Bank – amounts that exceed their total annual revenue and enable the companies to aggressively outbid competitors in overseas markets.

---

<sup>30</sup> DBS Research Group, “China Telecom Sector” (Feb. 24, 2010) at at 1.

<sup>31</sup> Export-Import Bank of the United States, *Report to the U.S. Congress on Export Credit Competition and the Export Import Bank of the United States* (June 2011) at 11.

<sup>32</sup> *Id.* at 113.

<sup>33</sup> See, e.g., Ryan J. Orr and Jeremy R. Kennedy, “Highlights of recent trends in global infrastructure: new players and revised game rules,” *Transnational Corporations*, Vol. 17, No. 1 (April 2008) at 108; Deborah Brautigam, *China’s African Aid: Transatlantic Challenges*, The German Marshall Fund of the United States (April 2008) at 25-26.

<sup>34</sup> See, e.g., *Circular of the People’s Bank of China on Adjusting Financial Institution Benchmark Deposit and Lending Rates of RMB*, YINFA [2010] No. 294 (Oct. 19, 2010).

<sup>35</sup> Export-Import Bank of the United States, *Report to the U.S. Congress on Export Credit Competition and the Export Import Bank of the United States* (June 2010) at 99.

In 2009, Huawei received a \$30 billion line of credit from the China Development Bank, a government-owned bank.<sup>36</sup> Huawei describes the credit line as an export buyer's credit – that is, financing available to Huawei's overseas customers to finance their purchases of equipment from Huawei.<sup>37</sup> The terms of the financing are not public, but are reported to be extremely favorable. According to one European industry source, "Huawei arranges for a seven-year loan from China Development Bank for equipment, where for the first three years operators make no upfront payment, but the company gets paid by the bank immediately."<sup>38</sup>

Also in 2009, ZTE secured a line of credit from China's Export-Import Bank totaling \$10 billion, and a line of credit from the China Development Bank of \$15 billion.<sup>39</sup> While ZTE reports that interest rates on loans from China Development Bank and China Export-Import Bank range from 3 to 4 percent, it is possible those loans have deferred payment terms as the China Development Bank loans to Huawei are reported to have.<sup>40</sup> For example, an article on China ExIm's backing of a 2010 sale by ZTE to Canada's Public Mobile notes that ZTE's rivals claimed such loans are offered at rates as low as zero percent.<sup>41</sup>

State-owned Chinese banks have also supported Huawei and ZTE by conditioning loan packages to struggling foreign telecom operators on the procurement of Chinese equipment. In 2010, Indian mobile operator Reliance Communications ("Rcom") secured \$1.1 billion in financing from a consortium of Chinese state-owned banks, including China ExIm, the China Development Bank, the Industrial and Commercial Bank of China and other Chinese lenders.<sup>42</sup> The loan, which was provided for a term of seven years at five percent interest and helped Rcom avoid default, reportedly included conditions requiring Rcom to use \$600 million of the financing to acquire network equipment from ZTE and Huawei.<sup>43</sup> The Rcom case does not appear to be the first instance in which Chinese financial institutions have propped up or bailed out foreign telecom operators in return for agreements to purchase equipment from Huawei. Other examples include start-up funding to a Polish operator, a bank-backed leasing arrangement with H3G in Austria, and a \$1 billion loan to America Movil in 2009.<sup>44</sup>

Export credits and other forms of conditional funding to foreign telecom operators are not the only form of state-backed financing Huawei and ZTE enjoy. As mentioned above, the optical equipment industry is an "encouraged" industry and thus eligible for preferential loans from state-owned banks in China, and the 12<sup>th</sup> Five-Year Plan calls for even more aggressive direction of subsidized financing to support this "strategic and emerging" industry. Both Huawei and ZTE report large increases in their borrowing in 2011. Huawei, for example, increased its global sales revenue by an impressive 11.7% from 2010 to 2011, but the volume of its short- and long-term lending grew nearly five times faster, rising by 56.9%.<sup>45</sup> ZTE increased its global sales revenue even more rapidly than Huawei, by 23% from 2010 to

<sup>36</sup> See, e.g., "China Development Bank Enhances Support to Huawei," TradingMarkets.com (Sept. 23, 2009).

<sup>37</sup> "FAQ," Huawei website, available on-line at <http://www.huawei.com/facts-beta/faq-1.do>.

<sup>38</sup> Venkatesha Babu, "Running Scared of Huawei," Livemint.com (Feb. 17, 2010).

<sup>39</sup> "ZTE Bags Another \$10B in Credit," *Light Reading Asia* (May 22, 2009); "China Development Bank Provides ZTE US\$15 Billion Credit Line," *Mobile Tech News* (Mar. 23, 2009).

<sup>40</sup> ZTE 2009 Annual Report at 192.

<sup>41</sup> "ZTE Bankrolls Canadian Mobile Network," *Light Reading Asia* (June 24, 2010).

<sup>42</sup> "Chinese lenders bailout RComm," *International Financing Review*.

<sup>43</sup> *November 2010 China Telecom Newsletter*, Information Gatekeepers, Inc., Vol. 17 No. 11 at 6. See also "Rcom to buy equipment worth \$600 m from Huawei, ZTE," *The Hindu*; "Chinese loans for Indian telecom firm raise eyebrows," *The Hindu*.

<sup>44</sup> European Metalworkers' Federation, *Fair trade in the telecoms industry* (adopted Nov. 23 – 24, 2011) at 8-9.

<sup>45</sup> Huawei 2011 Annual Report at 6, 21.



2011 – but its borrowing rose even more quickly, with short-term loans outstanding rising by 70% and long-term loans more than quadrupling in volume.<sup>46</sup> While neither firm discloses the extent to which these loans are from China’s state-owned banks (which account for 80% of China’s banking sector), ZTE does note the following regarding its interest rate risk exposure: “... the total amount of interest payments owed by the Group will vary as a direct result of any fluctuations in the loan interest rates determined by the State,”<sup>47</sup> indicating much if not all of the firm’s borrowings are from state-owned banks.

Huawei and ZTE also benefit from access to government-backed export credit insurance from China’s export insurance agency, Sinosure. Because optical equipment is listed in China’s catalogues of high-tech equipment, it is eligible for preferential terms from Sinosure on non-payment insurance.<sup>48</sup> Companies that manufacture equipment listed in the high-tech catalogues are entitled to higher approval limits and maximum discounts on premium rates.<sup>49</sup> In 2009, Sinosure announced Comprehensive Strategic Cooperation Agreements with Huawei and ZTE wherein Sinosure agreed to provide short-, medium-, and long-term export credit insurance to assist them in expanding their export businesses.<sup>50</sup> The premiums for the insurance offered to Huawei and ZTE appear to be at concessional rates. For example, Barclays Capital worked with Sinosure to guarantee \$127 million in export financing to Huawei in 2011, and the bank noted that it was “able to achieve a more competitive premium than originally expected.”<sup>51</sup>

Unfortunately, there does not appear to be public information available regarding the premiums paid by Huawei and ZTE for export credit insurance from Sinosure or any losses incurred by the companies that were covered by Sinosure. ZTE does report some instances in which customers failed to make the full payment owed that are currently under litigation or arbitration, indicating that losses may be occurring which may be covered by Sinosure.<sup>52</sup> Sinosure may also have been involved in certain financing guarantees to foreign customers reported by ZTE, including a guarantee of 50 million RMB for a term of twelve years to Djibouti Telecom S.A. in 2006 and a guarantee of \$3 million for a term of six-and-a-half years to Benin Telecom S.A. in 2007.<sup>53</sup> Huawei also reports that there are instances where the credit risk for a particular customer may become unacceptably high.<sup>54</sup>

### 3. Other Government Subsidies to Huawei and ZTE

Huawei and ZTE have also benefited from a variety of other forms of government support, including direct grants, preferential tax treatment and equity infusions. In 2010, Huawei reported receiving RMB 433 million in unconditional government grants and RMB 545 million in grants that were conditional on completing certain research and development projects.<sup>55</sup> In 2009, Huawei reported receiving \$129 million in government grants.<sup>56</sup> ZTE received RMB 471 million in government grants, contract penalty

<sup>46</sup> ZTE 2011 Annual Report at 17, 72.

<sup>47</sup> ZTE 2011 Annual Report at 85.

<sup>48</sup> *Notice on the Implementation of the Strategy Promoting Trade Through Science and Technology by Utilizing Export Credit Insurance*, Doc. No. Shang Ji Fa [2004] No. 368.

<sup>49</sup> *Id.*

<sup>50</sup> “Sinosure Inked Comprehensive Strategic Cooperation Agreements with ZTE, Huawei,” Sinosure.com.

<sup>51</sup> “Telkom secures \$127m loan for mobile expansion,” *Engineering News* (Jan. 21, 2011).

<sup>52</sup> ZTE 2009 Annual Report at 99.

<sup>53</sup> ZTE 2011 Annual Report at 117, 367.

<sup>54</sup> Huawei 2009 Annual Report at 16.

<sup>55</sup> Huawei 2010 Annual Report 37.

<sup>56</sup> Huawei 2009 Annual Report at 32.

income, and other miscellaneous gains in 2010, according to its annual report.<sup>57</sup> In 2009, ZTE reported receiving \$92 million in government subsidies, including grants, support for technology development, and tax subsidies.<sup>58</sup> Neither company has disclosed the volume of government grants received in 2011.

In addition, telecom equipment manufacturers that qualify as high- and new-technology enterprises are eligible for lower across-the-board tax rates. ZTE reports that numerous subsidiaries enjoy a 50% reduction in their income tax rates due to this status – other subsidiaries have been granted temporary tax holidays based on this status or additional provincial and local tax incentives.<sup>59</sup> China also refunds VAT taxes paid to companies in certain industries, including rebates on software procurement.<sup>60</sup> ZTE reports receiving 1.9 billion RMB in such refunds and other tax subsidies in 2011.<sup>61</sup> While Huawei does not disclose its Chinese tax rate or the eligibility of any of its operations for preferential treatment, its effective tax rate for its global operations 2011 was 6.5%, far below the statutory rate in China of 25%.<sup>62</sup>

Huawei and ZTE have also benefitted from direct equity infusions from the Government of China or supported by state-owned financial institutions. Huawei received an infusion of \$5.8 billion from its equity holders in 2009.<sup>63</sup> The company is 99 percent held by the union of its employees.<sup>64</sup> There is very little information about the true ownership structure of Huawei and the nature of its employees' ownership of the company. However, in China, all unions must be part of the All China Federation of Trade Unions, a public entity associated with the Communist Party. In addition, numerous commentators have noted the strong ties between Huawei's founder and the Government of China.<sup>65</sup> The equity infusion was equal to nearly four percent of the company's sales revenue in 2009.

In 2008, ZTE issued 40 billion RMB in bonds cum warrants, which were guaranteed by the China Development Bank, a state-owned bank.<sup>66</sup> The bonds, which bear an interest rate of 0.8%, have permitted the company to fund major capital investments. In addition to being backed by a major state-owned bank, it appears that many of the major purchasers of the bonds are themselves state-owned firms.<sup>67</sup> The RMB 40 billion the company has been able to raise through the bond issuance was thus directly supported by government guarantees and government purchases, resulting in a major government-backed infusion of funds to the company.

#### 4. Conclusion

Aggressive government support has permitted Huawei and ZTE to grow exponentially in recent years. By protecting its domestic telecommunications market for national champions, the

---

<sup>57</sup> ZTE 2010 Annual Report 315.

<sup>58</sup> ZTE 2009 Annual Report at 200 and 203 (some reported as non-operating income, others reported as operating income).

<sup>59</sup> ZTE 2011 Annual Report at 330 – 331.

<sup>60</sup> State Council, *Certain Policies to Encourage the Development of Software Enterprise and the IC Industry*.

<sup>61</sup> ZTE 2011 Annual Report at 324.

<sup>62</sup> Huawei 2011 Annual Report at 32.

<sup>63</sup> Huawei 2009 Annual Report at 21.

<sup>64</sup> Huawei 2009 Annual Report at 41.

<sup>65</sup> *The National Security Implications of Investments and Products from the People's Republic of China in the Telecommunications Sector*, U.S.-China Economic and Security Review Commission Staff Report (Jan. 2011) at 15 – 18.

<sup>66</sup> ZTE 2009 Annual Report at 193.

<sup>67</sup> ZTE 2011 Annual Report at 109.

Government of China has restricted competition and provided a guaranteed foundation for Huawei and ZTE's growth. Massive export credits and export credit guarantees have propelled the firms' expansion in overseas markets, where the sheer volume of low-cost funding available from China's state-owned banks overwhelms potential competitors. Huawei and ZTE have also benefitted from direct government grants, preferential tax treatment, and government-backed equity infusions.

The trade-distortions resulting from this support have not gone unnoticed by China's trading partners. In 2010, the EU initiated an investigation into subsidized imports<sup>68</sup> of wireless wide area networking modems from China after receiving a complaint from Option N.V., a Belgian producer of such wireless modems.<sup>69</sup> The complaint primarily targeted Huawei and ZTE, and stated that the Chinese exporters were able to flood the European market with low-priced products due to heavy subsidization by the Chinese government.<sup>70</sup> Following a preliminary investigation, public reports state that the EU was proposing significant duties of more than €30 for the imported Chinese modems, which normally only cost between €20 and €30 – meaning the extent of subsidization found was in the triple digits.<sup>71</sup> Prior to imposition of the duties, Option N.V. and Huawei entered into a “cooperative agreement,” which included Huawei paying €33 million to license some of Option's software and Huawei purchasing Option's subsidiary, M4S, for €8 million.<sup>72</sup> In the wake of this agreement, and “in the spirit of future collaboration,” Option then withdrew its complaints and the investigation was terminated.<sup>73</sup> In the past few weeks, however, it appears the EU may be contemplating re-opening the investigation.<sup>74</sup>

## C. WHAT IS THE IMPACT OF THE RISE OF THESE GOVERNMENT SUPPORTED ENTITIES

### 1. Impact on US Economy and Optical Industry

<sup>68</sup> The anti-subsidy investigation followed initiation of both an anti-dumping investigation and a safeguard investigation. *Notice of initiation of an anti-dumping proceeding concerning imports of wireless wide area networking (WWAN) modems originating in the People's Republic of China*, Official Journal of the European Union (2010/C 171/08) (June 30, 2010); *Notice of initiation of a safeguard investigation under Council Regulations (EC) No 260/2009 and (EC) No 625/2009 concerning imports of wireless wide area networking (WWAN) modems*, Official Journal of the European Union (2010/C 171/07) (June 30, 2010).

<sup>69</sup> *Notice of initiation of an anti-subsidy proceeding concerning imports of wireless wide area networking (WWAN) modems originating in the People's Republic of China*, Official Journal of the European Union (2010/C 249/08) (September 16, 2010).

<sup>70</sup> Matthew Dalton, “Huawei Pays Option To Go Away,” WSJ Blogs (November 3, 2010).

<sup>71</sup> *Id.*

<sup>72</sup> *Id.* See also Caroline Gabriel, “Option Drops Huawei Suit and Signs R&D Deal,” Rethink Wireless (October 27, 2010).

<sup>73</sup> Matthew Dalton, “Huawei Pays Option To Go Away,” WSJ Blogs (November 3, 2010). See also *Commission Regulation (EU) No 209/2011 of 2 March 2011 terminating the anti-dumping and anti-subsidy proceedings concerning imports of wireless wide area networking (WWAN) modems originating in the People's Republic of China and terminating the registration of such imports imposed by Regulation (EU) No 570/2010 and (EU) No 811/2010*, Official Journal of the European Union (March 3, 2011); *Notice of termination of the safeguard investigation initiated under Council Regulations (EC) No 260/2009 and (EC) No 625/2009, concerning imports of wireless wide area networking (WWAN) modems*, Official Journal of the European Union (2011/C 24/09) (January 26, 2011).

<sup>74</sup> “China's Huawei, ZTE face EU action on telecom subsidies: FT,” Reuters.com (May 27, 2012).

The rapid growth of Huawei and ZTE with massive state support has undermined competition and poses a threat to innovation in the optical equipment industry. The firms have grown exponentially over recent years: Huawei's annual revenues more than tripled from 2006 to 2011, growing from 66 billion RMB to 204 billion RMB.<sup>75</sup> ZTE's annual sales revenue also more than tripled from 2006 to 2010, rising from 23 billion RMB to 86 billion RMB.<sup>76</sup> From 2010 to 2011, Huawei overtook Alcatel-Lucent to become the top optical network equipment vendor in the world; ZTE leaped over Fujitsu to become the world's fourth largest.<sup>77</sup>

This astronomical growth is due in large part to Huawei and ZTE's ability to aggressively underbid their competitors with the backing of state support. As noted above, the European Union preliminarily found that government subsidies to the two firms may be as high as 100% or more of their sales revenue. Another article states that Huawei and ZTE are able to underbid their competitors in global markets by 30 to 40% on a regular basis.<sup>78</sup>

Huawei and ZTE are consistently rated by global telecom service providers as superior to their competitors in the optical network equipment industry in one important respect: price.<sup>79</sup> In a major 2011 survey of global telecom operators, a full 83% of respondents identified Huawei as among the top three firms in price leadership, with ZTE named by 67% -- the next most frequently mentioned firm was only named by 28% of respondents.<sup>80</sup> By contrast, neither firm was the most frequently mentioned on other important industry metrics such as technology, service and support, management tools, or research and development.<sup>81</sup>

The fact that the number one and number four vendors in the industry fall behind in each of these categories, and yet are able to prevail largely on price, indicates that their aggressive pricing behavior is thwarting the ability of the industry to innovate. The vendors rated highest for their technology – Ciena, Alcatel-Lucent, and Infinera – saw their revenues grow more slowly than either Huawei or ZTE last year,<sup>82</sup> ceding market position to firms that don't offer better solutions, but can undercut the competition on price. As Cisco CEO John Chambers remarked earlier this year, "in the long run, Huawei is the company's toughest competitor. Huawei will always compete on price."<sup>83</sup>

The list of projects lost to Huawei and ZTE due to aggressive underbidding is a long one. Most of these projects have been won outside of the U.S. From 2005 through 2010, Huawei and ZTE won over \$3 billion in contracts from African telecom operators in Algeria, Angola, Ethiopia, Ghana, Libya, Nigeria, and South Africa.<sup>84</sup> A few notable examples in the U.S. include Huawei's agreements with Leap Wireless in 2007 and 2009, a supplier agreement with Cox Communications in 2009, and an agreement

---

<sup>75</sup> Huawei 2010 Annual Report at 4; Huawei 2011 Annual Report at 6.

<sup>76</sup> ZTE 2010 Annual Report at 18; ZTE 2011 Annual Report at 17.

<sup>77</sup> "Optical network sales up 8% as big vendors surge," optics.org (Feb. 20, 2012).

<sup>78</sup> Iain Mills, "The Rise of China's Telecoms: Part II," *World Politics Review* (Apr. 12, 2011).

<sup>79</sup> Andrew Schmitt, "Global Service Providers Identify Optical Equipment Leaders," Infonetics Research Survey Excerpts (2011) at 8.

<sup>80</sup> *Id.*

<sup>81</sup> *Id.*

<sup>82</sup> *Id.* See also "Optical network sales up 8% as big vendors surge," optics.org (Feb. 20, 2012).

<sup>83</sup> "Cisco counters Huawei with Lightwire acquisition," ovum.com (Feb. 12, 2012).

<sup>84</sup> Daouda Cisse, "Going global" in growth Markets-Chinese investments in telecommunications in Africa, Center for Chinese Studies Policy Briefing (April 2012) at 3.

with Clearwire in 2009; in 2010, ZTE announced expectations to begin selling equipment in the U.S. market by the end of the year.<sup>85</sup> In some cases in which the amount by which Huawei or ZTE underbid competitors to win overseas contracts has been disclosed, the margins of underselling are dramatic. In one 2008 example, Huawei won a network contract in Oman in which its bid was less than a third of rivals Ericsson and Nokia Siemens.<sup>86</sup>

Each of these contracts represents a lost opportunity to American producers and American workers. As other optical network equipment providers have lost sales and market share, lost jobs have resulted. In July of last year, Cisco Systems announced it was laying off 9% of its global workforce in order to cut \$1 billion in expenses – increased competition in the switching and router market was blamed for the layoffs.<sup>87</sup> In 2007, Alcatel-Lucent aimed to cut costs by reducing its manufacturing presence – 12,500 workers worldwide lost their jobs, including hundreds in the United States.<sup>88</sup> The company has continued to struggle, however, and additional U.S. workers producing electrical switching equipment for Alcatel-Lucent were laid off and certified for trade adjustment assistance earlier this year.<sup>89</sup>

The loss of ground by major western equipment vendors is also undermining these firms' ability to keep investing in innovation. Robust research and development programs are vital to the future of the industry. Unfortunately, in the past few years major western equipment providers have been forced to reduce the share of their revenues devoted to research and development, threatening their ability to stay ahead of the curve and innovate the next generation of optical network technology. If these trends are allowed to continue, we will quickly lose our most important competitive advantage in this industry, which is our widely recognized technological edge. It is not only individual companies that will suffer. The failure to innovate will also impact the economy at large, which depends on a rapidly improving telecommunications infrastructure to raise our productivity, efficiency, and the quality of life.

Moreover, if predatory pricing trends continue, the last vendors standing will likely be Huawei and ZTE. Without any viable domestic vendors to compete with, they will raise their prices dramatically, causing further economic harm.

## 2. What are some of the Security Risks

The second reason we should be concerned about the growth by Huawei and ZTE are the security concerns that they pose to optical networks. There are three principal areas of concern that relate to the providers of optical networks, including the threats of:

1. disruption or disabling the optical network,
2. eavesdropping or other unauthorized information gathering; and
3. disruption to adjacent or dependent networks.

**Disruption of Optical Networks:** optical networks are controlled by network management software (NMS) that is developed and supplied by the optical equipment vendor. This management

---

<sup>85</sup> *The National Security Implications of Investments and Products from the People's Republic of China in the Telecommunications Sector*, U.S.-China Economic and Security Review Commission Staff Report (Jan. 2011) at 23-24.

<sup>86</sup> "Huawei undercuts NSN and Ericsson to take Oman 3G contract," *Telegeography.com* (Jan. 25, 2008).

<sup>87</sup> Charles Babcock, "Cisco Layoffs: 6,500 Jobs Cuts, \$1 B Expenses Trimmed," *InformationWeek* (July 18, 2011).

<sup>88</sup> Lauren K. Ohnesorge, "Signs point to additional layoffs at Alcatel-Lucent," *Triangle Business Journal* (March 9, 2012).

<sup>89</sup> TAA Certification No. 81349, available on-line at: <http://www.doleta.gov/tradeact/taa/taadecisions/taadecision.cfm?taw=81349> .

software is extremely complicated as it manages the equipment and connections for the optical network. Typically the NMS software package is comprised of anywhere from several hundreds of thousands to millions of line of source code and encoded in so-called “machine language,” which, as a practical matter is nearly impossible to decipher. As a result, it is difficult for anyone other than the developer of this software to fully understand its functionality and integrity.

If an optical vendor were so interested, it would be possible for them to include code into their NMS that would enable them to temporarily or permanently disable their NMS. The result of this action would be the temporary loss of any connectivity over this optical system for a period of several days to potentially months. The overall impact of this system would depend on the size of the rogue optical vendor’s network deployments. If the network equipment provider had a substantial number of customers it could severely impact the interconnectivity of the US and cause severe economic distress. In particular, any system that utilizes the optical network (internet, phones, data, etc.) would lose connectivity and have to be re-routed onto another optical network. If there was no available bandwidth with other optical networks, then the signal would be lost.

The supplier of optical equipment has access to detailed network design information, such as information on the locations of where the critical telecommunications devices are located and how the optical network is designed and operates. This same information would allow a rogue optical vendor to more effectively make any cyber-attack.

**Illegal Information Gathering (Cyber-snooping):** The information that is transported across optical networks could be accessed by a rogue optical equipment vendor. For example, such a vendor could include backdoors or other software devices into their network management software to enable the vendor to gather or copy data that is being transmitted over the optical vendor. It would be very difficult for the end user to determine that their information is being copied and it is unlikely that the US network operator would discover this intrusion. In particular, an operator would have to be specifically looking for this type of intrusion and would have to specially equip the network with complex and expensive monitoring gear to detect it. Moreover, they would need to know exactly where to look since instrumenting an entire network this way would be prohibitive.

**Inject Malware into other support Systems:** Since optical network are the pipes that carry most critical network information, it is possible to inject malicious code into attached systems that could damage these adjacent systems. Adjacent systems would include electrical systems, and other critical infrastructure services.

For these reasons, the House intelligence committee announced in November of last year that it would examine “the threat posed by Chinese-owned telecommunications companies working in the United States, and the government’s response to that threat.”<sup>90</sup>

I would also note that the Chinese optical vendors, such as Huawei’s Submarine Cable Company have become much more active in the subsea communications sector. The opportunity for rogue vendor activities that I discussed above for terrestrial systems would be equally applicable for subsea optical networks.

## **D. CONCLUDING REMARKS**

---

<sup>90</sup> <http://www.bloomberg.com/news/2011-11-17/house-intelligence-panel-probing-chinese-phone-companies-in-u-s.html>

The rapid growth of China's optical equipment suppliers, fueled by protectionist government policies at home and lavish government support to expand overseas, poses an increasing threat to American innovation and job creation. The pattern is similar to what we have seen in many other industries.

In the solar industry, for example, China protected its home market for domestic producers and propped up those producers' exports with tens of billions of dollars of state-backed loans, including export credits. As a result, Chinese producers quickly came to dominate the world market and world prices plummeted by 40% in 2009 and later. No matter how innovative their technology or how much better their product may perform and conserve resources over the long-run, American producers were forced to shut their doors one after another as prices dropped below their costs to produce. In 2011, the U.S. lost a full 20% of its domestic solar capacity due to bankruptcies and other shut downs. The solar industry has finally taken action to defend itself from China's predatory and unfair trade practices, but for many firms and workers it is too late.

It is interesting to note the approach taken by countries such as Australia and Germany.

**Australia:** The fact that China is Australia's biggest trading partner did not stop the Australian federal government from banning Huawei from participation in tenders to supply equipment to the national broadband network (NBN). The \$37.6 billion (USD) NBN project aims to bring fiber optic broadband connectivity to 93 percent of Australian homes by 2020. The Australian government prohibited Huawei from tendering for the multi-billion supply contracts due to security concerns, specifically cyber-attacks originating in China. The government based its decision on advice from the Australian Security Intelligence Organization. Australia's top signals intelligence expert said there was "no doubt" Huawei partnered with China's espionage services.

Similarly in **Germany**, earlier this year, Huawei and other Chinese vendors were excluded from bidding for business at Germany's national research and education network (DFN) where Huawei was an incumbent supplier. The Chinese companies were not considered due to security concerns.

Our ability to innovate the telecommunications infrastructure of the future with U.S. technology, U.S. intellectual property, and U.S. workers depends on our ability to confront China's state-capitalist model that drove our solar industry to the brink and is now distorting world markets for optical equipment. China's intentions are clear: they have announced their intention to intensify government support for the industry and to make their national champions world market leaders. Our response must be equally clear to ensure that competition in this vital sector is not based on which government is willing to lavish the most resources on its producers, but on the quality of our products, the strength of our innovation, and the productivity of our workers.

I would like to recognize the efforts of Terence P. Stewart and Elizabeth Drake of the Law Firm of Stewart and Stewart for their significant assistance in preparing the materials for my testimony. Thank you Terry and Elizabeth for your support and assistance.

HEARING CO-CHAIR SLANE: Thank you, Mr. McCarthy.  
Mr. Fellowes.

**OPENING STATEMENT OF JAMES FELLOWES  
CHAIRMAN AND CEO, FELLOWES INC.**

MR. FELLOWES: Good morning. My name is James Fellowes. I'm Chief Executive Officer of Fellowes, Inc. We are a 95-year-old, fourth generation family business, located in Itasca, Illinois. We produce business machines and office products, and sell them all over the world.

Our company is perhaps best known for its market-leading line of paper shredders. Fellowes' engineering expertise and intellectual property is what sets our shredders apart.

Although Fellowes produces many products domestically, we began manufacturing paper shredders in China in 1998 to serve our global market. In 2006, Fellowes entered into a 50/50 joint venture with Shinri Machinery Company in Changzhou, China.

Under the terms of the contract, Fellowes retained 100 percent ownership of its tooling and its IP necessary to manufacture Fellowes shredders by the JV.

For over three years, this engagement resulted in a productive joint venture to manufacture and ship goods to Fellowes' locations around the world. Shinri enjoyed a return on its investment of in excess of 100 percent per year.

In 2009, Shinri changed its leadership for the joint venture with Fellowes. Everything changed immediately. Shinri methodically imposed unreasonable demands on Fellowes in an effort to hijack Fellowes' global shredder business.

Specifically, the new leader of Shinri made it clear that unless Fellowes assigned its 100 percent Fellowes-owned tools to the 50/50 JV, and unless it assigned its 100 percent owned, Fellowes-owned, engineering division to the 50/50 JV, and also assigned its 100 percent Fellowes-owned China Sales Division to the 50/50 JV. And our JV partner also made it clear that unless we agreed to increase prices to Fellowes around the world by 40 percent immediately, and also agreed to unilaterally contribute \$10 million to the joint venture, unless we met all those conditions, Shinri would use its power as legal representative of the JV to close down all operations.

When Fellowes refused this extortion, Shinri effectively shut down operations in order to force Fellowes to submit. Shinri illegally obstructed shipments of paper shredders beginning August 7, 2010, forcing the JV to stop production.

Shinri placed trucks and guards in the front of the gates of the JV facility to block shipments of goods. Shinri expelled Fellowes' appointed management personnel from the facility, and Shinri illegally detained Fellowes injection molding tools.

Immediately after the closure of this facility, I traveled to Changzhou and met with local government officials. They sympathized with our plight, but



were either unable or unwilling to open the factory or facilitate a sale of the JV to Fellowes.

Several months later, the JV became insolvent, and the process of liquidation of assets began. Prior to the shutdown, Fellowes' annual sales revenue from these blocked products was 168 million U.S. dollars. The cumulative impact of these actions is an economic loss totaling over \$100 million to Fellowes. While Fellowes was struggling to rebuild its manufacturing capability elsewhere, Shinri entered into a new joint venture with a former Fellowes operations manager of the joint venture.

Shinri's purpose in forming the new JV was to create a new shredder business to compete on a global basis with Fellowes. Shinri's new venture, New United Office Equipment, successfully purchased the former joint venture facility and all the production fixtures inside the facility at an auction.

This gave New United a fully functioning manufacturing operation. In addition, the purchase of the facility effectively gave New United physical control over Fellowes' 100 percent-owned production tools and \$3.5 million of Fellowes-branded finished goods inventory that was located inside the factory at the time of the closure.

Trapped inside the facility at the time of the shutdown were over 1,000 sets of production tools. These tools are used for making housings, gears, cutters, as well as nearly every other part of the products. The tools weigh thousands of pounds each and collectively have a replacement value of over \$10 million.

These tools embody Fellowes' intellectual properties and 30 years of development and know-how. Without them, Fellowes cannot manufacture its shredders.

Also, over 70,000 branded shredders with a resale value of \$3.5 million were held inside the facility. These shredders were ordered by Fellowes, bore the Fellowes trade name, incorporated Fellowes' patented features, and contained warranties backed by Fellowes and its global subsidiaries.

Fellowes objected to Shinri's physical control of the tools and finished goods in the Changzhou courts and also with local government officials and with the United States government. Fellowes offered to pay for the removal and storage of these tools and finished goods and to put them into a secure third-party location.

The Changzhou court refused to take any action other than imposing a preservation order on the assets. Though Fellowes filed a suit at the Changzhou intermediate court to recover its tools, in the fall of 2010, the first hearing was not held until a year later in the fall of 2011. Fellowes provided documents showing how each of these over 1,000 tools was ordered, purchased and paid for by Fellowes. Clear title was established.

The court indicated that there would be a second hearing a few weeks later. But nothing has occurred since. All appearances indicate that this case is being slowed down by forces external to the judicial system. Nearly two years after the illegal takeover of our joint venture facility, Fellowes' tools remain in the physical control of Zhou Licheng, the former joint venture partner who attempted to hijack our business and now competes with us.

The recovery of these tools is our number one priority. In late May 2012, Fellowes received word that the local Wujin court had made a deal with New United that would allow New United to sell 70,000 Fellowes-branded paper shredders locked inside this building at the time of the shutdown.

The sale of the Fellowes-branded goods to anyone other than Fellowes is a violation of the joint venture contract which is still in place. The shredders have been stored in poor conditions over the last two years. Fellowes cannot assure the functionality or the safety of these products. Yet, the Chinese courts have authorized their sale.

In summary, Fellowes has suffered damages in excess of \$100 million from the extortive criminal shutdown of its factory in Changzhou, China. Government officials did not act to protect Fellowes' property nor its contractual rights. In the 22 months since the shutdown, Fellowes has been unable to secure the return of its 100 percent owned tools, which it needs to rebuild its business.

The court has also permitted the sale of Fellowes' finished goods inventory to the former Chinese partner who is now our competitor. This is a clear violation of Fellowes' contractual rights and intellectual property rights.

In spite of these injustices, Fellowes has moved forward by building new tools and new factories in other locations around the world. Its products are now back in the market worldwide, but it has suffered greatly in its recovery because its contractual and property rights have been ignored. Fellowes continues to compete and to recover financially with one arm tied behind our back.

On behalf of Fellowes, Inc., I want to thank our supporters, our great supporters in the United States government, including our Illinois Congressional delegation, the leaders and staff of the Departments of Commerce, State, and USTR. I apologize for running a bit long.

**PREPARED STATEMENT OF JAMES FELLOWES  
CHAIRMAN AND CEO, FELLOWES INC.**

**Oral Testimony  
James Fellowes  
CEO/Chairman, Fellowes, Inc.**

Chairman Manzullo, Ranking Member Faleomavaega, members of the Subcommittee, my name is James Fellowes and I am third generation Chairman and CEO of Fellowes, Inc. Thank you for providing me the opportunity to testify today.

Fellowes is a family-owned company headquartered in Itasca, Illinois that produces business machines and office products reaching customers in over 100 countries. Until the time of our difficulties last August, we employed approximately 2,700 workers in 16 countries around the world, including 625 workers in the U.S.

\*\*\*\*\*

Our company is perhaps best known for our market-leading line of paper shredders. **Fellowes' engineering expertise and intellectual property is what sets our shredders apart.**

Although Fellowes produces many products domestically, we began manufacturing paper shredders in China in 1998 to serve our global market. In 2006, Fellowes entered into a joint venture contract with Jiangsu Shinri Machinery Co. in Changzhou, China.

Under the terms of our contracts, Fellowes retained ownership over the tooling and IP used to manufacture Fellowes® brand shredders in the JV facilities. Moreover, the JV contract specifically provided Fellowes the right to manage the day-to-day operations of the JV.

For over three years, this engagement resulted in a productive partnership with Shinri to manufacture and ship goods to Fellowes locations around the world. Shinri enjoyed a 100%-plus return on its investment each year and was always paid on time.

In 2009, Shinri methodically imposed unreasonable requirements on Fellowes in an effort to extort more profit and ultimately control our global shredder business, in direct violation of our contract.

Specifically,

- unless Fellowes would assign its 100% owned tools to the JV,
- and unless Fellowes would assign its 100% owned engineering capability to the JV,
- and unless the Chinese sales division was assigned to the JV,
- and unless Fellowes immediately increased its prices by 40%,
- and unless Fellowes agreed to unilaterally contribute over \$10 million dollars to the JV,
- then, Shinri would close down the operation as Legal Representative of the JV.

**When Fellowes refused these illegal demands, Shinri proceeded to destroy our business:**

- They illegally obstructed shipments of paper shredders beginning August 7, 2010, forcing the JV to stop production. This ultimately led to the JV insolvency.
- They placed security guards and trucks at the gates of the JV facility to prevent entrance of our people and shipment of goods or transfer of Fellowes-owned assets.
- They expelled Fellowes-appointed management personnel from the facility.
- And they illegally detained Fellowes' injection molding tools.

Immediately after the closure of our facility, I traveled to Changzhou and met with local Chinese government officials. They sympathized with our plight, but were either unable or unwilling to force our Chinese partner to open the factory or facilitate Fellowes purchasing the JV.

Fellowes' sales volume for these blocked products is \$168 million dollars. **The cumulative impact of these actions is an economic loss totaling over a hundred million dollars for Fellowes.**

Also, we recently learned that affiliates of Shinri are planning to compete directly with Fellowes in the shredder business, all while using illegal tactics to block Fellowes from recovering our custom molding tools that represent the embodiment of Fellowes' engineering investment and IP rights.

As a result of Shinri's decision to stop shipments, suppliers have filed lawsuits against the JV for its failure to pay its invoices. The Changzhou Intermediate Court has initiated proceedings to liquidate the JV and auction its assets to satisfy the debts of the JV. **The sale of Fellowes' tooling or finished goods inventory to anyone other than Fellowes would directly violate our intellectual property rights.**

**The immediate release of our tools is of great concern to us today.** We have been restricted from these tools for nearly 8 months which hampers our opportunity to recover.

We want to close by commenting that we are working around the clock to retool our products and bring up new factories. One of these factories is in Itasca, Illinois. We will bring two high performance shredders up with the hope of adding more products in time. This will immediately create about 30 jobs at Fellowes and about twice that amount in 15 suppliers in the Midwest.

\*\*\*\*\*

We are grateful for your efforts, Mr. Chairman and Ranking Member Faleomavaega, as well as the assistance we have received from Senators Durbin and Kirk and Congressman Roskam. We hope the U.S. government will act to protect the rights of American companies like ours.

HEARING CO-CHAIR SLANE: That's fine. Thank you, Mr. Fellowes.  
Mr. Siddiqui.

**OPENING STATEMENT OF AHMED SIDDIQUI  
FOUNDER OF GO GO MONGO**

MR. SIDDIQUI: Commissioners, distinguished panelists, my name is Ahmed Siddiqui, and I'm pleased to speak to you today about the importance of addressing Chinese piracy in the mobile app marketplace.

I am the creator of an iPhone game called Go Go Mongo! and a member of the Association for Competitive Technology. ACT is an international advocacy organization representing over 5,000 app developers just like me.

I make educational apps for children that help them develop healthy eating habits. My tag line is to inspire children to reach for cauliflower and beyond through games and technology. Kids love characters like Dora and Mario, and I knew that I needed a character to connect with kids, and this year the Chubby Monster is Mongo.

It became possible for me to make games like Go Go Mongo! through revolutionary changes taking place in the software industry. Advances in mobile technology have led to a renaissance in application development. Small software companies that once wrote applications exclusively for big software platforms at the enterprise level are now able to create innovative solutions and apps and sell them directly to consumers, in my case, kids.

The emergence of the app marketplace is a radical departure from the long-standing barriers to entry, like marketing costs and publisher delays, that limited opportunities for the independent software developers like me.

So I released Go Go Mongo! just over a year ago. My app sales are just 99 cents on the App Store and it has over 40,000 downloads in the U.S. alone. At launch, I didn't spend too much time thinking about the Chinese market, but after several months, however, I was contacted by a Chinese app marketing site.

They told me that my app would sell really well there because there was a whole forum dedicated to my character Mongo in China, and so I did some like google translate searches to see what people were saying, and everybody was saying this is great, this is an awesome app, you know, I want to see the next game, tell us more about Mongo, et cetera. So I got really excited. I was like "wow," I must be killing it in China.

And then I looked at my App Store report, and I found out that I had one download from China entirely. So there are thousands of kids playing my game, but I'm not getting any benefit from it. So I just found this to be a bit frustrating.

[Laughter.]

MR. SIDDIQUI: So the Chinese users were actually using pirate app stores that sell apps for phones that have been hacked or "jailbroken." The pirates even sell ads on these games, collecting the profits.

But you know what, in spite of all this, I'm still an optimist. I made a decision to expand my product into China and take advantage of the interest in

my product. I've hired a translator and have spent many hours updating my app to appeal to the Chinese market, but this is still a huge risk. I already know my app is being pirated by thousands. So my attempt at expanding into the marketplace could fail before it even starts, not because my product isn't successful, but because pirates have no fear of recourse.

My hope rests on the fact that Apple has recently made it possible for Chinese citizens to purchase mobile apps through the legitimate iTunes store using RMB instead of U.S. currency.

Last week, I released the Chinese version of my app. It's called "Jia-yo Jia-yo Mongo! so let's see how it goes.

My story is just one example of a widespread problem with profound implications to American app developers. China has passed the United States as a nation with the greatest number of smartphone owners. The country's two largest mobile telephone companies serve over a billion customers combined. As Chinese smartphone ownership continues to grow, it will emerge as one of the most important marketplaces for software developers.

Recent research by ACT has shown that some American apps are among the top sellers in the app stores in China. For example, Angry Birds. Apple's decision to accept the Chinese yuan in the China app stores has helped improve opportunities as discussed, but the problem of piracy could scuttle all of this. It will be very difficult for developers to succeed in China if they find piracy threatens their work, and even in a curated marketplace like Apple's.

It's clear that demand exists in China for U.S.-made apps. It's critically important for American app developers to ensure that this demand is realized through sales rather than theft.

The U.S. must confront these obstacles to ensure that the global marketplace remains dynamic and competitive. The future of the app economy looks bright for American small businesses, and developers will continue to find success just as long as these challenges don't go unanswered.

Thank you for your time and consideration, and I look forward to hearing your questions.

**PREPARED STATEMENT OF AHMED SIDDIQUI  
FOUNDER OF GO GO MONGO**

**Testimony**

**Of Ahmed Siddqui**

Creator, Go Go Mongo

Member, Association for Competitive Technology

*Before the*

United States China Commission

*On*

The Evolving U.S.-China Trade & Investment Relationship

*At*

562 Dirksen Senate Office Building

June 14, 2012

Commissioner Reinsch, Commissioner Shea, distinguished panelists, my name is Ahmed Siddiqui and I am pleased to speak with you today about the importance of addressing China trade and the mobile app marketplace.

I am the creator of the iPhone app Go Go Mongo! And a member of the Association for Competitive Technology. ACT is an international advocacy and education organization for people who write software programs – often referred to as application developers – and providers of information technology (IT) services. ACT represents over 5,000 small and mid-size IT firms throughout the world and advocates for public policies that help its members leverage their intellectual assets to raise capital, create jobs, and innovate.

I make education apps for young children that help them develop healthy eating habits. I knew that kids love characters like Dora and Mario so I created Mongo, who kids steer toward healthy eating decisions. Making a game out of Mongo's eating choices allows children to have fun while learning. Sometimes they don't even realize they're learning when it seems like a game.

### **Evolution of the Software Industry Initiated by Smartphones**

Revolutionary changes taking place in the mobile marketplace make apps like Go Go Mongo! possible. Mobile technology has led to a renaissance in application development; small software companies that once wrote applications exclusively for big software platforms at the enterprise level are now able to create innovative apps and sell them directly to consumers. The emergence of this app marketplace has broken down the longstanding barriers to entry, like marketing costs and publisher delays, that limited opportunities for independent software developers like me.

The rise of the app marketplace has coincided with the explosive growth of smartphones. Sales of these devices continue to outpace all predictions and are providing a huge boost to our economy. Total smartphone sales in 2011 reached 472 million units and accounted for 31 percent of all mobile devices sales, up 58 percent from 2010. In the United States and Europe, smartphone sales have begun to overtake feature phones and that trend is expected to continue.

Smartphones derive considerable value from the apps that run on them. Consumers are attracted to phones based on the functionality these programs provide. Telephone companies and handset makers have devised entire ad campaigns built around highlighting the apps that run on their platforms. "There's an app for that" is probably one of the most recognizable ads in the technology space.

### **The App Marketplace: An Incredible Success Story**

It should come as no surprise that the growth of the app industry has been a dramatic success story, even in the face of our enduring economic slowdown. The mobile app market got started in 2008 when Apple launched its App Store and



allowed independent developers to sell applications for the iPhone. Since then, over 30 billion apps have been downloaded in the App Store, earning developers over \$5 billion. Over a million apps are available across all platforms and the mobile app marketplace has grown to a \$20 billion industry since its inception four years ago. Over the next four, analysts expect that number to rise to \$100 billion.

This success has had a dramatic impact on job creation. A recent study by the University of Maryland found the Facebook platform for app developers has created more than 182,000 jobs and generated over \$12 billion in wages and benefits. Facebook is just one platform that app developers write for, with iOS, Android, Windows Phone 7, and Blackberry also attracting mobile app developers. Another study identified nearly 500,000 jobs created by the app economy and ACT's own research estimates that the current mobile apps economy has created, saved, or supplemented more than 600,000 jobs nationwide.

### **Foreign Markets: New Opportunities, Recurring Challenges**

App developers are creating jobs and growing businesses. They are optimistic about expanding into new markets and creating even more jobs. The 99-cent price point of apps makes them accessible in developed and developing countries alike. Foreign markets – particularly those in Brazil, Russia, India, and China – offer considerable opportunities for our members. The BRIC nations produce more than 50% of revenues for the technology industry and offer far more in growth opportunities.

While piracy has historically posed a challenge for developers across the world, the emergence of mobile app stores has offered a partial reprieve. Apple, Microsoft and Blackberry sell apps in curated stores. Phone users can only install apps through a store that reviews each piece of software before approving its admission. Although some developers chafe at the control these stores exert and the conditions required in the approval process, they largely appreciate that stores greatly cut down on the piracy rate.

Each app installation from a curated store – even free apps – involves a transaction record. This has cut down on pirated sales, relegating them to open platforms such as Android where they proliferate as free downloads. It is still possible to hack phones to provide access to alternative app stores where pirated apps can be found, but this involves technical expertise and voids the terms of service. Since this action denies the user access to technical support, upgrades, and virus protection, most Americans opt not to pursue this illicit route.

In China, however, this has not been the case for multiple reasons. The incidents of hacked or “jailbroken” phones is high with estimates as great as 60%. Combined with China's traditionally lax enforcement of intellectual property rights, U.S. developers' export opportunities are limited at a time they should be rising.

I am one of those developers.

### **Case Study: *Go Go Mongo!***

I released *Go Go Mongo!* just a year ago. My app sells for just \$0.99 in the store and has over 40,000 downloads in the United States alone. At launch I didn't spend too much time thinking about the Chinese market. After several months, however, I was contacted by a Chinese app marketing site wanting to sell ads on a forum dedicated to my character, Mongo. After running a quick Google translate on some of the websites I found hundreds of posts raving about the game, about the Mongo character, discussing game tactics, and even talking about how much there were looking forward to the next app. It was incredibly exciting to realize my product had attracted so many fans abroad.

However, this excitement was quickly replaced by anger and disappointment when a check of my iTunes App Store sales in China revealed only one copy of the app had been sold in China. The community of hundreds or maybe thousands of *Go Go Mongo!* players in that country were almost entirely using pirated copies of the app, copies for which I earned nothing.

These Chinese users were visiting pirate app stores that sell apps for phones that have been hacked. The pirates even sell ads on my game and keep all the profits.

I've made a decision to try to expand my product into China and take advantage of the interest in my product. I've hired a translator and have spent many hours to update my app to appeal to the Chinese market. But this is a huge risk. I already know my app is being pirated by the thousands so my attempt at expanding into this marketplace could fail before it even starts. Not because my product isn't successful, but because pirates have no fear of recourse. I hope that Apple's recent decision to allow Chinese citizens to purchase mobile apps through the legitimate iTunes store using RMB instead of U.S. currency will help me.

However there are still difficulties that app developers will face even in legitimate, curated stores.

### **Case Study: Dotfuscator**

Despite the piracy protections that the curated store model provides, developers are now facing an old problem emerging in a new form, the "application chop shop."

PreEmptive Solutions, based in Mayfield, Ohio, created Dotfuscator, a software application that protects intellectual property within apps, prevents piracy, and monitors application usage.

PreEmptive reported a recent incident involving 22,604 reported cases of stolen Dotfuscator key usage in a total of 46 countries. Of those stolen keys, only two were actually hacked. It was replicated, pirated, and installed another 22,602 times. This happened in a rather unexpected fashion.

Due to the sophistication of Dotfuscator, the tamper alerts were not disabled when the keys were stolen. Because of this, the distribution patterns of the stolen keys were accessible to PreEmptive and provided an interesting revelation; this wasn't pirated software sold in some illicit marketplace. This was an app completely copied, re-engineered, and sold in the App Store as if it was an original product. It was the brazen act of a new piracy phenomenon, the application chop shop.

The irony of pirates seeking to protect the intellectual property of their counterfeit goods from other thieves was not lost on Dotfuscator's creators. But profits from the sale of 22,602 copies of software were lost. The tamper alerts allowed PreEmptive to see what region was responsible for the proliferation of its stolen software. The data pretty clearly pointed to China.

Apologists for intellectual property theft in the software industry often claim there is no identifiable harm since the product was downloaded for free. Their argument is that there are no lost profits since the downloaders would never have paid for the product and there is no additional cost to the developer for downloads. The application chop shop demonstrates this is a false argument.

The pirated product in Dotfuscator's case still commands a price in the app store and is a clear instance of lost profits. Additionally, a hacked app often requires the app developer to bear the expenses of the additional traffic from unauthorized users hogging resources for hosting, bandwidth, and human support.

Removing an app built with your legitimate content from an app store is a time-consuming process. The curated store must verify ownership before pulling an app, and that's a good thing. But what has happened recently is that pirated apps, once taken down, appear almost immediately under a new name with similar, if not identical, stolen content, forcing the legitimate developer to begin the process all over again. This is most difficult for the smallest companies. Curated stores are unlikely to accidentally approve an unadulterated copy of Angry Birds. But small apps with limited market share are exactly the kind that is most vulnerable to counterfeiters. Not every reviewer is familiar with all the apps in the store.

### **Conclusion: China Presents Enormous Opportunities but Old Risks are Enduring**

These are just a couple examples of a widespread problem with profound implications for American app developers. China has passed the United States as the nation with the greatest number of smartphone owners. The country's two largest mobile telephone companies serve over a billion customers combined. As

Chinese smartphone ownership continues to grow, it will emerge as one of the most important marketplaces for software developers.

Recent research by ACT has shown that some American apps are selling reasonably well in the app stores in China. Apple's decision to accept RMB in its China App Store has helped improve opportunities as discussed. But the problem of piracy could scuttle all of this. It will be very difficult for developers to succeed in China if they find piracy threatens their work, even in a curated market like Apple's. It is clear that demand exists in China for U.S.-made apps. It is critically important for American app developers to ensure that this demand is realized through sales rather than theft.

The U.S. must confront these obstacles to ensure that the global marketplace remains dynamic and competitive. The future of the app economy looks bright for American small businesses, and developers will continue to find success, as long as these challenges do not go unanswered.

Thank you for your time and consideration on this important topic and look forward to any questions you may have.

**PANEL II: QUESTION AND ANSWER**

HEARING CO-CHAIR SLANE: Thank you, Mr. Siddiqui, and I apologize for mispronouncing.

MR. SIDDIQUI: No worries. It happens all the time. Don't worry.

HEARING CO-CHAIR SLANE: Thank you.

We will start with Commissioner Wortzel.

COMMISSIONER WORTZEL: These are three really sad stories. I guess they sort of sum up why sometimes our annual reports don't seem very positive about Chinese trade practices.

I've got a couple of questions. For Mr. McCarthy, we recently had a fairly long discussion with a journalist from Politico about this whole idea of whether government support for the national champion telecom companies like Huawei and ZTE amounts to forms of subsidies.

So I'd ask you whether you consider the support from the Chinese government in various forms to be subsidies? And second, what sort of influence do you think that the Chinese government gets over these companies and their activities and corporate decisions because all of the support?

And, then, for Mr. Fellowes, I take it the State Department and Commerce have at least spoken on your behalf. Has any action been taken to bar all products from Shinri from entering the United States?

MR. McCARTHY: Let me address the first question. In terms of subsidies, yes, I do believe they are subsidies. My perspective is that if U.S. companies, like Infinera or Ciena or others, were given the same level of support, we would have terrific market share gains.

What's interesting about Huawei and ZTE is it's not just the subsidies, the domestic subsidies, that occur, but also some of the ex-im type of financing that's provided as well as the third element is the closed market.

So, effectively, you have a closed market where you can make your profits do well, excluding most non-Chinese companies, but then you also have the ability to provide very, very favorable terms to your customers, and that's coupled with a policy of oftentimes combining--we've seen examples and we've heard of examples where the Chinese trade representatives will tie the purchase of bauxite or other purchases, saying we'll be interested in purchasing goods from you, but as a quid pro quo, we need to make sure that you are supporting us in a form of supporting some of our national champions. Oftentimes, this will include Huawei or ZTE.

We would love to have that advantage in the U.S. It's not our view of the free market, but absolutely we believe that they are subsidies.

COMMISSIONER WORTZEL: And what about your assessment of the type of influence that gives the Chinese government over what those companies do?

MR. McCARTHY: Yes, I think the two elements that you oftentimes hear of are support versus influence. No doubt that they are strongly supported. The Chinese government is strongly supporting Huawei and ZTE. I think particularly Huawei formed by the former People's Liberation Army, you know, the general People's Liberation Army, the rumors are extremely strong ties.

Obviously, they're a private company. Their shareholders are not disclosed. The, I think, official stance is that their shareholders are 99 percent owned by a Chinese union, but the unofficial position and some of the things that you see from other governments, such as Australia and others, saying that there are close ties to the Chinese government. Our position, our belief is that that's the case, but certainly I have no proof of that.

MR. FELLOWES: Okay. I think I heard two questions. The first relates to the support from the Department of Commerce. As a private citizen and a business entrepreneur, and one who has never had an experience like this before or needed to come to the United States government for help, I have found it a heartening experience to be able to bring our problems to various parties in the Congress, and in the current government. The former Secretary of Commerce, Gary Locke, has become very involved in this case.

I was invited to a lunch with half a dozen people to discuss intellectual property issues, and at that time he pledged support and he has advocated directly and personally to the Jiangsu provincial government on our behalf.

And we met with the people at Commerce, again, yesterday. It is not for a want of effort and good effort that our tools remain in China. It's a very difficult deal to spring them loose, and we're determined that we're going to do that.

But we've had excellent support.

The second question pertains to restricting the flow of what we suspect are damaged shredders and certainly pirated shredders. We met yesterday with USTR and other groups to develop a strategy to make sure that they do not enter the United States.

We have this problem, of course, worldwide. It's not just a U.S. problem, and with the local government's agreement with our former partner to permit the sale of these products, it just opens up a whole new dimension of disaster management for us because there is immense liability associated with the use of these products of which we can't ensure the quality and safety.

COMMISSIONER WORTZEL: Thank you.

HEARING CO-CHAIR SLANE: Thank you.

Commissioner Wessel.

COMMISSIONER WESSEL: Thank you all for being here although I'm sorry you have to be here because you have bad stories to tell. So I'd be a lot happier, I think, for you, as you would be, if you didn't have to appear today to talk about the problems that each of you have with China.

I appreciate what you just said, Mr. Fellowes, about the support of the U.S. government, and I do know that they care. But it's got to be pretty frustrating for a businessperson to, I assume, spend a lot of money on Washington-based help, shall we say, to have to reach out the way you are for what is a commercial dispute that one would assume would be settled properly within the legal system in China.

Similarly, to each of you, each of the other witnesses, you're facing problems that if there was a transparent rules-based system, one would assume that your problems would be solved easier.

My question to each of you is how much are you having to put into actually defending your rights and actually moving forward to protect your interests, your company's interests, your employees' interests?

Mr. Siddiqui, it sounds like your 40,000 downloads at 99 cents each, I admire everything you're doing, you know, innovation, and at the level you're doing it is really key--we talked about it on the last panel. How do you survive long term?

You said you're an optimist. That's great. You know, it seems to me if I was in your chair, I wouldn't share your optimism. So I'm really trying to understand from each of you--I understand the government has been helpful, but you got to be pretty frustrated. How much time, effort, resources, have you been putting in simply to get a fair shake? Mr. Fellowes, do you want to start?

MR. FELLOWES: Okay.

COMMISSIONER WESSEL: And I don't need exact dollar. I don't mean how much have you spent on a lobbyist or anything else.

MR. FELLOWES: Of course.

COMMISSIONER WESSEL: Unless you want to tell us.

[Laughter.]

COMMISSIONER WESSEL: But it's got to be a lot of time and effort you're putting into this.

MR. FELLOWES: It's an enormous time and effort. I think the most time, labor-intensive part of our work has been facing the reality that we would have to start and rebuild this business from scratch. It took us ten years to build this factory, build these tools, design the products, and do all of this work, and to be faced with the stark reality that even though we have tools that we own inside a factory that would enable us to get back to the market quickly, and at a low cost, they are not within our reach.

And so the level of frustration is hard to describe. The ruling that was made in May that now permits our former partner to sell our inventory opens up another huge dimension, and it will be a labor-intensive effort to try to work country-by-country to restrict the entrance of the products into the various countries around the world.

So I can't quantify how much time and energy. I can tell you this. This ordeal began for me in January of 2010, and it has consumed almost all of my time ever since just to enable our business to survive and get back into the business, and that would be the same case for most of our top people.

COMMISSIONER WESSEL: And just a quick follow-up. Are you pursuing a 337 here in the U.S. to exclude the products coming in?

MR. FELLOWES: That is one of the options that we talked about yesterday.

COMMISSIONER WESSEL: If you were to do that and get affirmation here, would that decision be applicable in other markets or have you got to do this country by country?

MR. FELLOWES: I believe it's country by country.

COMMISSIONER WESSEL: Okay. Either?

MR. McCARTHY: Yes. As evidence, I would, respond that we spend a lot of time and energy on it. Two things, I think, that cause us some level of optimism, not being by nature as optimistic in these things. But the first I think

is the EU Commission's, you know, rumor of bringing an antidumping suit against Huawei and ZTE.

Our view, if we got a vote, would be that's absolutely the right answer. You see some of the examples in terms of, you know, the free equipment that they're sending around. I mean their perspective is let's lock up the business now. Over time that will drive out competition, drive out innovation, and we'll be left as the winners.

And if I were in their position with the government backing, I'd probably do the same thing. It doesn't make it right, but it's certainly the direction they're heading.

I think the other area that is reason for optimism for us is the security concerns that have been raised. As the provider of an optical network, the three big concerns you have are, first, is going to be the ability to take down the network. If we were a rogue or had other agendas in mind, we could probably include in our software package the ability to take down our equipment, either temporarily or permanently, and that would mean that you would have to route your equipment somewhere else. If there is no available bandwidth, the bandwidth gets lost.

Second element that you have is the ability to eavesdrop on conversations or just to take the whole information that you have and either listen in or copy that information and send it elsewhere. But very, very difficult for a telecom service provider who is not in the business of monitoring for that information to learn about that.

And then the third element from a security perspective, as I'm sure you're aware, is the whole threat of adjacent systems. Our optical communication systems form the backbone of the information highway for all the information that gets transported, but they're all connected to power systems and the power grids, electrical systems, everything else, so there's the ability to inject malware to adjacent systems, and that's a real threat in terms of the security and the providers that you have on these optical systems.

I'm heartened by what's happening in places like Australia, Germany, where they've said we can't deal with the risk that's posed by some of the Chinese vendors.

MR. SIDDIQUI: I'm just a small fry here so I don't have the resources to really spend much money on defending myself here. It's actually quite tough to compete in the U.S. app store alone, and then thinking about China, it's just, you know, it's a big problem, and there are thousands of app developers just like me that have this exact same problem, and we can't really do anything about it because we're just one or two-man shops.

I actually had the opportunity to go out to China back in November, and it was amazing how much Angry Birds merchandise was all over the place, like, and we clearly know, it's all knockoff stuff. I mean they at least have opportunities to defend themselves, but I mean me as an independent developer, I can't.

The one thing I am doing, though, is the new game that I released just for the Chinese market, I did spend a little bit of money to get that translated and updated for the Chinese market, but I am realizing that the



education market, it's surprising that parents are actually spending quite a bit of money to teach their kids English.

And my app in the U.S. may be used for healthy eating, but there it's actually being used to teach names of different foods, et cetera. And so I partnered up with a company out there that understands the Chinese app marketplace, and they have relations with, you know, the app stores there. I mean I don't know how they get all this stuff distributed. They also have relationships with schools, and they're distributing the product for me.

Now, granted, I'm not going to be making the full 99 cents on each app, but still at least I'm hopeful that I'm going to get something out of it. So that's kind of where I'm at, but, yeah, compared to your story, I'm nowhere near that.

COMMISSIONER WESSEL: Thank you.

HEARING CO-CHAIR SLANE: Thank you.

Commissioner Fiedler.

COMMISSIONER FIEDLER: Mr. Fellowes, without necessarily naming names, did you ever figure out who's behind your extortionist permitting them to do this in the power structure? Relationships with the Party, relationships with the mayor?

MR. FELLOWES: Yes. The former joint venture partner is a first-generation entrepreneur in Changzhou, China, and he has established a very close relationship with government officials and with Party officials, and when I traveled to Changzhou to seek justice, when I got on the airplane--this is after the closure of the factory--I felt fairly confident of a good outcome one way or another.

I felt somewhat confident that we could either open the plant under supervision or we could facilitate a sale of the business--if he was just looking for money. And we would have paid a huge premium for the business if we could have bought it.

But in our negotiations with the government, they recognized they stood much to lose if this factory went down. 1,600 workers unemployed walking around the streets is not what they want. A tax stream going into the Changzhou government was going to be lost. And worst of all, this would be a horrible mark against the attractiveness of Changzhou as a foreign investment site.

So I felt like we had plenty to go on, and we met with the officials, they believed our story, they told us two or three times in the course of this five or six days that we worked together, that they would visit with Mr. Zhou and come back and the problem would be solved. And each time they came back, sheepishly, and said we were unable to get him to move. So that told us that he was more powerful--

COMMISSIONER FIEDLER: More powerful than they were.

MR. FELLOWES: --than they were. He is an employer of a lot of people in Changzhou. He has other business ventures. I will add that he is currently under central government investigation in the--

COMMISSIONER FIEDLER: Bo Xilai.

MR. FELLOWES: --railroad industry corruption case. And he and his wife are excluded today from traveling outside China. So things have changed a

little bit for him in the last 22 months. But that's the best picture that I can paint of his power source.

COMMISSIONER FIEDLER: It's interesting. Your problem is state-sponsored ignorance. In other words, lack of enforcement. Your problem is state-sponsored extortion on a local level. Your problem is national state-sponsored policy.

Now, I'm looking at everybody, you know, all these economists come in here, and I've always asked so what do you call this place? Capitalism? State capitalism? Some people say bureaucratic capitalism. Somelike John Garnaut, a reporter out there, is calling is a "mafia state" now. Okay. The Bo Xilai stuff is showing all kinds of inherent weaknesses of corruption at high levels in the political system.

Now, you are three people. The question then becomes how is this scaled to us? How is this scaled in other business relationships in the country? What does the future hold?

Why, by the way, Mr. Fellowes, you ever thought you were going to get justice out of the court system, I would say you were probably naive. I mean maybe now with hindsight, you do, but it's controlled by the Party; right.

I don't have any optimistic policy prescriptions unless we are punitive. So, in other words, you got messed with. How do we get the Chinese government's attention at a level sufficient to make a difference? It's draconian, but the willingness of our own government to do things like that, to play similar games in retaliation, is--how shall we say--severely limited. In other words, we don't play the reciprocal hardball.

Huawei, we know their business practices; yet, we allow them into the United States. We may keep them out of the security businesses, but we allow them in the telecom business, in the commercial sector, which you just described to us is you're getting creamed. And they're doing it in an unfair way.

I don't know that we're having the tools. What are the new tools we need for this new world of thug capitalism that we're competing with?

MR. McCARTHY: Let me try and answer that. I mean I think that one of the responses has got to be more of the quid pro quo approach that China tends to take. So, the first thing, when the rumor came out about a potential antidumping suit by the telecom industry against China, their immediate response was, well, we think that you're dumping agriculture, and we think you're dumping some of your finished goods, Western European finished goods.

So if you consider taking this action against us, we're going to take a similar action and kind of put the pain to you. That threat is one of the overarching themes of China's response to these type of initiatives.

My perspective is that two concerns that the U.S. has to be very concerned about are the security concerns we've talked about, but the security concerns are mixed. So there may be DoD, NSA and some other organizations may understand them, but I don't think that that gets translated always in terms of the buying behavior of some of the customers in the U.S. that probably transport a lot of government business.

They may tell the government we'll try and put it somewhere else, and I think that one of the concerns has to be that from a U.S. perspective, I don't know that we have the tools in place or the fortitude to tell China unless

you open up your market, we're not going to allow ZTE and Huawei to come into the U.S. telecom market because certainly the market for most U.S. vendors is closed in China. You can see by the market share information.

But I'm skeptical and concerned about the fact that I don't believe that we're going to turn the tables on China and say unless you open up your market and show that it's open, we're going to limit your ability to come in, and that's independent from the security concerns.

COMMISSIONER FIEDLER: That's reciprocity.

MR. McCARTHY: Yes, the reciprocity approach.

COMMISSIONER FIEDLER: That is the central question. We as a Commission are beginning to address that question. We've always raised it. Reciprocity is a real problem. We believe in the theory of all of this stuff; therefore, we don't want to change the rules. We want to let them in, buy our oil companies, even though we can't buy theirs, and some theoretical rationalization, but the reciprocity, lack of reciprocity kills businesses like yours.

MR. McCARTHY: I think that's right, and I think that we come at it from a perspective of we are for free trade and, absolutely, I mean it's part of the American DNA, is we want free trade, but it has to be, the prerequisite for that has to be that we are engaged in a market that is willing to accept free trade on both ends.

It can't be free trade from one end, but we're going to have a concerted effort and a closed trade on the other end.

COMMISSIONER FIEDLER: I agree. Thank you.

HEARING CO-CHAIR SLANE: Thank you.

Commissioner D'Amato.

COMMISSIONER D'AMATO: Thank you, Mr. Chairman, and I want to thank the candor of the panel in describing your problems. Obviously, you take risks with regard to getting benefits from the Chinese government. When you do that, we understand that, but it's important for us to have this kind of testimony. And I share my colleagues' empathy and outrage over the behavior that you've been subjected to.

And I want to make one thing clear--I couldn't describe it any better than Commissioner Fiedler--what you're faced with is the action of a foreign state. I mean essentially, you know, you thought maybe you could persuade the local government or Party to come to your side, and maybe they gave you indications, but in the long run, at the end, you're working against the role of a foreign state in terms of getting your benefit.

And this Commission, in our last report, which I hope you'll get copies of, we mentioned for the first time, we thought, a guiding principle of our relationship with China should be reciprocity, and it seems to me that this testimony reinforces in spades that conclusion.

And what do we mean by reciprocity? The fact is that what is important to the Chinese; the only thing important to the Chinese, as far as I can tell, is access to our market. Access to our market is the key, and without access to our market, they'd be in big trouble. So the question is do you want to use the thing that they care about the most to try and change their behavior? It seems to me that, you know, we run the risk of violating the international laws and rules and guidelines and principles that we sign up to.

But to get change in behavior, it seems to me that we have to deny them access to our market which is sufficient to get their attention that this kind of behavior will hurt them more than it will help them. I mean I'm just saying that's my opinion. You can, I'm hoping that you'll agree with that. But persuasion doesn't work, and it seems to me that that's the only kind of tool that we can use that will be effective over the long run.

It's not a good tool because, in many respects, we're following their game, but we have to decide what's important to protect our industry, and you guys in coming here and putting a face on this problem highlights to me that I think we're moving down the right road in terms of that recommendation. I don't know if you have any comment about that, but thank you very much.

MR. FELLOWES: Yes, sir.

COMMISSIONER D'AMATO: If you have a comment on it, be happy to hear it. Go ahead.

MR. SIDDIQUI: I actually have a slightly different idea. It's a little bit weird and different.

COMMISSIONER D'AMATO: Go ahead.

MR. SIDDIQUI: But I was thinking about this anyways. So the best thing that the American entrepreneur has is innovation, and when I was out in China, I quickly realized that there really isn't a lot of innovation there. It's a whole economy based around copying. So I mean Facebook was invented here, and in China they just blocked Facebook and built their own; right? And so they've got a huge marketplace of just building, taking American ideas, copying them, and then building their own.

So there isn't a ton of innovation that's going on, but there actually are a lot of innovative people, innovative entrepreneurs in China that are trying to do innovative things, but they're really scared that even their own ideas will get stolen.

I notice this because as part of my other job, I run these events called Startup Weekend, and this is a weekend-long event where entrepreneurs will come and pitch their ideas, actually will build something over a weekend, and then present it back to a panel of judges.

So I was asked to actually run one event there in China, and when I went out there, the biggest concern that everybody had was, well, if I share my idea, how do I know that it's not going to get stolen; right? And so I mean even the Chinese have the problem. It's not that, you know, it's, just, hey, we're doing it to screw the Americans; right?

COMMISSIONER FIEDLER: No, I--

MR. SIDDIQUI: So I don't know. I mean my thought around this is, okay, we can take the enforcement route. Otherwise, what we can do is we can find these Chinese innovators and say, look, you know, the American innovators are getting hurt by these practices, and I'm sure you're getting hurt by this. Let's go together to the Chinese government and say, look, I mean you got to do something to support your own people, to support innovation in your own country, but at the same time, you got to support us in letting our own innovators innovate in China.

I don't know. It's just kind of a weird counterpoint, but I thought I'd bring it up.

COMMISSIONER FIEDLER: Can I just say something? That's a very politically charged solution, which is why the fear is so prevalent that you found. I mean that is a political solution.

MR. SIDDIQUI: Yeah.

COMMISSIONER D'AMATO: I commend you for that. I would hope that something like that would work. I mean it sounds like, you know, it's difficult to do. If it works, it would be great. It would be better than closing our market.

But my reaction is that nothing else seems to work without closing off what they really need.

MR. SIDDIQUI: Yeah.

COMMISSIONER D'AMATO: So--

MR. SIDDIQUI: I agree with you on that sentiment, too. So--

MR. McCARTHY: Yeah, I would just say that I agree. Ultimately, I think that it's, and again it's not an expression of they're bad people, or they necessarily have bad intentions; it's that you have a concerted effort of the Chinese government to be successful in certain areas, and they will do everything it takes to be successful in those areas.

And I think that ultimately they're only going to listen if there is the reciprocity angle of the risk of closing the markets to force them to open their markets up.

HEARING CO-CHAIR SLANE: Thank you.

Commissioner Bartholomew.

COMMISSIONER BARTHOLOMEW: Thanks very much and thanks to all of you.

It's nice to see the optimism as well as the sort of what I would call the hard cold reality of what's been going on, and I think that your testimony is an important cautionary tale, both for businesses that are thinking about investing in China, U.S. businesses thinking about investing in China, and for U.S. policymakers.

Mr. Fellowes, it strikes me that the experience that you are having is something that people would have thought maybe ten years ago, but this is happening right now, and it must have been terrifying to you at parts of this when there were guards at your gates, and you can't get access to your own material, and what was happening to your people. So like others, I'm glad to hear that the U.S. government is helping you as much as it can.

Mr. Siddiqui, I would only point out on the intellectual property, for the past 20 years, we have been hearing that when China had its own IP to protect, they would start taking IP seriously, and we haven't seen a whole lot of evidence happening.

So I hope that you're right that there's a possibility of that to happen, but we have a whole lot to lose in the time period until it happens. Your innovation, for example, Mr. Fellowes' manufacturing, Mr. McCarthy's telecom, all of your industries are the backbone of our economy today and tomorrow, and we have to figure out a way to deal with all of that.

That said, Mr. Fellowes, I'm trying to understand, do you have any ability now to sell into the Chinese market?

MR. FELLOWES: Yes.

COMMISSIONER BARTHOLOMEW: Oh, you do. So they haven't blocked your products from coming in?

MR. FELLOWES: No. Interestingly, one of the first measures that our partner took against us was blocking our shipments to customers in China. We have a small sales division. It was independent and is independent of the joint venture operation, but he claimed that he was entitled to participate in that business, and it should be folded into the joint venture. When we refused, he said, okay, I'm blocking shipments, and that shipment blockage began actually in May of 2012, about two or three months before the main blockage. But since that time and since we have established a new operation in Suzhou, China, which is about 40 miles away, we have resumed shipments to our customers.

COMMISSIONER BARTHOLOMEW: Okay. Interestingly, actually, we were in Changzhou and Suzhou about two weeks ago now, and I wish that we had known of your situation. The people in Changzhou do quite a presentation on what they have to offer foreign businesses, and again I think this is a cautionary tale. We met with government officials. Had we known about this, we would have been able to raise the issue and undoubtedly sour the discussions that we had.

[Laughter.]

COMMISSIONER BARTHOLOMEW: Mr. Siddiqui, you mentioned that there was one download from China on that iTunes store. Is that the one that you think that knockoff came from?

MR. SIDDIQUI: Yeah.

COMMISSIONER BARTHOLOMEW: And is there any way that you can trace--I presume it would have to be with Apple's cooperation--who is the person who did that one download?

MR. SIDDIQUI: I think it's really difficult to trace it back because I'm sure that copy has also been copied.

COMMISSIONER BARTHOLOMEW: Right.

MR. SIDDIQUI: Because they have these different app stores in China that basically they're just knockoff sites where they've cracked the code. I mean the thing is that you can actually do this here in the U.S., too, but the thing is that we know for a fact that these app stores, that's all they do, they find out what new apps are coming out, they buy them, crack them, put them on their site and distribute. So it's very tough to track.

COMMISSIONER BARTHOLOMEW: Right. I would remind people that it wasn't just the app stores that are being knocked off but entire Apple stores were being knocked off.

MR. SIDDIQUI: Yes.

COMMISSIONER BARTHOLOMEW: Is Apple providing or making any effort to help protect the IP of apps on iTunes? I don't know if it's its role, but it's more out of curiosity.

MR. SIDDIQUI: Yeah. So the thing is that if you find an app that's being distributed under some other name, and it's the same as yours, you can actually ask Apple to take it down. And a few of my friends actually have gone through that process, and Apple is actually quite good about it.

COMMISSIONER BARTHOLOMEW: Okay.

MR. SIDDIQUI: But what's interesting about it is that once a thief takes it, they'll create another account and then do it again over and over again. Or they'll create a slight difference in the product, and then you don't know. I mean I found out about my like forum dedicated to my character because somebody was trying to sell me ads on it. Otherwise, I would have no clue.

COMMISSIONER BARTHOLOMEW: It's just really amazing. Just a comment, again, Mr. Siddiqui, that, you know, these processes that you're talking about take a lot of time and energy. Mr. Fellowes has told us. I mean he's working full time on a situation like this now, and I know that for app developers, you're often one person sitting at home putting these things together.

I hope that you all will consider the possibility of just organizing yourself some so that each individual can learn from the next individual.

MR. SIDDIQUI: Yes.

COMMISSIONER BARTHOLOMEW: Because there are lessons to be learned from everybody, lessons that there are a lot of things we wish we didn't have to know in this world, and I would characterize these lessons as that. But it would be nice to see moving forward if some of these issues can be prevented.

MR. SIDDIQUI: Great. Thank you.

HEARING CO-CHAIR SLANE: Commissioner Shea.

CHAIRMAN SHEA: Thank you for being here today. It's been quite eye-opening.

Mr. Fellowes, I love your branding. I love the "bred to shred" with the bulldog, and when I saw that in the briefing book, it kind of made me smile so it works. But it's really good.

MR. FELLOWES: Thank you.

CHAIRMAN SHEA: You know, as Commissioner Bartholomew mentioned, in May, we went to Jiangsu province to study Chinese abilities or progress in moving up the value chain and whether they're making progress in innovation. I guess they have. Your situation is one way of making progress--just take the factory.

But we went to Nanjing, and then we went to Changzhou, and then we went down to Suzhou, and as I understand, you had--your factory was in Changzhou.

MR. FELLOWES: Right.

CHAIRMAN SHEA: The joint venture. And now you have reopened a non-joint venture facility in Suzhou. Is it wholly owned by you or?

MR. FELLOWES: Correct.

CHAIRMAN SHEA: So help us get a better, again, I share Commissioner Bartholomew's statement, that if we had known about your situation--I had heard about your situation, had read about it in the past, but never placed it geographically in Changzhou--but we probably would have raised it with them, and I regret that.

But my sense from Changzhou is that the business there is very weighted toward the Chinese enterprises, and Suzhou is a bit more sophisticated and more of a Western multinational- Chinese company mix. Is that fair to say?

MR. FELLOWES: That's exactly our assessment. Yes.

CHAIRMAN SHEA: And my sense also, you know, is that the Changzhou government is really trying to encourage more Western investment,

foreign, Western companies to come to the Changzhou area, and they did a nice job. They really gave us a bit of a red carpet treatment, and we appreciated the courtesies. Is that correct?

I mean they seem like they're trying to catch up to Suzhou; is that fair?

MR. FELLOWES: Yes. Suzhou is a far more sophisticated city. It's a more international city. It's a university town. Changzhou is interior into China. It has a lower economic base. The Changzhou government has been working very intently for as long as we've been involved in attracting foreign investment, and that's why I felt like we probably had a good shot at salvaging something when the extortion plot thickened, and we found ourselves without a factory. But, you know, that's sort of the picture that I would paint on Changzhou.

CHAIRMAN SHEA: What was the reaction of other Western countries who had operations in Changzhou to your plight? Do they start trembling themselves? Do they provide support? Or they just keep a low profile and let you deal with your own problems?

MR. FELLOWES: I can't really answer that question because, in a sense, we were expelled from Changzhou, and when our management team was barred from entering the facility, we set up what I'll describe as an office in exile in Suzhou or actually in Wuxi, which is the intermediate city, and we operated out of a hotel for six months or eight months or something like that.

And the amount of information, at least that reached me, of that nature was minimal at that point.

CHAIRMAN SHEA: Did you hire Chinese attorneys?

MR. FELLOWES: Yes.

CHAIRMAN SHEA: Were they able to operate freely or were external pressures brought to bear against them unrelated to the legal proceeding?

MR. FELLOWES: If so, it would be unknown to us.

CHAIRMAN SHEA: Uh-huh.

MR. FELLOWES: But I would say our level of confidence in dealing with Chinese attorneys and the whole idea of client privilege and trust, it's a very different relationship than we would have in the United States, and whether or not the Chinese attorneys that we have hired are working exclusively with Fellowes' best interest in mind is something that I would have less confidence in ascribing than I would in the United States.

CHAIRMAN SHEA: Okay. Thank you very much.

COMMISSIONER BARTHOLOMEW: Just a quick comment, Mr. Fellowes. Both Changzhou and Suzhou are part of the same provincial government.

MR. FELLOWES: Correct.

COMMISSIONER BARTHOLOMEW: And you have been very brave, both in testifying before Congress and now coming and talking to us about your situation, and I hope that if you start seeing any blowback in your Suzhou operations and your functioning there, that you'll continue to keep us and keep the members of Congress you've been working with informed because there can sometimes be retribution. So thank you for being willing to talk about this.

MR. FELLOWES: I'm aware of that. Yes.



COMMISSIONER BARTHOLOMEW: But please let us know if, indeed, something starts happening.

MR. FELLOWES: We have worked very intently to establish very strong relationships with the Suzhou government. That was one the mistakes that we made in Changzhou, and we have a very solid relationship with the mayor, and we're hopeful that there won't be repercussions.

HEARING CO-CHAIR SLANE: Thank you.

I have a question directed to Mr. McCarthy. The Chinese government is starting to pressure their state-owned enterprises to go abroad. And we are struggling here with how do we deal with state-owned enterprises with all of the advantages that you have just testified to coming into the United States and competing with our companies?

For example, there is a large state-owned steel company, Anshan Steel, that is interested in opening up a steel mill in the United States. How do U.S. steel companies compete with a company, a Chinese company, that has no cost of capital and all sorts of other subsidies, and what should the position of the United States government be in allowing these companies to come in and do business here?

And let me further say that the governors of these states are looking at it differently. They're looking at the 2,000 jobs, and so there is an inherent conflict here, if you will.

MR. McCARTHY: I think it's a real problem because certainly the governors are going to be, or at the state level, they're looking to say we'd love to have these jobs in the state; we love the job creation.

The challenge becomes that, you know, steel, or I think it was China Mobil who is looking to open up a facility so they can service some of their international clients, but they want to have facility-based or facility-owned capabilities in the United States. The challenge is that with some of these companies unless you have restrictions on the prices on which they're going to sell their goods, I think you have a real challenge because I don't know if, for example, our experience with Huawei and ZTE has been that they are--support that they're getting from the Chinese government enables them effectively--guess I knocked out that mic--the experience we have is that certainly Huawei and ZTE operate such that with the support of the government, I think the only way that you're going to restrict their ability is going to be through some of these dumping suits, some of the reciprocity, you know, methods that you have discussed before.

I think that the question in terms of steel, for example, is you almost have to look at it industry by industry, and if the Chinese steel market is truly open, and it's, you know, open for both U.S. and international players to come in and operate, and there are no subsidies that are specifically provided. I don't know if steel is one of the national champions or subsidized industries in China. Maybe it's okay. I just don't know that much about steel.

I'd be very concerned, though, that the approach has tended to be that there is a fostering of national champions, and then they will provide whatever means are necessary for those national champions to be world leaders at the expense of all third-party countries. So the view is not we're going to

allow them to operate in a free market economy, but rather we need to make sure they're successful and provide whatever support is necessary.

HEARING CO-CHAIR SLANE: Thank you.

Commissioner Wortzel.

COMMISSIONER WORTZEL: If you could, I'd like you to educate me a little bit, I guess broadly, on information warfare, malware and some of the cyber techniques you described on page 17 of your testimony.

You know, in the Level 3 case, an industry analyst suggested that government traffic could be handled on your system and non-government traffic could be handled on Huawei, and then everything is deconflicted, and there's not a problem.

But as I read your testimony and listened to your oral explanation, it seemed that it's possible to insert malware into an optical network support system. Are Huawei, ZTE or the Chinese government information warfare agencies capable of developing that type of malware? That's question one.

And second, if they are, even if you had two systems on the same support network, could such malware target or also affect other network systems carrying government traffic on other, I guess, routers or whatever they are?

MR. MCCARTHY: Yes. Let me answer the questions. The short answer is yes. A couple problems are presented with the Level 3 example. I have to be somewhat careful because they're an existing customer of ours, but it's public knowledge that Level 3 has deployed a large number of Huawei nodes and that they use Huawei to carry a lot of their traffic.

I don't know what relationships or promises they've made to the government in terms of not putting government business on Huawei gear even though that tends to be fairly widespread. I think that, practically, the challenges that you have, are the first challenge would be if they were so inclined, Huawei could take the position to take down their network, to drive down capacity, and then you're left with how do you reroute that capacity or it just gets lost.

Second concern would be the ability for an optical vendor such as Huawei, if they were so inclined, to inject the malware, and that's certainly the case because all of this equipment is housed at the same huts or central office locations. So in the course of your servicing the equipment or being in those huts, you have access to not just your own equipment but other equipment that is there.

We have heard, I don't have firsthand experience, but we have heard through other network operators and telecom equipment providers that there have been instances, specifically with Huawei, where they have gone in with a lot of equipment, and people are questioning what is all this equipment, and have had it in there for extended periods of time, associated with the installation of their equipment.

So it raises the question of what are they really doing and why all that extra equipment? I don't have an answer for that, but it's certainly a concern that has been raised. The ability to inject malware into associated systems or to do something else while you're in the same physical location as the other equipment, whether it's routers or other WDM equipment, is certainly a concern.

COMMISSIONER WORTZEL: Do you think this is what's behind the Australian and German governments' decisions--

MR. McCARTHY: I believe so.

COMMISSIONER WORTZEL: --to keep these companies out?

MR. McCARTHY: I mean in Australia, for example, they said that they have no doubt that Huawei is, I think the words were "associated" or, you know, "engaged in" cyber, cyber espionage. I don't have firsthand knowledge of that, but that's what the Australian government believes. So I'll leave it at that.

COMMISSIONER WORTZEL: Thank you.

HEARING CO-CHAIR SLANE: Thank you.

Two quick questions. Mr. Fiedler.

COMMISSIONER FIEDLER: Actually, just a comment, Mr. McCarthy, something I forgot when I was asking my question. You said Huawei was owned by a Chinese union. I want to say two things to that. One, there are no Chinese unions. Okay.

[Laughter.]

COMMISSIONER FIEDLER: Okay. As a trade unionist, I want you to understand that that term does not apply to the existence of those entities, and that raises the question of what a private--you also said "private company." Your description of everything that they get from the state means that you should never use the term "private company" associated with them.

In this case--words are important--in this case, it is an ESOP--alleged ESOP-owned state-sponsored corporation.

MR. McCARTHY: I would not disagree with you. I would say I should have used non-public company.

COMMISSIONER FIEDLER: Well, no, no, no.

MR. McCARTHY: I tend to think of private/public, but non-public company.

COMMISSIONER FIEDLER: See, the problem is, the problem with all of this discussion about reciprocity and this, that, and the other thing is that we think words mean something here, and that they mean the same thing everywhere else, and they don't.

So we have to be more cognizant of what we're saying and perhaps more descriptive when trying to compare the two. That's all.

MR. McCARTHY: I agree.

HEARING CO-CHAIR SLANE: Thank you.

Commissioner--

COMMISSIONER WESSEL: Wessel.

HEARING CO-CHAIR SLANE: --Wessel. Thank you.

[Laughter.]

COMMISSIONER WORTZEL: The other "W".

COMMISSIONER WESSEL: The new guy. The new guy.

[Laughter.]

COMMISSIONER WESSEL: Thank you.

A quick question just from methodology, Mr. McCarthy. Huawei has said look at our code. You know, we've got nothing to hide. To me, that's irrelevant. The fact is from a capability point of view, your code may be neutral, and development of that code creates a vector for let's call it mischief or

whatever else you will, as well as remote maintenance and all the other things that go along with that.

Can we ever be assured of a vendor when you take a snapshot of their code, that that doesn't provide enormous benefits for a government, for its intelligence services, or others to be able to utilize those networks in interests that may be adverse to our own?

MR. McCARTHY: No. I mean the challenge with the code, and a number of countries, for example, in Russia, in China, and other countries, they actually require you to deposit your source code, you know, as a prerequisite for doing business there.

It's nice if I were the government of China to have that because it's always nice to have the code so you can look at it and potentially gain something from that. But just because you have the code, you have to remember that in optical networking equipment, it's a very complicated code so we're talking, in some cases, our latest product has the order of five plus million lines of code.

So practically speaking for someone to try and read every line of code and understand that, it's practically impossible for someone to determine if there are any back doors, traps or facilitating functions so that--because the other thing about the source code that you have to remember, or the operating code for most network operation equipment, is that once you put in the source code, there are constant updates.

So as you come out with new products, new functionality, there are updates. So what you can never know is, is there enabling code that's in the code that's being reviewed or turned over that would be enabled by a future upgrade that gets downloaded? Oftentimes that's remote; that's downloaded remotely, and it could be just done over the Web that would enable some mischief in the code.

COMMISSIONER WESSEL: And in a Stuxnet type situation, actually knowing the code gives you pure targeting information. The fact is you will know what the code is, and if you then send that code over the Internet, whatever, over the systems, it may, by knowing the code, it will actually tag on to that system, and therefore you might be creating the back doors afterwards. Is that right?

MR. McCARTHY: That's true.

COMMISSIONER WESSEL: Okay. Thank you.

HEARING CO-CHAIR SLANE: Gentlemen, thank you very much. This was very, very enlightening. We appreciate your time, and we stand adjourned for lunch. We'll reconvene at one o'clock.

MR. McCARTHY: Thank you.

MR. SIDDIQUI: Thank you.

[Whereupon, at 12:00 noon, the hearing recessed, to reconvene at 1:05 p.m., this same day.]

**OPENING STATEMENT OF COMMISSIONER DANIEL SLANE  
HEARING CO-CHAIR**

HEARING CO-CHAIR SLANE: We're going to reconvene for our third panel, and our final panel's discussion will discuss the Bilateral Investment Issues, including the feasibility and desirability of a bilateral investment treaty between the United States and China.

Our first speaker will be Nova Daly, public policy consultant at the law firm of Wiley Rein LLP. His specialty is helping clients navigate the policy and regulatory environment surrounding cross-border business activities.

His experience is the product of extensive experience in the field as he spent many years in leadership roles for government agencies, such as the Department of Commerce, the White House, and the Department of the Treasury's Office of International Affairs. He ran the U.S. Committee on Foreign Investment, CFIUS, from 2006 to 2009.

Our second speaker is David Fagan, a partner in the law firm Covington & Burling. His specialties lie in the areas of national security law, international trade, and investment, and global privacy and data security.

He has represented clients in a variety of industries, domestic and international, in securing the approval of CFIUS. He is also the author of a leading treatise on Chinese investment in the U.S. He has written extensively on foreign investment matters and is an Adjunct Professor of Law at Georgetown University Law Center.

Welcome, gentlemen, and we'll start with Mr. Fagan.

**PANEL III: BILATERAL INVESTMENT ISSUES****OPENING STATEMENT DAVID FAGAN  
PARTNER, COVINGTON AND BURLING LLP**

MR. FAGAN: Good afternoon. Thank you all for the invitation to testify at this hearing. It has been a fascinating hearing, and I hope that we're going to help you end on a high note after lunch today.

Before I begin my prepared remarks, I would like to emphasize that my comments today reflect my personal views and are not offered on behalf of my firm or any client of the firm.

I have focused my testimony on three aspects of the U.S. trade and investment relationship with China:

First, an assessment of the level of Chinese foreign direct investment in the U.S.; second, the regulatory and institutional environment in the U.S. for FDI from China, including the role that CFIUS plays; and third, the role that a U.S.-China BIT could play in creating greater investment flows between the two countries.

FDI in the United States contributes to a stronger manufacturing base, creates higher-paying jobs, and promotes investment in domestic research and development. In light of these benefits from FDI generally, an important policy question for U.S. engagement with China is to what extent does Chinese investment specifically contribute to the U.S. economy.

The short answer is that while the last several years have seen improvements in Chinese FDI in the U.S., the overall volume of such investments remains lower than it should be. China's direct equity investment in the U.S. pales in comparison to its holdings of U.S. debt and is lower than other developing economies, such as Brazil and India, and much smaller economies, such as Saudi Arabia.

Indeed, while the United States historically has garnered approximately 15 percent of total global outward FDI flows, the U.S. received only about two percent of China's outward FDI in 2010, ranking behind Sweden among other countries. This is especially concerning because China is on the path to become a net exporter of FDI. It is important for the U.S. economy and the relative balance of U.S.-China economic relations that the U.S. capture a larger share of this forthcoming outbound FDI from China.

Chinese firms often cite perceived regulatory and political obstacles in the U.S., including the review process undertaken by CFIUS, to explain their cautious approach to investing here. Indeed, I can tell you from experience, it is not uncommon for a Chinese company to ask not how it should invest in the United States, but whether it is even possible to do so.

The reality for Chinese investors is quite different than this perception. The U.S. is generally open to greenfield investments from China, and while particular laws and regulations may apply to investments depending on the industry, the size and scope of the transaction, and the nature of the business, these rules and regulations do not turn on the country of origin of the

investment, and they accordingly are not geared to discriminate against investment from China or any other country.

The national security review process undertaken by CFIUS is a narrow but important overlay to this regulatory landscape. Unlike many other countries, the U.S. does not apply an economic interest test when reviewing foreign investment. Rather, CFIUS is an appropriately tailored process focused strictly on national security, such that the vast majority of foreign investments in U.S. businesses are not subject to CFIUS review.

Thus, for many Chinese investments in the U.S., CFIUS will not be relevant, let alone an obstacle. For those investments that are subject to CFIUS review, the CFIUS process is not one to be feared. CFIUS acts within precise time-frames and under a defined regulatory process that appropriately balances the benefits of FDI with the protection of national security interests.

The CFIUS record in this regard is strong. While not hesitating to take tough action to protect national security, CFIUS has an overwhelming record of approving transactions, including Chinese transactions, in a timely fashion.

To be sure, Chinese transactions can receive comparatively greater scrutiny from CFIUS, and there are cases in which political controversy or CFIUS action has thwarted investment from China. But these cases are the exception rather than the rule. The clear lessons of the history of CFIUS and the United States' broader approach to FDI from China is that the U.S. is open to and encouraging of investment from China, and the review process undertaken by CFIUS is one in which both investors and national security hawks can and should have confidence.

Fear over CFIUS also is not the only factor restraining Chinese investment. Differences in management style and structure, bureaucratic and political obstacles to obtaining required approvals to invest abroad, and challenges and frustrations with the U.S. visa process, all these factors to varying degrees have acted as a drag on Chinese investment in the U.S.

There is no silver bullet solution to addressing these challenges and to bringing Chinese FDI more in line with what the U.S. should be receiving. However, a strong U.S.-China BIT is one sensible measure that can help open up greater investment opportunities in both directions to the benefit of U.S. businesses, workers and the economy.

A U.S.-China BIT would provide an important signal of both countries' commitment to boosting bilateral investment flows. It would underscore that the U.S. is open to Chinese investment and is a safe environment in which to invest, and it would signal to the Chinese investors a comfort level and commitment from the Chinese government regarding investment in the United States.

Importantly, for U.S. businesses, a BIT also is sure to include the principle of national treatment, which will require China generally to accord more equitable treatment to U.S. investors and their operations in China.

Indeed, that inclusion of the most-favored nation clause also will ensure that U.S. investors going forward receive the benefit of any future liberalization that China includes in other BITs.

And the BIT would provide for investors of each country to bring investment disputes to arbitration, which will provide a greater measure of

protection for investors and can help temper conduct before it rises to the level of a violation.

Importantly, while U.S. investors do not yet have these protections in place with China, investors from at least 120 other countries do. This is a potentially significant disadvantage to U.S. businesses, and the remedy for it, in my view, should be pursued vigorously.

To be sure, the BIT will be toughly negotiated, and even a strong U.S.-China BIT cannot solve all of the challenges that confront U.S. businesses looking to invest in China or that impact outbound Chinese investment and its impact on U.S. businesses which you heard about earlier today.

There will remain other significant issues, including intellectual property protection and adherence to the OECD rules on export and import financing, that the U.S. government also should pursue vigorously through bilateral discussions and other multilateral fora.

But a strong U.S.-China BIT would be a very positive step that could enhance the opportunities for and confidence of investors on both sides.

I'd be pleased to take your questions and thank you again for having me today.



**PREPARED STATEMENT DAVID FAGAN  
PARTNER, COVINGTON AND BURLING LLP**

**Hearing on “The Evolving U.S.-China Trade and Investment Relationship”  
Testimony before the U.S.-China Economic and Security Review Commission**

**David N. Fagan<sup>1</sup>**

**Partner, Covington & Burling LLP**

**June 14, 2012**

The United States’ trade and investment engagement with China presents myriad opportunities and challenges for the world’s two largest economies. The items addressed in the most recent Strategic and Economic Dialogue, concluded on May 4, 2012, reflect the importance and complexity of this relationship. These include, among other items, China’s agreement to participate in negotiations on export financing with the United States and other major exporting countries; efforts to ensure that U.S. firms may compete on a fair basis with Chinese state-owned enterprises; positive direction on Chinese efforts to join the WTO Agreement on Government Procurement; agreement to “intensify negotiations” for a U.S.-China Bilateral Investment Treaty (BIT); and various commitments related to intellectual property protection.

More broadly, the intricacies and challenges of the U.S. engagement with China on trade and investment issues range from significant macro-level policy matters – such as rebalancing the export-driven nature of the Chinese economy, and ensuring transparency and fairness in each country’s rules governing trade and investment – to very practical obstacles, such as visa restrictions and differences in management experience, that can exacerbate the distance between the two economies.

The diversity and depth of these matters, in turn, underscores the complexity of the topic of this hearing, “The Evolving U.S.-China Trade and Investment Relationship.” Within that broad subject, I have focused my testimony on three areas in particular:

- The benefits of foreign direct investment to the U.S. economy and job creation, and an assessment of Chinese foreign direct investment (FDI) to date;
- The regulatory and institutional environment in the United States for FDI from China, including the role of the Committee on Foreign Investment in the United States (CFIUS); and
- Other factors impacting Chinese outbound FDI, and the role that a U.S.-China BIT may play in attracting more Chinese direct investment in the United States.

**I. The Benefits of Foreign Direct Investment in the United States and the Role and Status of Chinese Investment**

FDI has received long-standing, bi-partisan policy backing: every Administration since that of President Carter has issued formal policy statements or speeches expressing strong support for FDI. The most recent of these was President Obama’s statement last June on the U.S. commitment to an open investment policy.

---

<sup>1</sup> David N. Fagan is a Partner in the law firm Covington & Burling LLP in Washington, D.C. His practice covers foreign investment, national security, and cyber and data security. This testimony represents the personal views of Mr. Fagan and is not offered on behalf of any client or his firm.

The reasons for this bi-partisan support are clear: there is an unambiguous record of FDI contributing to a stronger manufacturing base, creating higher-paying jobs, promoting investment in domestic research and development, and generating greater tax revenues. For example, the Council of Economic Advisers has reported that:

- Majority-owned U.S. affiliates of foreign corporations produced \$670 billion in goods and services in 2008, accounting for about six percent of total U.S. private output that year;
- These same companies employed 5.7 million U.S. workers, accounting for five percent of the U.S. private workforce and 13 percent of the U.S. manufacturing sector, and were responsible for more than 18 percent of U.S. merchandise exports; and
- The capital expenditures of these firms accounted for more than 11 percent of total U.S. private capital investment, and contributed to over 14 percent of total U.S. private R&D investment.<sup>2</sup>

The data are even more attractive when considering the ancillary benefits of FDI. According to a study released last month by the Organization for International Investment:

- While U.S. subsidiaries of foreign companies directly employ 5.3 million people, they also are responsible for an additional 15.8 million jobs in the related supply chain or associated with the spending of the employees' paychecks, thereby indirectly accounting for a total of 21 million jobs (or 12.2 percent of total U.S. employment).
- The jobs related to foreign direct investment are higher-paying. The average compensation in the U.S. for all types of employment is \$50,100, while the average compensation for a position with a direct U.S. subsidiary of a foreign company is more than 50 percent higher, at \$77,590, and the average compensation for both direct and indirect jobs supported by U.S. subsidiaries of foreign companies is \$58,500 (17 percent higher).
- Approximately 2 million jobs at U.S. subsidiaries of foreign companies are in the American manufacturing sector, accounting for about 17 percent of total American manufacturing jobs. These subsidiaries also account for more than 21 percent of all U.S. exports, or \$219.7 billion.
- Although U.S. subsidiaries of foreign companies account for less than one percent of all U.S. businesses, they account for \$43.4 billion in annual spending on U.S. research and development activities; reinvest \$93.6 billion annually in their U.S. operations; and pay \$38 billion in annual U.S. corporate taxes, nearly 17 percent of total U.S. corporate tax payments.<sup>3</sup>

---

<sup>2</sup> Executive Office of the President, Council of Economic Advisers, U.S. inbound Foreign Direct Investment (2011), available at [http://www.whitehouse.gov/sites/default/files/microsites/cea\\_fdi\\_report.pdf](http://www.whitehouse.gov/sites/default/files/microsites/cea_fdi_report.pdf)

<sup>3</sup> Organization for International Investment, Chain Reaction: Global Investment Works for America (May 2012), available at [http://www.ofii.org/docs/OFIL\\_CHAINREACTION\\_REPORT.pdf](http://www.ofii.org/docs/OFIL_CHAINREACTION_REPORT.pdf).

In light of these benefits from FDI generally, an important policy question for U.S. engagement with China is the extent to which Chinese investment specifically is contributing to the U.S. economy. The short answer is that while the last several years have seen improvements in Chinese FDI in the United States, the overall volume of such investment remains lower than it should be, especially by comparison to the strong equity investment flows from the rest of the world to the United States.

To start with the positive, there are encouraging signs of growth in the net U.S. benefit from Chinese investment. During the recent financial crisis, China's FDI stock in the U.S. grew nearly fivefold, from \$1.2 billion in 2008 to \$5.9 billion in 2010. U.S. subsidiaries of Chinese firms currently are estimated to own between \$20 billion and \$30 billion in assets on their books and to employ more than 10,000 people with higher-than-average wages. Chinese-owned firms, while still net importers, have been growing their exports, and have been steadily adding to U.S.-based R&D.<sup>4</sup> According to the China Investment Monitor, Chinese-owned firms have invested a total of more than \$16 billion in greenfield and acquisition transactions in the U.S. since 2003.<sup>5</sup>

The recently-announced sale of AMC Entertainment Holdings to China's Dalian Wanda Group, which marks the largest Chinese acquisition of a U.S. company to date, is a tangible example of these positive trends. This \$2.6 billion deal by a leading Chinese company includes a commitment to maintain AMC's U.S.-based headquarters, to retain AMC's U.S. management and to pursue the company's management-directed strategy, and to invest another \$500 million in AMC. It also will help U.S. film companies increase their exports to China, the second largest theater market in the world. In short, the transaction not only provides the buyer with global synergies for its brand, but also provides the U.S. business with an important capital injection that will allow it to grow and expand. This is a great example of a Chinese firm investing in the U.S. economy in a way that will benefit businesses, workers, and consumers alike.

Notwithstanding these encouraging trends, the overall amount of FDI in equity investments from the world's second largest economy remains lower than it could be. Even with the positive growth in FDI stock to nearly \$6 billion, China's direct investment pales in comparison to its well-publicized holdings of U.S. debt, and still represents well under one percent of foreign investment in the United States. Chinese FDI in the U.S. is "marginal compared to major investors such as the U.K. or Canada,"<sup>6</sup> and lower than other developing economies, such as Brazil or India, as well as other much smaller economies, such as Saudi Arabia.<sup>7</sup> Moreover, this lag also reflects the United States' relative positioning as a destination for Chinese FDI. While the United States historically has garnered approximately 15 percent of total global outward FDI flows, according to China's own figures, the U.S. ranked seventh as a destination for FDI in 2010 — behind Sweden, among others — and received only about two percent of China's outward FDI.<sup>8</sup> Indeed, a recent study on Chinese outbound FDI in the first quarter of 2012 reported a significant increase

---

<sup>4</sup> These trends are reported by the economist Thilo Hanemann in a blog post, *It's Official: Chinese FDI in the U.S. is Soaring*, dated August 25, 2011 (reporting on data from the U.S. Bureau of Economic Analysis and the Rhodium Group's China Investment Monitor), available at <http://rhgroup.net/notes/its-official-chinese-fdi-in-the-u-s-is-soaring>.

<sup>5</sup> The China Investment Monitor is a report produced by the Rhodium Group, available at <http://rhgroup.net/interactive/china-investment-monitor>.

<sup>6</sup> Hanemann, *supra* note 4.

<sup>7</sup> *Id.*; see also Daniel E. Rosen and Thilo Hanemann, *An American Open Door? Maximizing the Benefits of Chinese Foreign Direct Investment*, Asia Society, at 27 (May 2011).

<sup>8</sup> Ministry of Commerce of the People's Republic of China, 2010 Statistical Bulletin of China's Outward Foreign Direct Investment (2011), at 82-87, available at <http://hzs.mofcom.gov.cn/accessory/201109/1316069658609.pdf>.

in investment across the globe, but lower investment in the United States compared to the same period a year earlier.<sup>9</sup>

The United States' relative positioning as a destination for outward Chinese FDI raises policy concerns for two reasons. First, as noted, there are immediate benefits from FDI, which the U.S. simply is not capturing in proportion to its status as the world's largest economy and the most popular economy for investment. Second, there is even greater potential for Chinese outbound FDI in the future: China is on the path to become a net exporter of FDI, with a conservative estimate of outbound FDI placing it at between \$1 trillion to \$2 trillion in the next decade.<sup>10</sup> It is important for the U.S. economy and the relative balance of U.S.-China economic relations that the U.S. capture a larger share of the forthcoming outbound FDI from China.

## **II. The Regulatory and Institutional Environment for Chinese investment in the United States**

Chinese firms often cite perceived regulatory and political obstacles in the United States, including the review process undertaken by CFIUS, to explain their cautious approach to investing here. Indeed, it is not uncommon for a Chinese company to ask not how it should invest in the United States, but whether it is even possible to do so. This fear factor acts as a self-imposed restraint on Chinese investment — although, as described below, it is certainly not the only, or even the principal, reason limiting Chinese investment in the United States.

The reality for Chinese investors, however, is quite different than the perception: there is a basic regulatory and institutional framework that applies equally to all foreign investors in the U.S., including Chinese investors, and this framework generally works to preserve and advance an open investment environment, not to hinder the prospective investors.

To start, the United States is generally open to greenfield investments, which, by their nature, are focused on the creation of a new business that adds to the economy and therefore may implicate different — and lighter — regulatory considerations. For instance, antitrust rules apply both to greenfield investments and acquisitions of existing businesses, but a greenfield investment may be less likely to raise monopoly or restraint of trade concerns.

Beyond the generic landscape of greenfield investments, there may be particular federal laws and regulations that apply to investments depending on the industry (e.g., telecommunications, energy, and banking), the size and scope of the transaction (e.g., Hart-Scott-Rodino), and the nature of the business (e.g., securities filings for acquisitions involving publicly traded companies), as well as other rules and regulations at the federal, state and local levels that, while not triggered by a transaction, are relevant to it. But these rules and regulations do not turn on the country of origin of the investment, and they accordingly are not geared to discriminate against investment from China or any other country; rather, they apply equally, if at all, to all foreign investors. The fact that the United States is the world's largest recipient of FDI also underscores the openness of the regulatory landscape to foreign investment.

The national security review process undertaken by CFIUS is a narrow — but important — overlay to this regulatory landscape. CFIUS operates pursuant to clear statutory authorities (i) to determine the national security effects of certain controlling foreign investments, and (ii) to take action, as necessary, to address national security risks when no other laws apart from certain Presidential emergency powers are sufficient to address the risk. Unlike many other countries, the U.S. does not apply an economic interest test when

---

<sup>9</sup> Aaron Back, "China Buys Overseas Assets," *Wall Street Journal* (June 6, 2012), available at <http://online.wsj.com/article/SB10001424052702303296604577450053974933534.html>.

<sup>10</sup> See Rosen and Hanemann, *supra* note 7, at 22.

reviewing foreign investment. Rather, CFIUS is an appropriately tailored process focused strictly on national security, such that the vast majority of foreign investments — around 90 percent — are not subject to CFIUS review.

Thus, for many Chinese investments in the U.S., CFIUS will not be relevant, let alone an obstacle. For those investments that are subject to CFIUS review, the CFIUS process is not one to be feared. CFIUS acts within precise timeframes and under a defined regulatory process that, consistent with U.S. law and policy, appropriately balances the benefits of FDI with the protection of national security interests. The Committee conducts a thorough review of each case presented before it, operating from a premise — supported by the statute — that it should seek, if at all possible, to find solutions that enable transactions to proceed while protecting national security. CFIUS's record in this regard is strong; while not hesitating to take tough action to protect national security, CFIUS has an overwhelming record of approving transactions, including Chinese transactions, in a timely fashion.

This is not to ignore or diminish aspects of Chinese investment that may attract more attention from a regulatory and policy perspective. Of the United States' ten largest trading partners, China is the only one not considered an ally; Chinese state-owned enterprises have accounted for approximately 70 percent of its outbound investment; key U.S. institutions, including the Department of Defense and the U.S. intelligence and law enforcement agencies, view certain Chinese investments with great suspicion; and U.S. concerns regarding the transfer of export-controlled technologies and other compliance matters can be especially acute with China.

Chinese transactions can receive comparatively greater scrutiny, and there are cases — frequently cited by Chinese firms and the Chinese government — in which political controversy or CFIUS action thwarted the investment from China. These include, among others, the failed bid by China National Offshore Oil Corporation (CNOOC) for Unocal in 2005; Huawei Technologies' failed acquisitions in 2007 and 2010; the divestiture of Emcore's fiber optics business to Tangshan Caofeidian Investment Corporation in 2010; and recent transactions in the mining sector in Nevada.

But these cases are the exception rather than the rule, and it is important to place them in context. First, much of the kindling that helped to spark and stoke the CNOOC-Unocal fire in Congress in 2005 was addressed in the Foreign Investment and National Security Act of 2007 (FINSA), which strengthened the CFIUS process and added energy security to the statutorily enumerated national security factors for CFIUS to consider. As a result of FINSA, Congress can have greater confidence in the thoroughness of the CFIUS process, and transaction parties in turn can help allay Congressional concerns by voluntarily notifying a transaction for CFIUS review.

Second, insurmountable CFIUS-related challenges, while rare, generally reflect miscalculations in the transaction planning, the parties' approach to CFIUS, or both. This is true regardless of the country of origin of the investment, and each of the foregoing transactions from China is no exception. Indeed, for each CNOOC-Unocal or Huawei-3Com deal, there are examples such as CNOOC-Chesapeake Energy, CIC-AES, Lenovo-IBM, and many other transactions that have proceeded without controversy, reflecting the careful planning of the transaction parties and their counsel. Moreover, while the overwhelming number of transactions reviewed by CFIUS are approved and non-controversial, China is not the only country to have its investors confront difficulty in CFIUS; even investors from our closest allies have, from time to time, failed to identify or anticipate hard national security issues that were identified by CFIUS.

The plain lesson of this history is that the U.S. is open to and encouraging of investment from

China; that regulatory and political obstacles can generally be avoided through appropriate planning by the transaction parties; and that the review process undertaken by CFIUS is one in which both investors and national security hawks can and should have confidence.

### **III. Non-Regulatory Factors Impacting Chinese Investment and the Role of a U.S.-China BIT in Encouraging Investment Flows**

Apart from the fears and misperceptions stemming from a minority of failed transactions, there are more practical, non-regulatory factors that have restrained Chinese investment in the United States. Differences in management style and structure, a lack of management experience in global business operations, and a pre-occupation with their domestic market have limited the scope of outbound Chinese investment. In addition, bureaucratic challenges, both within companies and in the Chinese political and regulatory scheme for obtaining required approvals to invest abroad, make it difficult for Chinese companies to mobilize quickly enough to participate in bidding processes abroad and can cause frustration for counterparties and potential suitors of Chinese investment, leading potential transaction parties to turn elsewhere. On top of this, many potential Chinese investors find the U.S. visa process lengthy and frustrating, further diminishing their enthusiasm for investment in the United States.<sup>11</sup>

There is no silver bullet solution to address these challenges and bring Chinese FDI more in line with what the world's largest economy should receive from the world's second largest economy, just as there is no single policy or action that will address completely all the market access considerations that U.S. investors confront with respect to their investment in China. However, a strong U.S.-China BIT is one sensible measure to pursue to open up greater investment opportunities in both directions, to the benefit of U.S. businesses, workers, and the economy.

A U.S.-China BIT would provide an important signal of both countries' commitment to boosting bilateral investment flows and would create greater confidence in Chinese investors in two important respects. First, it would underscore — symbolically and substantively — that the U.S. is open to Chinese investment and is a safe environment in which to invest. Second, equally important, it would signal to Chinese investors a comfort level and commitment from the Chinese government regarding investment in the United States.

In turn, several aspects of a U.S.-China BIT also would provide U.S. businesses with greater opportunities and protection for investments in China. First, a BIT is sure to include the principle of national treatment, which will require China generally to accord more equitable treatment to U.S. investors and their operations in China.

Second, the inclusion of a most-favored-nation clause, which now is generally accepted by the Chinese in their BITs, will ensure that U.S. investors going forward receive the benefit of any future liberalizations that China includes in other BITs.

Third, the BIT would include protection against expropriation. While that risk seems increasingly remote in China, it nevertheless is an important protection for foreign investors in any country.

Fourth, and arguably most important, the BIT would provide for investors of each country to bring their investment disputes to arbitration. This ability to take disputes to arbitration not only provides a measure of direct protection for investors; the threat of arbitration often can serve to temper conduct before it rises

---

<sup>11</sup> For an additional reference on the impacts on Chinese investment in the U.S., see David M. Marchick, *Fostering Greater Chinese Investment in the United States, Renewing America: Policy Innovation Memorandum No. 13*, Council on Foreign Relations (Feb. 9, 2012).

to the level of a violation. It functions to hold each party to the terms of fair and equal competition and access that are embodied in the BIT.

Importantly, while U.S. investors do not yet have these protections in place with China, investors from 120 other countries around the world do enjoy such protections. This is a potentially significant disadvantage to U.S. businesses, and the remedy for it should be pursued vigorously.

To be sure, there will be tough areas of negotiation with China over the BIT, and the U.S. should push hard in particular on key market access points. These include pressing China to provide greater clarity in how laws and regulations apply to investors in China, to ease policies that tilt the playing field in China to domestic companies and to provide similar commitments to enforce principles of fair and equal treatment at provincial and local levels, and to reduce sector-based restrictions and equity caps.

As noted, even with progress on these fronts, a U.S.-China BIT will not solve all of the challenges that confront U.S. businesses looking to invest in China or that impact outbound Chinese investment. There will remain many other significant issues, including intellectual property protection, adherence to the Organisation for Economic Co-operation and Development rules on export and import financing, and accession to the WTO Agreement on Government Procurement, to be pursued through bilateral discussion and multi-lateral fora. There also is constructive unilateral action that the U.S. can take to encourage greater equity investment flows from China, such as making it easier for investors to travel to the U.S., continuing engagement by senior Administration officials with China on its concerns about the U.S. investment environment, and enhancing the efforts of the federal government's Select USA initiative to attract Chinese FDI to the United States.

In sum, a strong U.S.-China BIT should not be viewed as a cure-all for every consideration or concern that infuses the U.S.-China trade and investment relationship. However, it would be a very positive step that could enhance the opportunities for — and confidence of — investors on both sides.

#### **IV. Conclusion**

Chinese FDI can have a significant positive impact on the U.S. economy, but it has not yet flowed in amounts commensurate with the nature of the relationship between the two economies. Both sides should have confidence that the U.S. can be — and is — open to such investment without the U.S. sacrificing important national security interests and without the investor risking an embarrassing rejection. A strong U.S.-China BIT would help increase this confidence, as well as increase opportunities for U.S. businesses in China.

HEARING CO-CHAIR SLANE: Thank you.  
Mr. Daly.

**OPENING STATEMENT NOVA DALY  
PUBLIC POLICY CONSULTANT, WILEY REIN LLP**

MR. DALY: Thank you very much, Commissioners, for the opportunity and honor to be here today.

While I served within the United States government at the Department of Treasury, I had the opportunity to talk to my foreign counterparts on investment issues for a number of different matters, including sovereign wealth funds, which we dealt with the Europeans and through the Santiago Principles.

But in my meetings with the Chinese, their key issue was the CFIUS process and whether it was an appropriate vehicle and whether we were obtuse in the way we handled the process. I, of course, had to explain the CFIUS process, but also one of my tasks was to explain the open investment policy of the United States, which is a long-standing policy which we need to continue.

And the Chinese, my goal with the Chinese was to try to find out exactly how their process worked, which was more opaque than the U.S.

Since that time I've gone into the private sector, and within government I've continued to see the rise of Chinese investment and their use of state-owned enterprises and state-supported enterprises in their investments abroad and globally, and what has interestingly occurred, what I didn't think could happen then, was that industries across the board, whether they be in the financial industries or the banking and steel, have come together to seek remedies to the anticompetitive issues they are facing on an investment basis and trade basis abroad.

It's been amazing, and it's being done through the Trans-Pacific Partnership, through provisions on state-owned enterprises. It's the first time the U.S. has ever tabled that, so I find that to be a very interesting occurrence.

So I thought for the purpose of my testimony, and within it, the written testimony, I make three postulates that I see out there as frictional issues between us and China in terms of bilateral investment issues.

The first being that China must address the distortions and national security concerns arising from its system of state-supported and state-led economic growth in order for the United States to continue to support and promote open investment policies.

The second postulate is that the United States should consider additional international and domestic policies in the face of Chinese practices and laws that address the inadequacies of our current system and investment regime in order to ensure a fairer competitive playing field globally and domestically.

And the last is that the U.S. and China bilaterally need to come together and find solutions and rules based systems within our investment processes where we can find agreement, and that's through the bilateral investment treaty. The BIT is a good vehicle for that.



To focus on the first postulate, I think the anti-competitive issues that state-owned enterprises are bringing are clear and well documented. The OECD has done a number of reports. Whether that's on competitive neutrality or on state-owned enterprises and the practices they ought to adopt within the marketplace, we've seen that on a number of occasions.

We've also seen state-owned enterprises crowding out private investments. In the United States, the Anshan investment was one that you raised that was one that had competitive issues, as well, in terms of creating overcapacity, but we could discuss that later.

Other issues that state-owned enterprises, and interestingly, one of the things I saw when I was in China in the private sector is in meeting with a person who had started his own company and grown fairly large, I looked to him and said, you know, what do you think about state-owned enterprises, and his response was that they're a tool of the Chinese Communist Party, the 2,000 people that run this country, and they should be abolished.

So leading from that, there's also the issue of reciprocal market access or reciprocal investment policies. The Chinese utilize multiple levers of constraints, whether that is through indigenous innovation policies, through the MOFCOM reviews, through the new national security reviews, or their investment catalogue, to crowd out and block foreign investment. So the question becomes why should the U.S. continue to allow the Chinese unfettered access to our market at the same time that U.S. firms face significant restrictions in the Chinese market?

Perhaps the most troubling matter that is affecting the bilateral investment issue is the issues that surround national security concerns, and this is specifically most heightened in the cybersecurity matters we're facing.

More and more commercial considerations and government operations are facing cybersecurity threats over their systems. Given the ubiquity of the Internet on governments and the concerns it raises, it should be no surprise to companies out there, notably Huawei, that the security of our information systems would be a core concern of U.S. policy.

In considering the ways to address the investment issues that state-owned enterprises and state-supported enterprises raise, there could be, and they have been raised, a number of different mechanisms that could be used. Obviously, the Trans-Pacific Partnership agreement dealing with state-owned enterprise provisions is one methodology, but others have been raised.

This may include negotiating an agreement within the OCED to establish guidelines for foreign investment, much like the Santiago Principles best practices, perhaps work within the WTO, and then also obviously containing the provisions of investment with state-owned enterprises, other free trade agreements, and last, of course, being the BIT.

Why I think there is broad support moving forward with China on a BIT, even though there are hurdles to face, given the new model BIT, and whether it fits the dynamic in the U.S.-China relationship, but BITs essentially are intended to promote and protect investment in foreign countries, and a BIT would help do that.

And they also encourage market-oriented policies that treat private investment in a transparent and non-discriminatory manner.

Provided that the BIT and its negotiation is tailored to reflect the unique challenges posed by the Chinese investment environment and state-led economy, a U.S.-China BIT can serve as an effective mechanism through which the United States and China can build shared rules-based and market-based investment policies for the mutual benefit of our countries and for greater global stability.

Thank you.

**PREPARING STATEMENT NOVA DALY  
PUBLIC POLICY CONSULTANT, WILEY REIN LLP**

Prepared Statement of Nova J. Daly  
Before the U.S.-China Economic and Security Review Commission  
Hearing on “The Evolving U.S.-China Trade and Investment Relationship”  
June 14, 2012

**I. INTRODUCTION**

While all bilateral trade and investment relationships have varying degrees of complexity, the trade and investment relationship between the United States and China is perhaps the most complex and dynamic in the world. This complexity arises from economic issues, given the size of the U.S. and Chinese economies and recent global economic turbulence, and from multiple security-related issues, including those caused by divergent national defense goals. The rise of Chinese military might and the dawn of a potential new economic paradigm, as the Beijing model of state-led and sponsored growth challenges the “Washington consensus,” add further issues to this dynamic relationship.

Given these complexities, it is fitting that this Commission explore the issues raised by the bilateral trade and investment relationship between the United States and China. How these issues are handled by each country individually, bilaterally and multilaterally, will have long-term ramifications for global growth and stability, as well as for each country’s role in global leadership.

In addressing the topic of this panel, namely U.S.–China bilateral investment issues, this testimony will focus on three views being raised by a growing number of U.S. industries, lawmakers and government officials that underscore the increasing friction in the bilateral relationship. Specifically, these views are:

- China must address potential economic distortions and national security concerns arising from its system of state-supported and state-led economic growth in order for the United States and other nations to continue to fully support and promote global and domestic open investment policies;
- The United States should consider the implementation of additional international and domestic policies and laws to address potential inadequacies in its current investment regime that may not ensure fair competition for its industries, vis-à-vis their Chinese counterparts, domestically and abroad; and
- The United States and China should build stronger rules-based investment platforms, including through a bilateral investment treaty, in order to provide greater stability to the U.S.-China bilateral relationship and global markets.

**II. CHALLENGES TO MAINTAINING OPEN INVESTMENT POLICIES AND PRACTICE**

Multiple administrations, both Democrat and Republican, have placed a singular importance on maintaining the long-standing U.S. policy of open investment. They have done so because inbound and outbound international investment have been and continue to be fundamental pillars of U.S. prosperity and growth.<sup>1</sup>

---

<sup>1</sup> Research shows that foreign-owned firms in the United States employ over 5.3 million Americans, with

Maintaining open investment policies in the United States, and pressing for such policies abroad, helps ensure that U.S. businesses have better opportunities to open foreign markets to U.S. products and services. The resulting long-term benefits include the expansion of export platforms, stronger rules-based systems abroad, and formal and informal channels to achieve broader political objectives.

Nonetheless, there are growing concerns that China's state-sponsored economic model is undermining some aspects of our open investment policy and practice, as private actors increasingly lose market share to state-owned enterprises ("SOEs")<sup>2</sup> and state supported enterprises ("SSEs") in U.S. and global markets. These concerns are shared by an array of U.S. industries, as well as those from other nations. The result, as discussed below, is that a broad coalition of U.S. industries have reached consensus in seeking new disciplines to address these issues.

### **A. China's State-Sponsored Economic Model Raises Economic and Security Concerns**

China's state-sponsored economic model, and its use of SOEs and SSEs, are increasingly raising economic and security concerns around the globe. These concerns have resulted, at times, in significant bilateral investment friction between the United States and China, with political and economic consequences.

The U.S. Government has had recent experience addressing the issue of state involvement in global economic activity via sovereign wealth funds ("SWFs").<sup>3</sup> While SWFs are in principle long-term investors, these investment vehicles raise legitimate policy concerns – namely that they could take market actions based on state interests rather than economic considerations. The immediate concerns raised by SWFs were addressed, in part, through the Santiago Principles.<sup>4</sup> This was a broad agreement by the SWFs to make investment decisions based solely on commercial grounds, incorporate greater information disclosure, implement strong governance structures, compete fairly with private sector entities, and respect host-country investment and regulatory rules. While the agreement on these principles was helpful, and informative to the current policy discussions on SOEs and SSEs, abiding by them is voluntary.

At the time the U.S. Government was working through the issue of SWFs, there was a realization that a much more difficult issue – addressing SOEs as market actors – would eventually need to be considered. Many of the policy concerns raised by SOEs are similar to those raised by SWFs.

#### 1. Economic Challenges Raised by State-Owned Enterprises

The potential adverse economic effects of SOE participation in the global marketplace are well documented. For example, the Organization for Economic Cooperation and Development ("OECD") has released a number of reports detailing the rise of SOE investment abroad and the related anti-competitive

---

approximately 2 million of those jobs in the manufacturing sector. These firms account for nearly 21 percent of U.S. exports, and reinvest over \$93 billion annually into their U.S. operations. See Organization for International Investment website at <http://www.ofii.org/resources/insourcing-facts.html>.

<sup>2</sup> SOEs can be defined as enterprises where the state has significant control, through full, majority, or significant minority ownership.

<sup>3</sup> SWFs can be defined as government investment funds, funded by foreign currency reserves but managed separately from official currency reserves.

<sup>4</sup> See International Working Group of Sovereign Wealth Funds, *Generally Accepted Principles and Practices ("GAPP")-Santiago Principles*, available at <http://www.iwg-swf.org/pubs/gapplist.htm>.

effects and market distortions that may result, both in the SOEs' home markets and in markets around the world.<sup>5</sup>

SOE investments have also caused political controversies. While there have been a number of Chinese SOE and SSE investments in the United States that have not raised issues,<sup>6</sup> other investments have raised serious political concerns. Some of these include: CNOOC's attempted purchase of Unocal in 2005, Huawei's attempted acquisitions of 3Com and 3Leaf, and the proposed investment by Anshan Steel.<sup>7</sup>

The core arguments against many of these investments have been that the Chinese entities do not operate on commercial terms equivalent to private companies, and that they could choose to make investment and corporate decisions based on strategic rather than market-based considerations. Further, subsidies and other privileges bestowed on SOEs and SSEs raise concerns that these entities may have a nearly unlimited capacity to compete. Indeed, Chinese SOEs often receive substantial subsidies from the Chinese government, allowing them to operate and survive regardless of the economic conditions or their market behavior.<sup>8</sup>

As a result of these and other investments, there is a growing perception that SOEs and SSEs are competing unfairly and crowding out U.S. private investment. These entities are also having an adverse effect on private Chinese industries, causing potential market distortions in China as well as abroad.

## 2. Reciprocal Market Access Issues

China's constraints on foreign investment have also been a considerable source of trade friction. Its policies make it difficult for many foreign companies to invest and operate in China and raise the issue of lack of reciprocal access to the Chinese market by U.S. and other firms. Indeed, many U.S. companies complain that the Chinese market, and policies such as "indigenous innovation," do not allow for investment opportunities equivalent to those granted to Chinese companies in the United States.

For example, China recently established a "security review system" for mergers and acquisitions of Chinese domestic enterprises by foreign investors. This new tool, which the Chinese government could potentially use to restrict foreign investment, is in addition to the myriad existing laws and regulations governing foreign investment (such as the Foreign Investment Industries Guiding Catalogue, and investment reviews overseen by the Ministry of Commerce, the State Development and Reform Commission, and other Chinese ministries).

---

<sup>5</sup> State-Owned Enterprises: Trade Effects and Policy Implications – An Interim Report, OECD, TAD/TC/WP(2012)10 (May 18, 2012); Competitive Neutrality in the Presence of State Owned Enterprises, OECD, AF/CA/PRIV(2010)1 (Apr. 2, 2010) ("April 2010 OECD Paper on Corporate Neutrality and SOEs").

<sup>6</sup> These investments include the Aviation Industry Corporation of China's investment into Cirrus Aircraft, the Chinese National Offshore Oil Company's ("CNOOC") \$2 billion worth of investments in shale lease holdings in the United States, and the recent purchase of AMC Entertainment Holdings by the Dalian Wanda Group

<sup>7</sup> In May 2010, the Chinese SOE, Anshan Iron and Steel Group ("Anshan"), announced that it would form a joint venture with the Steel Development Co. ("SDC") of Armory, Mississippi to build up to five new steel plants in the United States. In response to the announcement, a bipartisan group of fifty Congressmen requested that the Secretary of the Treasury investigate the transaction.

<sup>8</sup> For a further discussion of the potential economic distortions caused by SOEs' operation and investment in the marketplace, see testimony of Timothy C. Brightbill (Feb. 15, 2012), available at [http://www.uscc.gov/hearings/2012hearings/written\\_testimonies/hr12\\_02\\_15.php](http://www.uscc.gov/hearings/2012hearings/written_testimonies/hr12_02_15.php).

The Office of the United States Trade Representative (“USTR”) has found that “China has added a variety of restrictions on investment that appear designed to shield inefficient or monopolistic Chinese enterprises from foreign competition.”<sup>9</sup> For example, China continues to impose technology transfer requirements as a condition of foreign investment in many Chinese sectors, despite its WTO commitment not to do so.<sup>10</sup> China continues to exercise control over technology transfers in its review of joint venture applications, as well as in the government’s involvement in contract negotiations between Chinese SOEs and foreign investors.<sup>11</sup>

This lack of investment reciprocity has led to questions on why the United States should continue to allow Chinese companies, including SOEs, to avail themselves of our market – with the potential distortions that could result from such investment – at the same time that U.S. firms face significant restrictions in the Chinese market.

### 3. National Security Concerns Posed by SOEs and SSEs

The growing presence of Chinese SOEs and SSEs as investors in global and U.S. markets also raises multiple national security considerations. For example, governments and companies are increasingly vulnerable to cyber security threats that affect core economic and national security matters. These matters involve the protection of critical infrastructure and technology, commercial markets and supply chains, as well as governmental programs involving economic, military, and foreign policy objectives. These vulnerabilities are especially concerning given the high level of economic and military dependency on digital infrastructure and technology.

Because of these concerns, it should be no surprise that the protection of the U.S. information system, and U.S. supply chains, would be a core concern for U.S. policy makers, and that investments by Chinese SOEs and SSE in such systems could raise both policy and political concerns.<sup>12</sup>

Currently, the United States addresses these and other national security concerns arising from foreign investment mainly through the Committee on Foreign Investment in the United States (CFIUS). Among other factors, CFIUS is required to address whether the foreign entity is government controlled, and to determine whether the foreign entity would take actions based on government policies, goals and objectives rather than commercial considerations. However, and as discussed below, CFIUS has limited jurisdiction that does not extend to greenfield investments (start-ups), and there are few, if any, mechanisms other than CFIUS that can address national security concerns arising from foreign investment. These limitations are, in many ways, by design and have been long-standing features of CFIUS and U.S. open investment policy. However, given the growing involvement of SOEs and SSEs in

---

<sup>9</sup> See United States Trade Representative, *2011 Report to Congress on China’s WTO Compliance* (Dec. 2011) (“USTR Report on China’s WTO Compliance”) at 68.

<sup>10</sup> See WTO Working Party Report on the Accession of China at ¶ 203 (“The allocation, permission or rights for investment will not be conditional upon performance requirements set by national or sub-national authorities or subject to secondary industrial compensation including specified types or volumes of business opportunities, the use of local inputs or the transfer of technology”).

<sup>11</sup> See, e.g., Regulations for the Implementation of the Law on Sino-foreign Equity Joint Ventures

(2001) at Chapter VI, available at [http://www.fdi.gov.cn/pub/FDI\\_EN/Laws/law\\_en\\_info.jsp?docid=51062](http://www.fdi.gov.cn/pub/FDI_EN/Laws/law_en_info.jsp?docid=51062).

<sup>12</sup> See U.S. House of Representatives, The Permanent Select Committee on Intelligence, Rogers and Ruppertsberger Intensify Investigation of Huawei and ZTE (June 13, 2012), available at <http://intelligence.house.gov/press-release/rogers-and-ruppertsberger-intensify-investigation-huawei-andzte>.

the marketplace, these limitations are coming under increasing scrutiny, especially with the growth of cyber security as a core national security concern.

### III. POLICY CONSIDERATIONS TO ADDRESS INVESTMENT ISSUES RAISED BY SOEs AND SSEs

The United States should consider new policies to address the challenges posed by the expansion of SOEs and SSEs as actors in global markets. The need for such policies is particularly heightened given the limitations of U.S. mechanisms to address such challenges.

A principal feature of the U.S. economic system is an appropriate, but limited, role for government in the private sector. Government prevents monopolies, regulates in other necessary ways, and helps ensure a level playing field for businesses, but generally assumes a limited role. Thus, it seems counterintuitive to many that our government would allow foreign government-owned businesses to operate freely within our own borders without creating mechanisms to deal with potential anticompetitive behavior.

A heavy hand by the government would likely run counter to the long-standing history of U.S. open investment. Addressing the issue of SOE and SSE competition is also difficult. Indeed, the United States itself has SOEs and SWFs that operate domestically and invest abroad (though, for the most part, the United States does not have entities that would be considered SOEs operating abroad). Thus, having a system in any way similar to China's, with multiple investment screening mechanisms, including for greenfield investments, may not be appropriate.

Other countries have implemented mechanisms that address SOE investment, including Canada's "net benefit" test and Australia's principle of "competitive neutrality."<sup>13</sup> However, there are currently no adequate tools to address potential competitive distortions arising from SOE participation in global markets, and U.S. laws can be viewed as generally inadequate.

As a result, members from a broad base of U.S. businesses have been working with the U.S. government to address these issues in the context of the Trans-Pacific Partnership ("TPP") Agreement. These efforts include establishing new and binding commitments in the TPP Agreement to effectively address the potential anti-competitive effects stemming from SOE investment. Many are seeking commitments that would generally: (1) require that SOEs investing or operating in the markets of other signatories act based on commercial considerations; (2) ensure that SOEs do not receive subsidies or financing or other benefits from their governments that unfairly advantage them with respect to investments abroad; (3) include a reporting/monitoring and information request mechanism; and (4) provide for a dispute settlement mechanism that is part of the broader agreement mechanism.

While China is not a party to the TPP Agreement, it covers a number of countries in which the state plays a growing role in commercial activity. Importantly, the TPP Agreement will set a precedent for new trade agreements, including any future agreements that could include China as a party.

Other potential steps being considered to address the increasing involvement of Chinese SOEs in the U.S. and global markets include the following:

- Negotiate an OECD agreement that establishes and enforces guidelines or "best practices" to

---

<sup>13</sup> The Australian Government introduced a "competitive neutrality" policy in 1995, with the goal of removing market distortions caused by state-owned businesses. Canada has both a national security review as well as a "net benefit" review, which ensures that foreign investment will be a "net benefit" to Canada.

ensure that SOEs operate based on commercial considerations. The arrangement could be modeled after the Santiago Principles and the guidelines themselves could be similar to the OECD “Guidelines on Corporate Governance of SOEs.” (“OECD Guidelines”)

- Address the issue of SOEs through the World Trade Organization (“WTO”).
- Enter into additional free trade agreements, and other bilateral and multilateral agreements, that include strong SOE disciplines.
- Ensure that SOEs are included as part of China’s commitments upon joining the WTO Government Procurement Agreement.
- Address potential anti-competitive effects of SOEs through a bilateral investment treaty with China, as discussed below.

Lastly, the United States could consider a narrowly tailored review mechanism for inbound investments by SOEs and SSEs (perhaps just those in non-market economies). Such a review could be in the form of an economic benefit test (similar to Canada’s test) or could ensure that the SOEs/SSEs are abiding by an established set of rules (e.g., the OECD Guidelines). The review could be designed to ensure that SOEs and SSEs investing and/or operating in the United States act solely based on commercial considerations and that such SOEs do not receive subsidies or other benefits from their home government that provide them unfair advantages over their U.S. competitors.

#### IV. BUILDING SHARED INVESTMENT RULES THROUGH A BILATERAL INVESTMENT TREATY

One means by which the United States encourages open bilateral investment with foreign countries is through the negotiation of bilateral investment treaties (“BITs”), and a BIT between the U.S.-China could serve as an important way to strengthen, and regulate as necessary, investment between the two countries. BITs provide binding legal rules, which are intended to promote and protect investment in foreign countries (especially where investor rights are not already protected through existing agreements), to encourage market-oriented policies that treat private investment in a transparent and non-discriminatory manner, and to promote U.S. exports.<sup>14</sup>

In April 2012, the United States completed the first review and revision since 2004 of the model BIT.<sup>15</sup> The three-year review process resulted in several changes to the model BIT, although the overall goal of “providing strong investor protections and preserving the government’s ability to regulate in the public interest” was maintained.<sup>16</sup>

---

<sup>14</sup> See Office of the United States Trade Representative, Bilateral Investment Treaties, <http://www.ustr.gov/trade-agreements/bilateral-investment-treaties>.

<sup>15</sup> See Office of the United States Trade Representative, United States Concludes Review of Model Bilateral Investment Treaty (Apr. 20, 2012), available at <http://www.ustr.gov/about-us/press-office/pressreleases/2012/april/united-states-concludes-review-model-bilateral-inves>.

<sup>16</sup> Office of the United States Trade Representative, Fact Sheet: Model Bilateral Investment Treaty (Apr. 20, 2012), available at <http://www.ustr.gov/about-us/press-office/fact-sheets/2012/april/modelbilateral-investment-treaty>.



Notably, the model BIT's disciplines apply to an SOE "when it exercises any regulatory, administrative, or other governmental authority delegated to it" by that country's government.<sup>17</sup> The 2012 revisions to the model BIT include a footnote added to clarify when governmental authority has been "delegated" – through "a legislative grant, and a government order, directive or other action transferring to the state enterprise or other person, or authorizing the exercise by the state enterprise or other person of, governmental authority."<sup>18</sup>

In the face of increasing encouragement from the U.S. business community and some U.S. lawmakers,<sup>19</sup> the United States has recently announced its decision to resume BIT negotiations with China.<sup>20</sup> The conclusion of a U.S.-China BIT is widely viewed as an opportunity to form a stronger, rules-based investment platform between the United States and China. At the same time, a BIT would allow the United States to address many of the concerns U.S. businesses confront when attempting to invest in China and could address many of the broader issues posed by Chinese SOE investment.

However, while the revised model BIT serves as a strong basis on which to begin negotiations with China, the unique considerations posed by the U.S.-China relationship requires that the two countries do not simply adopt the model treaty in full. Because the model BIT was drafted to serve as the basis for U.S. BIT negotiations with any foreign country, it does not effectively address many China-specific investment-related concerns. In particular, the model BIT, even as revised, does not appear to adequately reflect the prominence of SOEs and SSEs in the Chinese economy, and the effect this has on China's overall investment environment and on U.S. companies' access to and participation in the Chinese market. In order to ensure a level playing field for U.S. investors and Chinese private enterprises one of the main goals any U.S.-China BIT should include disciplines on SOE and SSE behavior in the marketplace.

Provided that the model treaty is tailored to reflect the unique challenges posed by China's investment environment and state-led economy, a U.S.-China BIT can serve as an effective mechanism through which the United States and China can build shared, rules- and market-based investment policies for the mutual benefit of both countries and their investors.

## V. CONCLUSION

The United States and China have extremely important roles to play in establishing global economic stability and the direction of the global economic system. There is great opportunity as well as great peril should both nations take confrontational positions, especially where it concerns trade and investment relations.

In order to avoid such controversies, both nations need to consider making systemic adaptations that build stronger rules of engagement and understanding. In order for the U.S. to continue to sustain its long-standing open investment policy, China must address the real and perceived economic distortions and national security concerns arising from its system of state-supported and state-led economic growth. The United States, in turn, should consider carefully whether to implement additional international and domestic policies and laws to address issues of fair competition, notably in the context of investment.

---

<sup>17</sup> 2012 U.S. Model Bilateral Investment Treaty (available from <http://www.ustr.gov/about-us/pressoffice/press-releases/2012/april/united-states-concludes-review-model-bilateral-inves>) at Art. 2.2(a).

<sup>18</sup> 2012 U.S. Model Bilateral Investment Treaty at Art. 2, n. 8.

<sup>19</sup> See, e.g., Doug Palmer, U.S. lawmaker urges investment treaty pact with China, Reuters (Apr. 26, 2012).

<sup>20</sup> See Charlene Barshefsky, Gary Born, Benjamin A. Powell, Suzanne A. Spears, David J. Ross, United States to Resume Bilateral Investment Treaty Negotiations on the Basis of a Revised Model Treaty

Working together to build clear rules of the road, through platforms such as a BIT, will in the long run provide greater trust and stability within the U.S.-China bilateral relationship and will strengthen global markets.

**PANEL III: QUESTION AND ANSWER**

HEARING CO-CHAIR SLANE: Thank you very much.  
Commissioner Reinsch.

VICE CHAIRMAN REINSCH: Thank you.

Let me apologize first. I'm going to have to leave before this is over, and I appreciate the Chairman letting me ask a question or two. First, can both of you assess the likelihood of us being able to produce a BIT result that remotely resembles the model BIT, and related to that, what do you think will be the issues where the Chinese will be either most demanding or least likely to agree to what we want?

MR. FAGAN: Thank you very much, Mr. Commissioner.

It's a great question. I think it's very hard to calibrate exactly what the likelihood is. As I said in my testimony, I expect that it's going to be a very tough negotiation, and we should hold firm and fast to the principles that are reflected in the model BIT.

I tend to be an optimist. I think China has demonstrated a desire to enter into BITs. They have more than 120 of them. Most of the recent ones contain some of the key terms that are in our model BIT and that would be most beneficial to us. I think one very tough area, and it's an area that we should push them on, is it's more beneficial to be able to list negative sectors than it is to have a positive sector list.

A negative sector list identifies clearly those areas that are out--every country has them--or where there are higher rules. A positive sector list is more ambiguous. It identifies a few areas where you might be in, but leaves a broad swath of the economy still uncertain. That is something that I would expect that we would push for very hard and that they would be very reluctant to give in on.

VICE CHAIRMAN REINSCH: You mean we would push for a negative list.

MR. FAGAN: We would push for a negative list; correct.

VICE CHAIRMAN REINSCH: Nova.

MR. DALY: Yes. I would just add to that, I think what's going to be difficult is the new labor and environmental provisions. I think that's going to be an interesting negotiation with the Chinese. What they're probably going to proffer on the table, which is what they did prior to this, was to try to get terms to deal with the CFIUS issue and our investment views to provide their industries with sort of a way around that process.

So I could see that being an issue of some increasing antagonism within it. And then I'm guessing, depending on the politics of how things go, that we're probably going to offer state-owned enterprise provisions as we have within the TPP perhaps. And I think if we do, that will obviously be a pretty difficult issue. So those are some of the major things.

VICE CHAIRMAN REINSCH: On CFIUS, and you made a reference to this in your oral statement, I think, Nova, can you--but having spent a lot of time on that during your tenure, are the Chinese treated differently than other countries when it comes to acquisitions?

MR. DALY: That's a wonderful question, and it's a difficult question. I think the answer is that CFIUS reviews all investments with the purpose of determining what are the narrow national security issues and concerns that are addressed with that investment? Obviously, those investments that deal with government control bring on a heightened level of security per law and the requirements of CFIUS.

So if it's solely about China, I think within the context of each investment, it's going to have its individual issues given the nature of our relationships and the nature of the threats that are out there.

So I would say that if you were to take government control, and I'm going out on a limb here, because I would never say these kind of things in government, if you take a government-controlled investment coming from France, Italy, Russia, or China, obviously, the nature of our relationships with those countries are going to determine what sort of threats, vulnerabilities arise from the transaction.

VICE CHAIRMAN REINSCH: Thank you.

HEARING CO-CHAIR SLANE: Thank you.

Commissioner Shea.

CHAIRMAN SHEA: Thank you both for being here and for your testimony.

Mr. Daly, I'm glad you mentioned cyber because I'm going to try to put two different silos together. I'm assuming you're both familiar with the Office of Counterintelligence report from October which identified China as a major perpetrator of economic espionage through cyberspace and other means against the United States, and Mr. Fagan, you're probably familiar with this op-ed from Michael Chertoff, who I think is at Covington; right? He's an advisor there as well.

MR. FAGAN: He is a colleague, yes, sir.

CHAIRMAN SHEA: A colleague, yeah. Mike McConnell, former director of National Intelligence, Michael Chertoff, and William Lynn, "China's Cyber Thievery Is National Policy and Must Be Challenged." And it says that the Chinese government has a national policy of economic espionage in cyberspace. In fact, the Chinese are the world's most active and persistent practitioners of cyber espionage.

The threat of cyber espionage looms even more ominously than the threat against critical infrastructure. Then it goes on and says estimates that the cost to the United States of the espionage, the cyber espionage, is clearly in the billions of dollars and millions of jobs, and then it says we must acknowledge the severity and understand the impacts are more long-term than immediate, and we need to respond with all the diplomatic trade, economic and technological tools at our disposal.

So I was wondering how does this play? Should the issue of cyber espionage be part of our negotiations on the BIT? If these three gentlemen are serious that we should be using all our economic tools available to us to respond to this threat, should we be conditioning access to FDI in the United States on better behavior on the part of the Chinese or am I just being very unsophisticated on these matters by even suggesting this?

MR. FAGAN: I think it's a great question, and I'd start by saying there is no doubt that cybersecurity is a significant security and economic issue in our relationship with China. I can speak to the issue from the perspective of threats to businesses. In addition to my practice before CFIUS and on national security issues, I also do deal with cyber issues and data security issues of clients.

And there's no doubt that the threats are real, they're advanced, they're persistent, and they're focused on stealing sensitive commercial information or spying on companies' strategic correspondence, and that's just the threat on the commercial side. I can't speak to it from the threat on the government side. I haven't been in government in quite some time.

But it's a real issue, and it's one that, to the point of the op-ed, requires a holistic, long-term engagement strategy. The solution can't be that we just say no every time we get a chance to say no, which is infrequent, and it's in CFIUS. That's not a solution; that's a punt.

We need a broader strategy on multiple fronts to get countries, all countries, to abide by a set of norms of behavior in cyberspace, and the relation of that behavior to industrial policy and government-to-government interactions. My view is that the BIT is not a mechanism well suited to do that. I do think it should be part of our economic and trade discussion. I don't think it should be a drag on the BIT. I think that that would ultimately hurt our businesses because there's a lot of advantages to be gained by having a BIT in terms of opening the Chinese market to our businesses.

But we should engage in bilateral discussions, and we should engage multilaterally with allies and through other fora. You know, when we were the first country to adopt anti-corruption laws, the OECD proved to be a very useful forum to get other countries to sign up and adopt those norms. That's the kind of strategy that I think we should be pursuing on the cyber security front as well.

MR. DALY: Yeah, it's a great question, and a very serious issue. Now Secretary of Defense Leon Panetta has said that the next Pearl Harbor is from a cyber incident. So it's extremely serious, and unfortunately Congress has yet to truly enact or put forward a cyber security bill that can help towards the process of defending our infrastructure and defending our systems.

But, fortunately, there's work being done. In terms of China, I agree. I don't think the BIT is the best vehicle, but I think we need to pursue it diplomatically and internationally and on every front because we are losing our innovation and our future.

CHAIRMAN SHEA: Thank you both for your responses. I think you have to have leverage, and so I'm just looking, trying to find points of leverage where the other side wants something, and if you don't exercise leverage, I don't think you're going to make much progress. But thank you.

MR. DALY: Agreed.

HEARING CO-CHAIR SLANE: Commissioner Fiedler.

COMMISSIONER FIEDLER: First, a quick comment. In your testimony, you talked about a low level of FDI on the part of the Chinese, and I would make a quick argument that they made a policy decision to spend all of their FDI money in a race for resources, and that's the reason it's low because it wasn't here that the resources were available that they were trying to scarf up--number one.

Number two, I am not certain that our current rules, regimes and thinking envisioned the phenomenon that exists in China. So is there a historical parallel where we ever had a country that was dominated by a single party--forget Communist Party--a single authoritarian party that had massive state enterprises, that was stealing the technology, that was reengineering stuff, that was trying to jump over generations of technology by doing so, and who closed their markets, and how do we even talk to anybody in that circumstance?

So, for instance, the reciprocity issue, we don't have state-owned enterprises. General Motors was never a state-owned enterprise. It was a momentary bailout. AIG is not a state enterprise like these state enterprises are. And they are not apparently willing to give them up. They've made a serious policy decision.

So why in the world would we want to encourage investment by state enterprises in the United States and thereby encourage the existence of these in even other countries? Even friendly countries. By the way, I know there are Thai, Indonesian, French, Saudi, Russian state enterprises. The Chinese don't have a monopoly on state enterprises, but they have a different phenomenon of state enterprises and a panoply of them that our principles and rules and regimes just don't seem to be adequate for.

Talk about leverage, we're giving them--can they, can they buy our oil companies, and we can't buy theirs? Can they buy our telecoms, and we can't buy theirs? Can they not adjudicate disputes like Mr. Fellowes when he has a dispute, but yet the U.S. legal system is available to them here?

I'm not seeing the logic here beyond the greed that I see, i.e., money drives it, not security policy, not reciprocity, some sort of ephemeral principle of we have open markets, God forbid if we taint the theory of free investment, free flows of investment and free trade in the face of this phenomenon.

I'm very perplexed about why we would even think about doing it until there have been some fundamental changes in their construct. Am I being unfairly hard here?

MR. DALY: Not at all. I'll go real quick so we can split the time up. You know, one of the fundamental principles of the U.S. capitalist system is that we want to ensure a limited role for government to allow private enterprises to compete on a fair basis. So I think you're absolutely right. It is a mystery to me why we would allow unfettered access to our markets, government entities to compete with our private entities.

So, true, there is a great question to that effect. We do have state-owned enterprises here, but they really don't operate overseas. But in terms of how to address the issue with the Chinese, I think it's a long-term process. I think what's very interesting is what I had had that Chinese gentleman say to me. He said that in front of a member that was obviously part of the Communist system, who was a reporter for their Chinese Communist television station, so he said that directly to me in front of him, and the other person heard. So it just takes time and engagement on all levels.

MR. FAGAN: I'll just add that you've raised a number of important issues, and frankly I think that is why this hearing in particular is so timely and important. It's raised a lot of great questions, and there are no easy solutions. Let me touch on a couple of points just very briefly that you made.

First of all, there was an implicit message in the opening comment with respect to them investing here and the limited amount of it: it may be more them than us. I would agree with that. I don't think that there is a direct historical parallel. You're talking about the world's two largest economies, two very different political systems, two very different industrial systems, two very different ways of approaching things, and that is what makes it such a complex issue.

And so I think if you were to try to draw the analogy, and I've heard it drawn, to Japanese investment in the '80s, for example, it falls apart. There is no direct historical parallel. I do think that with respect to the broader economic impact and the SOE issue, I think we need to be very careful about painting in too broad of brushes and defining rules that may inadvertently have a broader sweep than we intend, and that's a risk when you just talked about SOEs.

You mentioned that there are a number of other countries that have them, too. They're not all the same. In my experience, not even all the SOEs in China are the same. There are some that are much more commercially oriented, and there are some that when you deal with them, it feels like dealing much more with the government.

I do think it is appropriate for the Commission, the government, Congress, to focus on market access and removing some of the distortions in the Chinese market that favor SOEs and also assuring that countries, all countries, including China, play by the same competitive rules globally on business practices, on export-import financing, and respect for intellectual property. There's not an easy solution to any of that. It's something that has to be pursued on multiple fronts.

COMMISSIONER FIEDLER: The one thing that I would add is that, just to make a comparison between them and us, we are trying to protect a democratic system in the United States, as a matter of policy; they are trying to protect the existence and the dominance of a Party.

The motivations for economic activity in the United States and in China are different. The motivations on the part of the government of the United States for economic activity are one thing, and they are very different. And the head of the Communist Party and the maintenance of power of the Communist Party, the chief motivation is their survival, not sort of people getting better wages or better jobs or developing this. That's secondary.

In the United States, we're just enabling an environment where people flourish. They're trying to enable an environment where the Party flourishes and the people then might. Trickle down politics, if you will, instead of trickle down economics. I don't see how you deal with that on a fair basis. It's entirely different motivation.

Now, maybe you do it on sector by sector, but a broad investment policy that tries to capture everything, I'm very pessimistic about whether or not that works except for one or two industries in the United States.

MR. DALY: Yes. I don't think there's going to be one grand bargain or deal that's going to fix all this, and I do think it is a time thing where you take it issue by issue, and you continue to wear away and bring them to a system that is fair and open and allows for that sort of equity.

So I think it's multiple engagements. I don't think a BIT will be the end all/be all of achieving that, but I think it's a step towards that, and I think it's heartening that you do see within China private enterprises that believe state-owned enterprises are crowding out their ability to compete and grow and innovate.

So even though China has never experienced a democracy in its 2,000, 3,000, or 4,000 years, you see the elements of that freedom and that will of the private sector taking more of a driving seat in its future. So I think piece by piece.

COMMISSIONER FIEDLER: The only problem is we've been hearing that for a long time.

MR. DALY: Understand.

HEARING CO-CHAIR SLANE: Commissioner Wortzel.

COMMISSIONER WORTZEL: Mr. Fagan, in your biography, you also address FOCl issues, foreign ownership, control or influence.

MR. FAGAN: Correct.

COMMISSIONER WORTZEL: I have six questions. I'm going to read them out. You've probably, and Mr. Daly, you may want to comment, too, and you may not be able to answer all of them here, and maybe my whole sort of thought process is wrong. But can you describe concerns about foreign ownership, control and influence that do not involve CFIUS review, but would still or should be of concern to the U.S. government?

Have you seen Chinese investments or cooperative research and development programs approach companies in the defense-industrial- security system? Is our national security regulatory structure adequate to address FOCl issues specific to China?

Should our policies on foreign ownership, control and investment be expanded given Chinese behavior to include the protection of industries involved in our critical infrastructure? How would a bilateral investment treaty be tailored to address FOCl concerns?

And, finally, how would you suggest we mitigate concerns about foreign ownership, control and influence by China given the widespread and deep reach of the Chinese Communist Party?

MR. FAGAN: I will take those in order and feel free to remind me if I miss any single one of them, and I'm happy to follow up also.

COMMISSIONER WORTZEL: Well, you may not need to.

MR. FAGAN: So I think the first question was the extent to which there may be instances of FOCl that are not subject to CFIUS review. And I would just point out that as a legal and regulatory matter, all FOCl issues may not be subject to CFIUS review. Both the Department of Defense and the Department of Energy have their FOCl processes. Those authorities are independent.

The National Industrial Security Program Operating Manual creates a five percent rule. All companies with a facility clearance have to submit a very detailed form that details the nature of their ownership, and then all the different tentacles, and the Department of Defense for DoD regulated entities and the Department of Energy for DOE regulated entities take a very thorough review on how far that reaches.



So some of those transactions may not even be subject to CFIUS. There also is on the telecommunication side, as you may know, if transactions involve filings with the FCC, the federal government is made aware of it, and agencies have the right to intervene in the FCC process. There's an informal interagency committee of the security agencies known as Team Telecom, which takes a very active role there.

So on the DoD and on the telecom side, when it involves traffic, as opposed to equipment, so that there's filings with the FCC, there are processes. I think the government and Congress and the Commission should have a high degree of confidence that FOCI issues are being addressed. I think the more challenging question, and it may have been where you're also going, is to what extent influence may exist in ways that do not involve ownership shares?

COMMISSIONER WORTZEL: One of our debates internally is we know about the five percent rule.

MR. FAGAN: Right.

COMMISSIONER WORTZEL: But if six Chinese companies each have five percent, none of them crosses the threshold, but it's 30 percent by the Communist Party.

MR. FAGAN: Right. Look, I mean I can't speak for DSS, the Defense Security Services. I have total confidence that, first of all, the company with the clearance has to provide that information, and that clearance is core to their business, and the remedy is to invalidate the clearance.

So I have a high degree of confidence that in a circumstance like that, there would clearly be FOCI, and DSS would actively pursue the appropriate remedy, whether that's an invalidation or whether it's a form of mitigation, that's an agreement. So I do think that that kind of scenario can be addressed.

Your second question, which was to what extent research and development activities can create a risk on the FOCI side, that's not necessarily something that would fall before CFIUS. I think that that starts to touch on other risks, which are counter-espionage risks, stealing theft of intellectual property. We do have laws that address that.

If it involves technology, there are licenses that need to export it. If that regime is violated, there can be criminal punishment. As I'm sure you're aware, the administration has been very active and the Department of Justice has been very active in pursuing criminal penalties, and there's strong counter-espionage and economic espionage laws.

So I think that's part of the landscape. I'm mindful of the time, and your other questions.

COMMISSIONER WORTZEL: Right.

MR. FAGAN: And I want to be able to get to them. I guess I'm happy to follow up separately if that would be--

COMMISSIONER WORTZEL: I guess the big one would be would you include critical infrastructure now under that whole FOCI approach?

MR. FAGAN: I think CFIUS effectively does include it. Critical infrastructure is a factor that CFIUS is directed by statute to consider. Your question may be whether all transactions, if they are a small minority investment, get filed with CFIUS?

There are certainly instances where transactions haven't been filed. CFIUS, in my experience, each agency has a very active approach to monitoring investments, and they will not hesitate to bring in transactions that have closed, require a review, and then exercise the full authorities that are under the statute, including the presidential authority to unwind the transaction.

There can be no doubt about that. They have done that. So on the critical infrastructure side, I actually think CFIUS provides a very good mechanism for addressing that.

MR. DALY: Yeah, in terms of addressing FOCI, I mean there's the classified side, and that's what David was talking about, the DSS process, and that's where you get the five percent, and the question of whether that is adequate if you have a five percent, five percent, five percent?

You know, I think in some respects you do, but you know after the DSS has been in and they do their work, and then they create a mitigation agreement or a national security agreement, it really behooves the companies to be able to follow that, and given ownership stakes and multiple ownership stakes, and also providers and customers, I mean there are a lot of nexuses for issues to be problematic.

So I think that is something that has to be considered in terms of are we really in a holistic way addressing our national security issues, especially all the vectors for our vulnerabilities?

In terms of should we sort of expand it, I think definitely the Defense Department takes its role and job very seriously, but as the cyber security report, Commissioner Shea, that you mentioned, denotes, we have a very serious issue, and it emanates not solely just from the ability to walk into a company and go in there and take its information but to go online and do it just as easily. So we do have FOCI issues.

COMMISSIONER WORTZEL: Thank you. Appreciate it, both of you.

HEARING CO-CHAIR SLANE: Commissioner Bartholomew.

COMMISSIONER BARTHOLOMEW: Thank you.

I have two different kinds of questions. I think I'm going to start with Mr. Fagan. You point out the AMC holdings deal and see that as a good sign, and I think there are some questions. I'm a strong believer in freedom of speech, and I wonder whether, I think we're going to have to watch. It's not a question as much as we're going to have to watch to see whether the Chinese government tries to influence content.

If, for example, there's a movie about the Dalai Lama that comes out, is AMC going to be able to show that in theaters across the United States? We don't know that, and it would be an interesting test case to see. So I think that there are questions about are they going to influence content; what is being shown on U.S. screens; are Chinese movies with Chinese government funding going to start showing up in our movie theaters as part of perception management? Those kinds of dynamics.

So even something that looks to me like it should be, well, this is a simple thing, isn't because of the access to the audiences and freedom of information. I don't know if you have any thoughts on them.

MR. FAGAN: Well, look, I think any investment needs to be, you can't tell exactly what's going to happen in the future. I think I have a high

degree of confidence based on my own experiences with investments that acquirers in this case will follow through on their commitments, which included commitments to retain U.S. management, to follow through and invest on the strategy that U.S. management is putting in place, to maintain the facilities and the company in the U.S.

It may not be a perfect analogy, but it does bear in mind when Lenovo bought IBM Personal Computing Division, which was a transaction that we handled. Lenovo now has executives that are U.S. executives, and they have maintained their research and development facility in North Carolina and invested in it.

And, you know, that was 2005. Seven years later, I don't think, as a general matter, we are pausing over the fact that it's a Lenovo ThinkPad instead of an IBM ThinkPad, and different people may have different views on that. But they did follow through on what they said. And the company continues to operate in a commercial way.

I have a high degree of confidence that that would happen in the AMC case, but certainly no one can predict the future, and if you have questions about that, you're right to point out that it's something that can be monitored or should be.

COMMISSIONER BARTHOLOMEW: Yeah. And then there's also the self-censorship issue. If I'm management for this company, and I've just been bought out by a behemoth of a nation essentially, how much freedom--I might just decide, well, you know what, a movie about the Dalai Lama is not going to go over very well with my bosses so I think I'm not going to do it.

And some of these things, again, I have no idea if this is how it's going to unfold, but I think it's something--there are always so many complications with these investments, which gets me to actually a question that former Commissioner Mulloy always asked or pointed out, which is, and it's a variation on what Commissioner Fiedler asked about, but I mean in this country, we believe in a capitalism that doesn't have government ownership of companies or frankly government control of companies.

So why should we be comfortable with Chinese government-owned or controlled or Chinese state investment vehicles buying companies in our context when we don't believe that our own government should be doing it?

MR. FAGAN: I think this is probably one area where we don't see it exactly the same. So I'll go first and then you can point out all the ways that you disagree.

MR. DALY: Okay. I'll rebut.

MR. FAGAN: I think it's an issue that has to be looked at and should be looked at. But I also don't think that we should, as I said, paint in too broad of brushes. There can be transactions that involve state ownership including state ownership from China that are positive for the United States and that do not raise concerns.

They should be closely examined and scrutinized. Smart investors and transaction parties will file those transactions with CFIUS. If they don't file it with CFIUS, as I said, CFIUS has a very active monitoring process, and there's a substantial chance that they could be brought before CFIUS, and it will be reviewed.

But the parties should not run from subjecting the transactions to a very close review. And I do think that, by and large, there are a number of areas where SOEs can invest that would be good for U.S. investment.

You know, we almost had a transaction, and it fell apart for other reasons, nonregulatory reasons, but it would have been an SOE investing in an automobile manufacturing sector, and jobs would have been moving frankly from Mexico to the U.S. under that transaction. And U.S. management was going to be retained. That was going to be a good transaction.

And there was a high degree of confidence that they wouldn't move anywhere else because of the way the market works, they need to be close to the customers in the U.S. So that's just one anecdote of how every transaction is.

COMMISSIONER BARTHOLOMEW: Right. And Mr. Daly, before you answer, I just want to say, Mr. Fagan, that's an answer about process. I think I'm asking about principle. We have sort of been in the global marketplace with the definition of what we believe capitalism is, and we don't believe that there is a role of government in these companies, and we are looking at a situation where it is the exact reverse of what it is that we believe capitalism should be based on.

So, yes, there's CFIUS and, in fact, Mr. Daly, we could hope that you would lift the curtain of mystery about CFIUS, but I won't ask you to do that. But that's process. There is still to me a principle about the economic principles on which this country is based.

MR. DALY: Madam Commissioner, there's a super-secret CFIUS handshake, and I'll share that later.

[Laughter.]

MR. DALY: Regarding the SOE and SSE issue, I differ from my colleague here. I'm more of a purist. I think the government needs to have a limited role in the market, and that's to make sure that we don't have monopolies and to provide a level playing field, and that should be its role because I think private enterprises are the ones that do the most innovation and giving them the allowance to compete fairly is what you need to do.

That's why I don't think state-owned enterprises, especially those operating in foreign markets, is an appropriate formula to and the most conducive formula to working, good working capitalists, not distorted capitalist markets that are based on principles of fair competition.

So I do have an issue with state-owned enterprises, especially in their operations abroad. That's why I believe, as has been raised, that there needs to be some form of making and ensuring that a level playing field is out there because the antitrust laws currently in place in the United States would not be adequate enough to deal with a competitor who is anti-competitive, who has access to unfair financing or subsidies.

So that's to that point. Going back to the AMC point, I think it's actually a fantastic thing that this Chinese company has bought AMC. I think it's a true exposure to the beauty and the vibrancy of our democracy and our free press, and the ability of our people to make choices, commercial choices, and so I truly hope it does expose all these things and allows us to keep a vigilant eye on how this company operates, and to allow it to see the full force of what we have here as a free press, people who do blow whistles when there are egregious violations.

COMMISSIONER BARTHOLOMEW: Mr. Daly, I'll join you in that hope and say I'll believe that day has come when a movie about the Dalai Lama can be shown in theaters in China.

MR. DALY: I agree.

HEARING CO-CHAIR SLANE: Commissioner Wessel.

COMMISSIONER WESSEL: Thank you.

You're not producing a Dalai Lama film; are you?

[Laughter.]

COMMISSIONER WESSEL: Just might as well test it. Thank you both for being here.

I hate to say I'm troubled. You know you sat through, I think, earlier today, and you heard some of our other panelists talking about the difficulty of having adjudication, proper adjudication of their rights in the Chinese market. When China became a WTO member, I believe they scheduled 84 products on which they could legally impose export restrictions of some kind.

Today, there are over 300 products that are subject to those restrictions. They lost a case in I think it was February of this year that the WTO said they had no defenses to apply any of the restrictions, rare earths, et cetera. Then about a month later, our own government filed a rare earths case. There are still 200 plus products that we have not gone after, and they have not abided by their WTO commitments.

Why on earth would we want to do a bilateral investment treaty with them that we will respect here in our market, but for the life of me, I have no confidence that they will respect the rights that we are granted on that BIT in their market? We will be giving them essentially one-way access rather than having any confidence that the investments we may make in their market will receive proper returns, will be properly adhered to, respected, et cetera.

Mr. Daly, did you want to start with that?

MR. DALY: Yeah, you raise a good point, and Commissioner Wessel, I know you are very familiar with the record of China's accession to the WTO and whether or not they've maintained the principles of that agreement and the black and white of the law of that agreement.

So it is a valid point given China's track record, but I will say this. I think having them in a rules-based system is the goal, and I think we should make this BIT negotiation difficult, we should make it a high hurdle, and if it doesn't work out, then too bad. I just don't think we should water this thing down to accommodate China's feelings or views. I think we should make it as strong as possible, and we should have investor state disputes where their authorities can be sued directly by companies that find egregious process, and we should make sure their judicial system is clear and based on a rule of law.

So my view is you raise an excellent question, and I think it just requires vigilance on our end, on every level, to move forward.

COMMISSIONER WESSEL: And I appreciate that, and I'm also for a rules-based system, but you say vigilance on our part. I go back to Ronald Reagan, a great president--

[Laughter.]

COMMISSIONER WESSEL: I'm just trying to get you over to my side here-- when it came to arms control said trust but verify.

MR. DALY: Right.

COMMISSIONER WESSEL: The fact is we're not verifying. You know every time we have a problem, we throw it over to the S&ED or the JCCT. We mentioned before the question about export supports. I think there have been a number of cases and issues brought before our own government identifying the violations by the Chinese and what are we left with now? We're now left with a bilateral negotiation scheduled to end by 2014 which gets them off the hook for another two years. And then maybe we find out that they still haven't provided a proper offer.

Let me, though, also ask, since I think both of you have knowledge, one of the issues that comes into TPP, SOEs, et cetera, is the adverse consequence issue. And I know that this was a huge issue; some were looking at the Anshan Steel investment in the U.S., and Tianjin Pipe, and other SOE type investments.

Because we treat a greenfield investment differently in many ways--it's not a controlling investment--so you may have certain clearance issues that don't apply at all. They may enter a market like steel where there is already overcapacity worldwide or some other industry. Our trade laws wouldn't apply because it's an investment here, not a transborder transaction.

We have no existing remedy for anticompetitive activities of an SOE in our own market, and as I've seen from the model BIT, and, et cetera, all the other things, we're still not going to have that as a result of this.

So Anshan Steel produces a facility here, has, builds a blast furnace, \$400 million. They can out-compete almost any existing U.S. competitor because they have no cost of capital. Now, there are some adverse consequence issues, but that also requires the support of the companies in terms of providing the data, many of whom are now multinationals and are unwilling to support trade cases.

That means the workers are left out on the street, that communities that had existing production are facing a state-owned entity as a competitor with no right of recourse. How is that in our interest?

MR. DALY: That's a great question and part of the argument for dealing with the Anshan investment, the counter argument was, this investment is going to bring jobs to Amory, Mississippi, but the counter to that was the market is already saturated, and any jobs it does bring will take away from the jobs of private enterprises that are already operating there as well. So that was a very telling investment at its time, and certainly one where it didn't make competitive sense or market sense for that investment.

COMMISSIONER WESSEL: And there is no existing screening mechanism here in the U.S.

MR. DALY: Right. Currently, that's why the issues around the TPP and the state-owned enterprise provisions are very, sort of historic in some ways, is that we don't have have a mechanism. CFIUS does not deal with greenfield investment. There is no mechanism by which we can evaluate foreign government-controlled investment by non-market economies in this country to ensure that the they're playing on a level playing field and not receiving benefits or other subsidies that unfairly advantage them vis-a-vis private sector companies.

So to your point, it's very true, and you have secondary and tertiary effects of these things. For instance, in the world of solar, state-owned enterprises aren't necessarily the companies that are sending the subsidized product over, but these companies that are supplied by state-owned enterprises are able to be subsidized and send their product here to the detriment of U.S. manufacturing.

That's a secondary and tertiary in our own market, but in terms of those companies coming here, obviously one of the things that my testimony does argue is that we really don't have a system, and we do have a situation where industries have come together to see that as an issue. They face the competitive pressures of China abroad and decided that it's time to remedy that.

COMMISSIONER WESSEL: Mr. Fagan.

MR. FAGAN: I'll just add briefly to that, one, you are raising a number of very fair points. And there's no question that the testimony earlier today was very compelling. I think we need to view it broadly. And I worry about creating rules or failing to take actions because of particular concerns where they may also be other benefits that can accrue. I do believe that foreign direct investment into the United States has a very strong record of contributing to our economy, including jobs and higher paying jobs.

There may be instances throughout foreign investment history where particular foreign investments have not been beneficial to the U.S., but as an overall, it has been beneficial.

I do think that if we have mechanisms in place to attract more Chinese investment, that it will be to our overall benefit. I don't have any evidence or reason to believe necessarily that the Chinese will behave materially differently than foreign investors have in the past.

At the same time, I'm not pollyannaish about the relationship with China. And I think that a number of these issues are good and fair issues to be raised. I think we need to take the long-term view. There's not going to be a major solution any time soon. But the strategy that we should approach is a strategy of engagement on multiple fronts on all the different issues, and one part of that is a BIT that we pursue aggressively with our principles in mind to benefit our economy and our businesses.

COMMISSIONER WESSEL: If there's another round, I'd--thank you.

HEARING CO-CHAIR SLANE: Dave, I think last time we were together, we were at the embassy having dinner, talking about these same issues. My question to you is would you support amending our antitrust laws to include subsidies and other things?

MR. FAGAN: I do not think that our fundamental laws need to be changed to address these particular issues from state-owned enterprises. I do think that we need to pursue bilaterally and multilaterally, including through the OECD, mechanisms to get our trading and investment partners, including China, to agree to well-established international norms on issues like export-import financing.

HEARING CO-CHAIR SLANE: Mr. Daly.

MR. DALY: I, as Commissioner Wessel said, I think the trust but verify issue is key here. I currently think there are many in industry that agree, that we do not have a mechanism within the United States to ensure that these

entities are competing and not receiving benefits that unfairly disadvantage them vis-a-vis private sector actors here.

So do I think it's the antitrust laws that have to be amended? That's one possible vehicle, but we could choose to look at a number of other vehicles in terms of Commerce that has expertise looking at subsidies. There was an executive order dealing with the formation of CFIUS that dealt with the role of the Commerce Department to closely monitor and look at foreign investment as it came in.

Perhaps some expansion or consideration of that in terms of the monitoring of state-owned enterprises within the United States vis-a-vis their competitive nature will be beneficial. Maybe a even a study could help. I think there's ways to deal with this issue.

HEARING CO-CHAIR SLANE: Thank you.

Commissioner D'Amato.

COMMISSIONER D'AMATO: Thank you, Mr. Chairman, and thank you both for coming. Your testimony is very interesting for all of us today.

I have two questions. First, talk a little bit about the CFIUS issue which I've been involved in over the years. I would be in favor of requiring CFIUS as part of the treaty myself. I'm in favor of verifying and then trust in that sequence.

And the reason is that in the past, we've had situations where let's take CNOOC, for example. CNOOC was not subject to CFIUS at the time. The reason CNOOC was rejected was because it was a message from the Congress that it would have been voted on and rejected. But the CFIUS process was ineffective in terms of CNOOC.

The consideration that CNOOC was a national security issue was a judgment that was made by the Congress without reference to the CFIUS process, as I recall.

And the second important issue is that CFIUS needs to be taken seriously by the Chinese because there's not necessarily going to be a haphazard motivation in the kinds of companies that are chosen to invest in the United States. Unlike other countries, there is the possibility of a strong espionage factor involved in the companies and industries that would come, and so I think having CFIUS as a part of the process would tend to mitigate a little bit against that possibility.

But the second thing I wanted to ask you was have you taken a look at the labor and environmental provisions of the U.S. model BIT, and are they adequate to address labor and environmental challenges vis-a-vis the U.S., vis-a-vis China?

MR. FAGAN: So let me take the first question, CFIUS, and how serious the Chinese should view it. I can only say that in my experience and with speaking with Chinese investors, they take CFIUS very seriously. Now have there been instances where particular investors have not understood it as well as they should have? Yes.

But in my experience, it's very difficult to have a conversation with any party in China, whether it's a private company, whether it's a state-owned enterprise, whether it's the government, about investment in the U.S. and not



have CFIUS be among the first three things that gets out. And then you have a discussion about it.

And I do agree completely that it is something that should be an active part of any transaction parties' deliberations on both sides, both the U.S. looking for foreign investment from China and the Chinese investment.

You raise, on the labor and environmental side, a very good question. I think we can have a lot of confidence in our model BIT. As you know, it was recently evaluated and developed, and labor and environment, my understanding is labor and environmental issues were front and center in those considerations.

As Nova mentioned earlier, there's going to be a difficult negotiation with the Chinese, and so I think there are two different questions. One, you know, is our model BIT strong enough? I think the answer to that is yes.

Two, are we going to be able to have those provisions in place with a BIT with China that will be effective? I think that remains to be seen, and it's going to be part of the negotiation.

MR. DALY: Yeah, in terms of taking CFIUS seriously, I think they obviously do, and in my dialogues with them, that was always a question on their mind. I sometimes wondered if they used the discussion of CFIUS and said that's how we block and screen their investments as their own way to get around a discussion of their system because frankly, having the multiple layer and levers that they have to be able to screen and block foreign investment is pretty significant.

And I did reiterate and reiterate ad nauseam the fact that our process was narrow and focused on national security and not broader economic issues. So they do understand it, and they do understand the parameters of it.

In terms of the CNOOC transaction that was--it was actually never filed with CFIUS, but the--and that's the interesting part of the system we have now is that CFIUS is very narrow; it's slim. It's national security. And then the only one that deals with the broader issues is really the Congress as it makes political notation, and I think that's an appropriate role given its financial roles.

So labor and environmental provisions, I've taken a brief look at them. I honestly haven't fully evaluated where I sit in terms of general things. I don't know if I'm going to be a huge supporter of them in the BIT, but that's just to be fully honest with you. So--

COMMISSIONER WESSEL: This is one where you should just trust and forget about verification.

[Laughter.]

MR. DALY: I'll leave that be.

HEARING CO-CHAIR SLANE: Commissioner Fiedler.

COMMISSIONER FIEDLER: So I've heard the term "monitoring" repeatedly, Mr. Fagan, in your testimony, a little bit in yours, and a great deal of confidence in our ability, U.S. government's ability to monitor. I want to break that down a little bit.

Is there any place in the U.S. government where there is a--or multiple places in the U.S. government-- repository of information on foreign companies operating in the United States?

MR. FAGAN: Well, Nova from his experience in the government may actually be able to answer that better, but I do think so. I mean--

COMMISSIONER FIEDLER: Where?

MR. FAGAN: A repository of information about foreign companies operating in the U.S.?

COMMISSIONER FIEDLER: Yeah.

MR. FAGAN: BEA has a survey that addresses it at the Department of Commerce.

COMMISSIONER FIEDLER: So everybody has the ability to say that Cayman Island company is, in fact, owned by CNOOC Subsidiary 103?

MR. FAGAN: So there's a difference between whether we have places in the U.S. government that do it and whether they have all of the information.

COMMISSIONER FIEDLER: That's what I'm asking.

MR. FAGAN: Well, Nova, again, can speak to that better. I can't speak for what information BEA has or what information we have on the intelligence side.

COMMISSIONER FIEDLER: Actually I won't play with you on that. I've asked that question repeatedly of government witnesses. The answer is no. Okay. So, and I sort of think about this occasionally as I'm going in through airport security; right?

[Laughter.]

COMMISSIONER FIEDLER: So an individual--you're Chinese first. You come into New York. You get a passport. You give us your fingerprints. You got to do this. You got to do--pretty soon, we're going to do biometrics, and--but you got a boatload of money, we don't care who you are. There is no deposit. Have you ever seen a Chinese corporate filing? I have them. I've done it--I mean I do this in another life, and U.S. company executives xerox their passports, and I can get their passport--okay--when I get the Chinese company information. It's 150 pages on a single minor company, get their bank book, get their bank statement. They know where we are. We haven't a clue. 80 percent of Chinese foreign direct investment according to the Chinese goes through the Caribbean.

We had some young staff who didn't understand what that meant. Said, well, the Chinese are really investing a lot of money in the Caribbean. I said like hell they are. Right. And so all of that is coming. I mean some large amount of that is coming here, not all of it by any stretch. We don't know. You talk about monitoring. Do we really know? Okay.

Now, on the CFIUS process, if you don't tell us, and we find out, then we unwind you. Right? But that's not true of--how much are we missing? You don't know. The U.S. government doesn't know. Is there a problem? Do we have a principle problem about registering ownership of companies--you know, beyond hedge funds not wanting to tell the rest of us what they own, is there a principle problem, a capitalist problem about real transparency and ownership?

We don't have it. I don't know how you talk about monitoring frankly. Because if you found a way to penetrate Cayman Island companies that I haven't, I want to know about it today.

MR. FAGAN: The transparency question is with respect to Chinese companies and investment. I cannot speak for the U.S. government or the

Committee. I can only speak from my experience, which is largely dealing with them on the private sector side.

It does seem to me that we have mechanisms to be able to try track and monitor it. Does that mean that we have perfect knowledge of everything? I don't know. I can't say.

COMMISSIONER FIEDLER: We have substantial knowledge. Forget perfect.

MR. FAGAN: My experience with the Committee is that they are pretty good at figuring things out. And they have the ability to draw upon resources that we never see. And that's true for investment and investors from any country. We've done complicated transactions and investors that involve Swiss, Cypriot entities, and Caribbean entities. They have a pretty good idea, and they have the ability to ask questions, and then take action. I can't tell you whether we have substantive knowledge of how the Chinese are organizing their investments or not. I have no basis to be able to answer that.

I can only say that from my experience with the Committee on a variety of transactions across a variety of sectors with a variety of investors, both from China and elsewhere, I have a fairly strong impression that we're pretty good--the government is pretty good at figuring things out.

MR. DALY: Big Brother has a lot of holes. I mean there's always room for improvement. You know I was amazed. It's sort of been amazing to have been in government and then come out of it and people who are out of government say, oh, the government knows everything about me, and I said you don't have any idea how little the government actually ends up knowing about you and being able to figure out how to deal with you.

So, yeah, there's definitely sort of room for improvement. You know, the issue of dealing with the monitoring aspect is then you get down the slippery slope of requiring everyone to register and--

COMMISSIONER FIEDLER: Is there a problem with that, by the way? Is it an onerous burden paperwork-wise, a piece of paper saying who you are?

MR. DALY: Yeah.

COMMISSIONER FIEDLER: I mean what--

MR. DALY: Yeah, no, no, I--

COMMISSIONER FIEDLER: Are there countries that do it?

MR. DALY: Yeah, certainly, certainly. China has a system every--

COMMISSIONER FIEDLER: Ah, China. Oh, a fee.

MR. DALY: Yeah. And then there's--

[Laughter.]

MR. DALY: I think Canada as well. So--

COMMISSIONER FIEDLER: So our American companies do it there, but they don't do it here actually.

MR. DALY: Yeah, that goes to the reciprocity, it's true. But it does become a question of open investment policy and whether we want to start, you know, whether that met--

COMMISSIONER FIEDLER: The simple requirement that you have a passport to get in the country.

MR. DALY: Yeah. There are definitely issues--

COMMISSIONER FIEDLER: We let individuals in, but we have requirements what those individuals produce to get here. And it is not viewed as particularly onerous. Okay. But we don't have any requirements for any registration on any company coming into this country. And we have a dangerous world. Okay. And so Gaddafi was all over the place with his investments with Goldman. We found out about it after they killed him.

[Laughter.]

COMMISSIONER FIEDLER: Right? I'm not confident that we have the information to know even what the level of Chinese FDI is in the United States. That's what worries me here. We say it's low; we say it's this. I don't think we know what it is. I'm not saying it's high. I'm just saying we have a range. It is probably low, but I don't think we know what it is. And we should know what it is. Sorry.

HEARING CO-CHAIR SLANE: Commissioner Bartholomew.

COMMISSIONER BARTHOLOMEW: Thanks.

I would just note, first, Jeff, that there are some people who do think the requirements to come into the country are onerous, but nonetheless your point is that it's much easier for, I mean people can get into the country, but businesses can get in without even having to meet a standard.

And I would just also note that it's been my experience that directors have to provide their passports too when an American company wants to open any sort of office in China. So it's not just the senior management.

Two questions. One is just a factual or an information question, but would the Chinese purchase of U.S. publishing houses or newspapers, not that they're necessarily good investments these days, sadly, but would that face any sort of review? Where would a review for those take place?

MR. DALY: Yeah, I mean it could definitely face CFIUS review, yeah. I mean it's a covered transaction.

COMMISSIONER BARTHOLOMEW: But so like if I'm Random House or something like that, and the Chinese wanted to buy me, it would have to go through a CFIUS process?

MR. DALY: Well, CFIUS is a voluntary process.

COMMISSIONER BARTHOLOMEW: Right.

MR. DALY: So it would not unless the parties decided that they ought to file, and then also CFIUS has a non-notified process whereby it can itself reach out and ask companies to file. So, yes, that's--

COMMISSIONER BARTHOLOMEW: And are there people watching the transactions to make sure that CFIUS itself does reach out?

MR. DALY: Yeah. One of the things I did sort of in my time at--

COMMISSIONER WESSEL: I'm sorry. Can I just ask qualifying--

COMMISSIONER BARTHOLOMEW: Yeah.

COMMISSIONER WESSEL: --just the issue? So a publishing house, you think CFIUS would view as a national security issue?

MR. DALY: Well, it depends, you know. Usually, the publishing houses have much more expanded operations than just printing out books. I mean it's magazines. It's sometimes broader communications, and also it deals with databases oftentimes as well.

COMMISSIONER WESSEL: Okay.

MR. DALY: So I think given that, and then they also, for customers, as well, they also collect data on that. So.

COMMISSIONER BARTHOLOMEW: And is there enough staffing capability within CFIUS and the participants in CFIUS to be able to deal with bulked up transactions?

MR. DALY: Yeah, I mean one of the interesting features of CFIUS is its 15/16 different departments and agencies within the government, and then you usually have a person that's dedicated to CFIUS and then other people that are part of the process, and the bigger the transaction, the more people that have to be involved in the process, but it does have a non-notified process whereby each agency looks at either it's Deologic or other or the press or its own systems to see M&A transactions.

I think that's the interesting thing how the Huawei-3Leaf sort of came to bear. There was someone in the Defense Department that was just doing their own research and knew that that was a triggered name and brought it to their attention, and it made its way to Defense and then to the rest of CFIUS.

So is it fully adequate? You know, it's as adequate as our government officials are vigilant. So I think my view is if you take on a role to represent your country and work for the government, you should do it vigorously and vigilantly. So I expect they are, and I've met a lot of great government folks that do so.

COMMISSIONER BARTHOLOMEW: And then on a completely different kind of question, oftentimes to the long-run detriment of our economy interests, the government has a tendency to emphasize, again, process over product. So discussions. Discussions are good. Dialogue is good. Negotiations are good. And then somehow what they all result in doesn't necessarily turn out to be what they should.

And I'm asking this, Mr. Fagan, particularly in the context of a BIT. Is the goal of having a BIT more important than what is in it, and is there a point--do you think that a bad BIT is better than no BIT at all, or where is there a point that you would think that this BIT shouldn't be happening?

And, Mr. Daly, I'll ask you that question, too.

MR. FAGAN: Sure. The answer is no, a bad BIT is not better than no BIT.

COMMISSIONER BARTHOLOMEW: Peter Piper picked a--

[Laughter.]

MR. FAGAN: Where that line is drawn, it's a negotiation. In any negotiation, you have to decide what your breaking point is. I think that there are some very important things that I highlight in my testimony. Most favored nation, national treatment, and arbitration provision. What is requested on the other side also has to factor into it. So I can't specify for you where the breaking point should be.

COMMISSIONER BARTHOLOMEW: But you think that there is--I mean just in your view of it, there is a breaking point?

MR. FAGAN: Absolutely. There has to be. And, look, I've spent a little bit of time in government, spent a lot of time outside dealing with government, there is no question that process is part of government; right. And it's important to focus on the product end goal. And that's a risk in any bilateral

discussion is that you end up getting bollixed up on process, and you miss the forest for the trees.

So we can't do that with respect to a BIT, and there has to be a breaking point. And if we can't get, you know, what we believe we need, then we should be prepared to walk away.

COMMISSIONER BARTHOLOMEW: Mr. Daly?

MR. DALY: Yes, I agree there is a breaking point where the agreement becomes essentially it's not the high standard, and it becomes less useful to the goals of what we need to give and provide our investors here and abroad. I think I understand your point.

If you just have negotiations and discussions, does that really lead the counterparty to do the things you know it needs to do in terms of either obeying its accession agreement obligations or what not?

So toward that end, I do think you have to have adjudicative provisions within the BIT that the United States should vigorously apply, and that's why I hope new institutions like the ITEC that's been created within the Department of USTR and Commerce, should take a strong role of enforcement and monitoring and people should make a focus on that.

I know it hasn't been funded near the levels people said it ought to be, but I think a concentrated view of it needs to happen because I think there are instances where sometimes it needs to be the role of the United States government to take on cases with China because sometimes U.S. companies themselves have their interests, commercial interests abroad, which makes it difficult, too. I think you see that with the Huawei and ZTE case in Europe especially.

COMMISSIONER BARTHOLOMEW: But there's a parallelism, I mean a presumption of a parallelism, and you just raised the adjudicative process. Does that mean that the Chinese then would have their own adjudicative process? I mean we've just heard from Mr. Fellowes how successfully that worked for him.

So I mean if you have an adjudicative process in a country where there is no, essentially no rule of law, what have you accomplished?

MR. DALY: Yeah, that's a good question. But, you know, what's interesting, though, I'll give the Chinese a little credit and then take it away. So what has been interesting is that in the context of WTO, every case that we have won within the WTO against the Chinese in terms of that they've corrected. They've come to terms with it and corrected it. So I will say that that adjudicative body has presented a forum whereby the Chinese--

COMMISSIONER BARTHOLOMEW: It's also multilateral.

MR. DALY: It is multilateral, right, and so why would that be the case with BITs? Well, I agree that presents a serious issue, and I think if you do have some, I think within the dispute resolution mechanisms, I think if you do bring on government to government, I think that could bolster findings that are based on rule of law and equity. But, I agree to your point.

MR. FAGAN: Can I just supplement on that? The BIT is bilateral, but it has multilateral impact, and the arbitration provisions in the BIT would be an international arbitration. And if they did not abide by the decision, yes, the direct impact would be for our investor who, in this scenario, would have won the

investment, but then the corrective action wouldn't have been taken and compliance with the arbitral award.

But they have more than 128 BITs with other countries, and there is a high degree of emphasis on the Chinese side on making sure that they are positioned with the rest of the world as a developed country. If they fail to abide by an arbitral award, I think in any of the BITs, it would have serious ramifications for the confidence of other countries with respect to their own BIT.

So I think that they would not just view it bilaterally. I think that they would have to consider the multilateral impacts of failing to abide by an arbitration.

COMMISSIONER BARTHOLOMEW: We keep getting more and more questions the more you guys say. Of these 120 countries that China has a BIT with, how many of them are essentially, I'm going to use the phrase "client states," but I don't really mean that. Is there a list in here?

MR. FAGAN: They have--

COMMISSIONER WORTZEL: Yes, we got a list.

COMMISSIONER BARTHOLOMEW: All right. Sorry. I'm just wondering if there are countries that are really dependent on their resource sales, for example, to China and--

MR. FAGAN: Well, certainly there is some. I think there is a BIT with North Korea, for example, but there are also BITs with Germany and France and the United Kingdom

COMMISSIONER BARTHOLOMEW: Yeah, and Kyrgyzstan and--

MR. FAGAN: It's most of the developed world.

COMMISSIONER BARTHOLOMEW: Yeah, I should have seen that. I should have looked at that. But, gentlemen, just in closing, thank you, again. You've been really patient with all of our questions, and I also wanted to thank you both for the service that you've done for our government, and I hope at some point you go back into government service.

Thanks.

MR. FAGAN: Thanks.

HEARING CO-CHAIR SLANE: Thank you, gentlemen, for your testimony. We know how very high-priced you are. We greatly appreciate your time and your expertise, and I also want to thank our crack staff for all their work in putting this together, especially Paul and Anna, and with that, we will stand adjourned.

MR. FAGAN: Thank you.

MR. DALY: Thank you.

[Whereupon, at 2:30 p.m., the hearing was adjourned.]