

**CHINA AHEAD OF THE 13TH FIVE-YEAR PLAN: COMPETITIVENESS  
AND MARKET REFORM**

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

**ONE HUNDRED FOURTEENTH CONGRESS**  
**FIRST SESSION**

**WEDNESDAY, APRIL 22, 2015**

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: 2015**

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

June 18, 2015

The Honorable Orrin Hatch

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 HATCH AND SPEAKER BOEHNER:

We are pleased to notify you of the Commission's April 22, 2015 public hearing on "China ahead of the 13th Five-Year Plan: Competitiveness and Market Reform." The Floyd D. Spence National Defense Authorization Act (amended by Pub. L. No. 109-108, section 635(a) and amended by Pub. L. No. 113-291, Section 1259 B) provides the basis for this hearing.

At the hearing, the Commissioners received testimony from the following witnesses: Dr. Stephen Roach, Senior Fellow, Jackson Institute of Global Affairs, and Senior Lecturer, School of Management, Yale University; Mr. Nicholas Consonery, Director of Asia, Eurasia Group; Mr. Oliver K. Melton, Senior Economic Analyst, U.S. Department of State; Dr. Xiaolan Fu, Professor of Technology and International Development, and Director, Technology & Management for Development Centre, University of Oxford; Dr. Ernest Preeg, Senior Advisor for Trade and Finance, Manufacturers Alliance for Productivity and Innovation; Dr. Gary H. Jefferson, Carl Marks Professor of International Trade and Finance, Brandeis University; Dr. Dali Yang, Professor of Political Science, Faculty Director, Center in Beijing, University of Chicago; Dr. Eswar S. Prasad, Tolani Senior Professor of Trade Policy, Cornell University, New Century Chair in International Economics, Brookings Institution; and Mr. David Frey, Partner, Markets Strategy, National Head of U.S.-China Strategic Corridor, KPMG China. The hearing examined the 12th Five-Year Plan, its effect on China's strategic emerging industries and innovation, and emerging issues related to China's market reform and U.S. competitiveness and their implications for U.S. economic interests.

We note that prepared statements for the hearing, the hearing transcript, and supporting documents submitted by the witnesses are 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 2015 Annual Report that will be submitted to Congress in November 2015. 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, Reed Eckhold, at (202) 624-1496 or via email at [reckhold@uscc.gov](mailto:reckhold@uscc.gov).

Sincerely yours,



Hon. William A. Reinsch  
Chairman



Hon. Dennis C. Shea  
Vice Chairman

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## **CHINA AHEAD OF THE 13TH FIVE-YEAR PLAN: COMPETITIVENESS AND MARKET REFORM**

WEDNESDAY, APRIL 22, 2015

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U.S.-CHINA ECONOMIC AND SECURITY REVIEW COMMISSION

*Washington, D.C.*

The Commission met in Room 216 of Hart Senate Office Building in Washington, DC at 9:00 a.m., Commissioners Robin Cleveland and Michael Wessel (Hearing Co-Chairs), presiding.

### **OPENING STATEMENT OF COMMISSIONER MICHAEL R. WESSEL HEARING CO-CHAIR**

HEARING CO-CHAIR WESSEL: Good morning. We will get started. Thanks, everyone, for being here at the fifth hearing of the U.S.-China Economic and Security Review Commission's 2015 Annual Report cycle. I want to thank our witnesses for being here today and for the time that they have put into their excellent written testimony. Before we begin, let me take a moment to thank the Senate Minority Leader Harry Reid and his staff for securing this room for us today.

Today's hearing raises questions regarding China's market reform and the long-term implications for U.S. competitiveness. China's Five-Year Plans are an important component in China's broader industrial policy by outlining the Chinese government's priorities and signaling to central and local officials and industries the areas for future government support.

The 12th Five-Year Plan focused on moving up the value-added chain, especially for its seven designated strategic emerging industries, and promoting indigenous innovation.

At the National People's Congress last month, Premier Li Keqiang announced that "Made in China 2025" and "Internet Plus" initiatives, which are aimed at increasing market share in other areas where the United States currently has an advantage.

As a result of strong government support to build capacity and to drive market demand in the clean energy sector, eight of the world's top-15 wind turbine makers in 2013 and six out of the world's top ten solar photovoltaic manufacturers are Chinese. Furthermore, continued support for heavy industry sectors such as steel has created cascading oversupply--directly impacting the employment and profitability of steel firms here in the United States.

Today's hearing also comes amid China's push for indigenous innovation. While encouraging innovation is important for sustaining long-term economic growth, China's domestic procurement requirements, forced technology transfers, and secrecy in standard setting are effectively shutting U.S. firms out of China's lucrative market.

This past weekend, IBM handed over a partial blueprint of its higher-end servers and software to ensure market access. While beneficial for IBM in the short-run, this transfer may lower the capacity gap between U.S. and Chinese firms, impacting the long-term competitiveness of the United States.

China has also made great strides in aerospace and in the auto sector, two important drivers of our economy. The five-year plans, and supporting policies, have helped promote their development and soon, I expect, international competitiveness in these sectors.

Today, we look forward to exploring these issues and hope to find creative ways that the United States can work with China to create a level playing field and ensure sustained U.S. competitiveness.

I now will cede the floor to my co-chair and colleague, Commissioner Cleveland, for her opening remarks.

**PREPARED STATEMENT OF COMMISSIONER MICHAEL R. WESSEL  
HEARING CO-CHAIR**



U.S.-CHINA ECONOMIC AND SECURITY  
REVIEW COMMISSION

**Hearing on China ahead of the 13th Five-Year Plan:  
Competitiveness and Market Reform**

**April 22, 2015**

**Opening Statement of Commissioner Michael R. Wessel**

Good morning, and welcome to the fifth hearing of the U.S.-China Economic and Security Review Commission's 2015 Annual Report cycle. I want to thank our witnesses for being here today, and for the time they have put into their excellent written testimony. Before we begin, let me take a moment to thank the Senate Minority Leader Harry Reid and his staff for securing this room for us today.

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Today, we look forward to exploring these issues and hope to find creative ways the United States can work with China to create a level playing field and ensure sustained U.S. competitiveness.

I will now cede the floor to my co-chair, Commissioner Cleveland, for her opening remarks.

## **OPENING STATEMENT OF COMMISSIONER ROBIN CLEVELAND HEARING CO-CHAIR**

HEARING CO-CHAIR CLEVELAND: Thank you, Mike, and thank you for our panelists for appearing. I am really looking forward to hearing from you.

Today's hearing comes at an opportune time. This year the Chinese government is simultaneously finishing its implementation of the 12th Five-Year Plan and drafting the next one or, as our witnesses know, not a plan but a process.

The reforms and targets China sets under this new plan will shape global competitiveness and economic growth. Understanding the plan and the opportunities and challenges they create for the United States is critically important.

Today's hearing seeks to address three important questions: how will the effectiveness of the current Five-Year Plan and interim economic goals influence the Chinese government's approach to the 13th Five-Year Plan and process; how are China's efforts to move up the value-added chain and promote innovation impacting the U.S.-China trade and U.S. competitiveness; and, finally, what are the opportunities and challenges for U.S. companies to compete fairly in China's expanding consumer and service market?

We'll begin today's proceedings by assessing the 12th Five-Year Plan and how it's meeting its key objectives. Since the 11th Five-Year Plan, China has sought to shift economic growth away from fixed investment and export-led growth toward a more domestic consumption and higher value-added manufacturing model.

In 2014, the service sector rose--and I think this is marginally debated within the first panel--to 48.2 percent of GDP, exceeding the share of manufacturing and construction, representing a fairly positive shift.

In addition, the Chinese government has dedicated significant resources over the last five years to boost consumption. However, the question for all of us is will the current slowdown, economic slowdown in China's growth, affect the Party leadership's maneuverability and opportunity to further rebalance the economy?

The final panel today will examine the impact--did I miss a panel? The final panel today will examine the impact of China's Five-Year Plans on urbanization, welfare, labor, and financial reform, and consider the opportunities and challenges a more consumption-oriented economy could create for U.S. companies.

An emerging middle class--that elusive middle class--is creating a new consumer market for better quality products and services with urban consumption expected to grow from 1.7 trillion to 4.5 trillion in 2022.

Furthermore, the Chinese government is planning to make major investments in transportation, public utilities and health care. The scale and number of these projects creates opportunities for both domestic and foreign companies. However, an opaque regulatory environment and market access barriers are tilting the playing field--potentially--against U.S. companies.

As a reminder, the testimonies and transcripts from today's hearings will be posted on our Web site, and you'll find a number of other resources, including really good staff papers, on that site.

**PREPARED STATEMENT OF COMMISSIONER ROBIN CLEVELAND  
HEARING CO-CHAIR**



U.S.-CHINA ECONOMIC AND SECURITY  
REVIEW COMMISSION

**Hearing on China ahead of the 13th Five-Year Plan:  
Competitiveness and Market Reform**

**April 22, 2015**

**Opening Statement of Commissioner Robin Cleveland**

Thank you, Commissioner Wessel, and welcome to our panelists and guests.

Today's hearing comes at an opportune time. This year, the Chinese government is simultaneously finishing its implementation of the 12th Five-Year Plan (2011-15) and drafting its next Five-Year Plan. China is the world's top trading nation, most populous nation, and second-largest economy. The reforms and targets China sets under this new Five-Year Plan will shape global competitiveness and economic growth. Understanding the effectiveness of these Plans and the opportunities and challenges they create for the United States is critically important for U.S. policymakers and companies.

Today's hearing seeks to address three important questions: How will the effectiveness of the current Five-Year Plan and interim economic goals influence the Chinese government's approach to the 13th Five-Year Plan? How are China's efforts to move up the value-added chain and promote innovation impacting U.S.-China trade and U.S. competitiveness? And finally, what are the opportunities and challenges for U.S. companies to compete fairly in China's expanding consumer and service market?

We will begin today's proceedings by assessing the success of the 12th Five-Year Plan in meeting its key objectives. Since the 11th Five-Year Plan, China has sought to shift economic growth away from fixed investment and export-led growth toward a more domestic consumption and higher value-added manufacturing model. In 2014, the service sector rose to 48.2 percent of GDP, exceeding the share of manufacturing and construction and representing a positive shift in China's rebalance. In addition, the Chinese government has dedicated significant resources over the last five years to boost consumption through higher wages, a greater social safety net, and urbanization. However, the current slowdown in China's economic growth represents a significant challenge to Party leadership's ability to further rebalance the economy and enact the necessary but painful market reforms.

The final panel today will examine the impact of China's Five-Year Plans on urbanization, welfare, labor, and financial reform, and consider the opportunities and challenges a more consumption-oriented economy could create for U.S. companies. An emerging middle class is

creating a new consumer market for better quality products and services with urban consumption expected to grow from \$1.7 trillion in 2012 to \$4.5 trillion in 2022. Furthermore, the Chinese government is planning to make major investments in transportation, public utilities, and healthcare facilities. The scale and number of these projects creates opportunities for both domestic and foreign transportation, healthcare, and construction companies. However, an opaque regulatory environment and market access barriers are tilting the playing field against U.S. companies – a losing proposition for both the U.S. economy and Chinese consumers.

As a reminder, the testimonies and transcript from today's hearing will be posted on our website, [www.uscc.gov](http://www.uscc.gov). You'll find a number of other resources there, including our Annual Reports, staff papers, and links to important news stories about China and U.S.-China relations. Please note that we will break for lunch after Panel II at 12:30 pm and return for Panel III at 1:30 pm.

## **PANEL I INTRODUCTION BY COMMISSIONER ROBIN CLEVELAND**

So let's start with the first panel. Our first panel will assess China's efforts to meet its 12th Five-Year Plan objectives. Our first witness, Oliver Melton, is a senior economic analyst at the Bureau of Intelligence and Research. His testimony will draw from a decade of experience covering Chinese economic, military and social issues for the Economist Intelligence Unit, the China Economic Quarterly, Voice of America, and CENTRA Technology.

His testimony does not reflect the views of the Department of State. They would be unwise not, however, to listen to them. Mr. Melton received a master's in public policy from Harvard and a bachelor's degree from the place where fun goes to die, the University of Chicago.

CHAIRMAN REINSCH: My son is a student there. I'd be careful.

HEARING CO-CHAIR CLEVELAND: Well, I bet he would agree. It's right up there with Johns--

CHAIRMAN REINSCH: Actually I guess he would.

HEARING CO-CHAIR CLEVELAND: It's right up there with Johns Hopkins, which is number two on that list, where my son went.

CHAIRMAN REINSCH: Me, too. I had no fun.

HEARING CO-CHAIR CLEVELAND: Anybody else want to comment on fun?

CHAIRMAN REINSCH: Sorry.

[Laughter.]

HEARING CO-CHAIR CLEVELAND: Our next witness is Dr. Stephen Roach, a Senior Fellow at Yale University's Jackson--is that as in Scoop?

DR. ROACH: No.

HEARING CO-CHAIR CLEVELAND: No--Institute of Global Affairs and a Senior Lecturer at Yale's School of Management, formerly Chairman of Morgan Stanley Asia and the firm's Chief Economist for the bulk of his 30-year career at Morgan Stanley, heading up a highly regarded team of economists around the world.

Our final witness is Nicholas Consonery, who I am pleased is here. He is a director of Eurasia Group's Asia practice and leads the firm's advisory and consulting work on China. He has a particular expertise in economic and financial policies in the mainland and is a leading analyst for the investment industry on China's financial and economic reforms.

I'm particularly glad you're here because I think Eurasia Group's approach to political risk provides us with really cutting-edge analysis to inform our decisions.

Prior to joining Eurasia, Mr. Consonery worked as a political and security risk analyst in Washington and for the Foreign Commercial Service at the U.S. Consulate in Shanghai.

So, gentlemen, if you would begin. We hope that you'll keep your remarks to seven minutes. As fascinating as they are, all of these folks like to ask questions. So, Mr. Melton, we'll start with you.

**OPENING STATEMENT OF DR. STEPHEN ROACH  
SENIOR FELLOW, JACKSON INSTITUTE OF GLOBAL AFFAIRS, SENIOR  
LECTURER, SCHOOL OF MANAGEMENT, YALE UNIVERSITY**

DR. ROACH: Thank you, and it's a privilege to be back in front of this Commission. It's been a while, but I always enjoy and respect the opportunity.

In a recent interview in the Financial Times, Premier Li Keqiang, I think, pretty much said it all, and I quote directly: "We believe that one needs to undertake structural reforms." Yet he went on to add, "Yet not that many countries have taken significant steps in that direction." End of quote.

For me that pretty much says it all in terms of China, as I outline in my written statement, but also it says a lot about China's codependent economic partner, the United States, and I'll come back to that in a second.

First, with respect to China, I want to just stress three key points in my brief oral summary: one, on strategy, and here I'll talk a little bit about the 12th Five-Year Plan and the Third Plenum; two, on tactics, and here I'm talking about the actions that China is taking in coping with the current state of the economy; and, three, prospects looking to the 13th Five-Year Plan.

In terms of strategy, I think China has a well-designed strategy to shift its growth impetus from production to consumption, from exports and investment to internal private consumer demand and from manufacturing to services. This strategy was originally framed by the 12th Five-Year Plan, enacted a little over four years ago, modified, refined, augmented by the Third Plenum reforms of November 2013.

I find these plans and reforms to be very helpful. They are a good framework to assess major directional shifts in the economy. The strategy is articulated by the 12th Five-Year Plan, emphasizes three key building blocks to consumer-led growth: more jobs by developing the services sector; higher wages through the income leverage that comes from urbanization; and reducing fear-driven precautionary saving by emphasizing the social safety net.

The results have initially been mixed. I would be the first to concede that. But after all, this plan has been in place for only four years, which is literally nothing in the time line of structural change for major economies the size of China.

I'm very optimistic that China's progress in executing its strategy will steadily improve, and I think the plan itself has been most successful in the development of services and urbanization but least successful in terms of providing support to the safety net.

The safety net issues, I think, however, have been addressed very effectively by Third Plenum reforms, in particular, hukou reform, relaxing the one-child family planning policy, deposit interest rate liberalization, deposit insurance, and in offering a more robust funding mechanism for social security by raising taxes on state-owned enterprises from 15 to 30 percent by 2020.

But if I had to pick one strategic accomplishment of China's that I would stress the most, one that's most overlooked in the West, it is the services piece of the development strategy. In the 12th Five-Year Plan, services were targeted to move up from 43 to 47 percent of GDP by 2015. A year ahead of schedule, that is in 2014, the number is not 47 but 48.2, and that compares with 42.6 for manufacturing and construction, combined.

Services, now the largest and most rapidly growing sector of the Chinese economy, are key for three reasons:

One, they generate a lot more jobs, and that allows China to grow more slowly and still hit its labor absorption targets. Two, services have a sharply lower carbon footprint, and that enables China also to deal with horrific pollution. And, three, services make urbanization work.

There's plenty of upside at 48.2 percent for services in China. The number should be 60 to 65 percent.

I'll be briefer in my second and third points because time ticking away here. If the clock that I am staring at were made in China, it would probably be frozen right now.

In terms of tactics, obviously there's a sharp compression of Chinese growth in early 2015, but as I outline in my statement, the compression is most acute in the old sources of growth: industrial output; exports; and construction. By contrast, there's resilience evident in the new sources of growth; services grew in the first quarter of this year by one-and-a-half percentage points faster than manufacturing and construction. Even the retail sales data, while they've slowed, the slowing has been minimal compared to other sectors of the economy.

I'm not sure if the Chinese economy is bottoming right here. I don't think anybody knows that. But if it doesn't, Chinese authorities have plenty of ammunition left in terms of fiscal and monetary policy to address the slowdown, and the sharp cut in required bank reserve ratio over the weekend was certainly encouraging in that regard.

In terms of the outlook for the 13th Five-Year Plan, I would stress three points here: one, the new plan is going to be a continuation of the old plan, nothing new in terms of the basic strategy; secondly, any changes that they'll make will be more in the way of strategic refinements to the safety net, pollution objectives, currency and financial reforms; and thirdly, I think this new plan will be most explicit in addressing China's global leadership role, not just the so-called One Belt, One Road initiatives, but also China's role in grappling with major global issues, such as climate change, global health, and terrorism.

I'm out of time, but I'd like to beg your indulgence for one more minute because I also want to summarize what this means for the United States. I would frame my remarks for China in the context of what I believe is a strong codependency between the U.S. and China. China needs us; we need them to sustain economic growth.

And as in human relationships, when one partner changes, there are consequences for the other whether he or she likes it or not. China is changing. And there are consequences for us, and I would just tick off three of them for the U.S.:

China is going from surplus saving to saving absorption. What does that mean for us? That means we can't count on China's surplus saving to subsidize our growth the way we have in the past, and that means that we must begin to debate a saving strategy so we are more reliant on our own ability to grow rather than on the surpluses of others.

Secondly, China is going from production to consumption, and that's an important source of new global demand. That's a huge opportunity for us to trade into if we can, number one, get market access to that, and number two, be competitive. And so we need to focus on our competitive strategy in order to capture that demand.

And, thirdly, and most obviously, recently China's geostrategic focus is going from inward to outward, as per the China Dream of Xi Jinping, and that means for the U.S. while we must be firm and resolute in defending our core security interests, we also need to move from containment to engagement in joining efforts that China and others are embarking on in global institution building, and here I'm referring to the Bilateral Investment Treaty, the Asia Infrastructure Investment Bank, the new development, so-called BRICS Bank, and the long overdue IMF reforms.

Containment is I think a holdover from the Cold War mentality that must be addressed. We're all aware of the historical warnings of a potential clash between a dominant power and a rising power, and I think it's up to us in this country not to be a victim of that tough history but to seize the opportunities.

I would conclude by stressing that we can't, allow China to be alone in addressing structural change – a point very much consistent with the interview of Premier Li Keqiang that I noted at the outset.. We've got issues of our own in terms of saving and competitiveness that need equal attention in the United States.

Thank you.



**PREPARED STATEMENT OF DR. STEPHEN ROACH  
SENIOR FELLOW, JACKSON INSTITUTE OF GLOBAL AFFAIRS, SENIOR  
LECTURER, SCHOOL OF MANAGEMENT, YALE UNIVERSITY**

*Chinese Rebalancing:  
Transitioning from the 12<sup>th</sup> to the 13<sup>th</sup> Five-Year Plan*

*Stephen S. Roach<sup>1</sup>*

On the surface, it doesn't seem like the vaunted transformation of Chinese economy is going according to plan. The consensus view in the West is, in fact, one of great concern over the current state of the world's second largest economy. Those concerns are understandable at a very basic level: After 30 years of 10% growth, gains in real GDP have slowed to 7% in early 2015. The fear is that this is but a hint of a far more serious endgame – a progressive weakening in the Chinese economy that culminates in the long dreaded hard landing. Are these fears well founded? What do they imply for the United States and the rest of the world?

The simple answer to the first question is “no.” The Chinese economy is in the midst of a long-awaited and welcome slowdown as it transitions to a very different, albeit ultimately more sustainable, growth strategy — one that essentially shifts the core focus of economic activity away from production toward consumption. The answer to the second question cuts both ways for the world at large. Those who have relied disproportionately on the Chinese production machine – especially resource economies and suppliers of industrial materials and components – will find a much tougher climate in the years ahead. Conversely, those who are well positioned to benefit from the emergence of the Chinese consumer will be able to uncover new sources of economic growth.

To be sure, Chinese rebalancing is a delicate and risky operation. Unexpected developments at home or abroad certainly have the potential to derail the transition. The growth compression of the Chinese economy in the early months of 2015 – together with the counter-cyclical policy actions such weakening has evoked – underscores those concerns. As China now moves into the final months of its 12th Five-Year Plan and its leadership puts the finishing touches on the upcoming 13th Five-Year Plan, a key challenge will be to stay the course of rebalancing and reform without suffering a major economic accident.

*Avoiding the Trap*

History underscores the daunting nature of this challenge. China's per capita GDP crossed the \$12,000 threshold in purchasing power parity terms in 2014 – nearing the zone when economic

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<sup>1</sup> Submitted as written testimony before the U.S.-China Economic & Security Review Commission, April 22, 2015, Washington, D.C. Mr. Roach is a Senior Fellow at the Yale Jackson Institute for Global Affairs and was former Chairman of Morgan Stanley Asia, as well as the firm's Chief Economist.

development is often arrested by the dreaded “middle income trap.”<sup>2</sup> The current growth slowdown, coupled with widespread concerns over China’s debt problem, property market excesses, and shadow banking risks, only underscores the mounting perils of just such a trap.

The good news is that China takes such risks very seriously and has the strategy, the commitment, and the tools to avoid such a dire endgame. This was foreshadowed by China’s own rethinking of its development strategy nearly eight years ago. The genesis of this rethinking can be traced back to early 2007, when the Chinese growth model seemed all but invincible. But for Beijing that was not a time for complacency. Indeed, former Premier Wen Jiabao offered a now famous warning of an economy that beneath the surface was increasingly “unstable, unbalanced, uncoordinated, and ultimately unsustainable.”

This critique of the “Four Uns” triggered intense internal debate over China’s economic strategy. With the enactment of the 12<sup>th</sup> Five-year Plan in early 2011, the decision was made to change the growth model – shifting the structure of the Chinese economy away from manufacturing-led export and investment growth toward services-led growth and internal private consumption.

The new plan provided a coherent framework to enable this transformation – more job creation through development of an embryonic services sector, higher real wages via urbanization, and a reduction of fear-driven precautionary saving by building a secure social safety net (*see Figure 1*). The results were mixed. While there was encouraging impetus to services and urbanization, progress on the safety net front was disappointing. The enrollment in healthcare and retirement programs was expanded, but the funding of benefits was woefully inadequate. As a result, still cautious Chinese families remained on the sidelines – fearful of an uncertain future and unable and unwilling to commit to discretionary consumption.

That shortcoming is now being addressed by the wide-ranging reforms ratified at the Third Plenum of the Central Committee of the 18<sup>th</sup> Party Congress held in November 2013 – especially those pertaining to the one-child family planning policy, the household registration (*hukou*) system, ceilings on deposit interest rates, and, most recently, deposit insurance for Chinese savers. At the same time, the government has tackled the safety net funding issue by proposing to raise taxes on state-owned enterprises from 15% to 30% by 2020 and earmarking the proceeds of such newfound revenue toward a woefully underfunded social security system. These reforms should go a long way toward assuaging the deep sense of insecurity that has long gripped Chinese households and constrained progress on the road to consumer-led rebalancing.

Moreover, China’s leadership has gone one key step further in transforming the growth model – it has sharpened its focus on implementation. A new “Leading Small Group on Comprehensively Deepening Reforms” has been empowered to dislodge the power blocs, special interest groups, and corruption that have the potential to stymie the most ambitious of strategies. In doing so, China is embracing a revolution in governance that could well be the most decisive aspect of its structural transformation (*see Figure 2*).

China’s current slowdown needs to be seen in the context of all of these developments. In one

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<sup>2</sup> See Barry Eichengreen, Donghyun Park, and Kwanho Shin, “When Fast Growing Economies Slow Down: International Evidence and Implications for China,” NBER Working Paper 16919, March 2011.

sense, the downshift to 7% GDP growth in early 2015 is actually an important step in the right direction. In large part, that's because it reflects an impressive shift in the mix of GDP toward services. When enacted in 2011, the 12<sup>th</sup> Five-Year Plan targeted an increase in the services share of the Chinese economy from 43% in 2010 to 47% by the end of 2015. That transformation is now well ahead of schedule. In 2014, with a year still to go on the 12<sup>th</sup> Five-Year Plan, services actually rose to 48.2% of Chinese GDP – not only surpassing the year-end 2015 goal but also far outstripping the 42.6% combined shares now going to the manufacturing and construction sectors, combined (*see Figure 3*).

One of the most significant implications of this development is that services require about 30% more workers per unit of Chinese output than do manufacturing and construction. This points to a more labor-intensive mix to the economy, which means that means services-led China now has the potential to hit its labor absorption objectives (i.e., employment growth and poverty reduction) with much slower GDP growth than has been the case in the past (*see Figure 4*). Recent employment trends bear this out. China's urban workforce increased nearly 13.2 million, on average, in 2013-14, well above the government's annual target of 10 million for each of those years – a target that has just been reaffirmed for 2015. In the end, employment will be the acid test of China's transformation and its ability to cope with a slowdown. So far, it has passed that test without a major problem.

That certainly doesn't mean the recent deterioration in the Chinese economy should be taken lightly. The last thing China needs is a cumulative weakening in its economy. Many worry that is exactly what is now happening in early 2015. Fortunately, a decomposition of the sources of the recent slowdown does not suggest that is the case. High frequency (monthly) data suggest that the growth compression has been most acute in the core drivers of the old model – namely the industrial complex that underpins the Chinese export machine. This was underscored by a sharp deceleration in industrial production to just +5.6% (y-o-y) in March 2015 and a -15% (y-o-y) plunge in exports. This is consistent with the latest trends in the industrial mix of Chinese GDP growth – a sharp decline in secondary sector output growth from 7.3% in the fourth quarter of 2014 to 6.4% in the first quarter of 2015.

Meanwhile the core drivers of the new model – namely services and consumption look relatively resilient by comparison. Tertiary sector output growth slowed only fractionally from +8.1% in the fourth quarter of 2014 to +7.9% in the first quarter of 2015. At the same time, there was only modest slippage in retail sales growth to +10.2% in March 2015 vs. 10.7% in the first two months of this year. Services and domestic private consumption are not immune to China's early 2015 growth compression, but they are certainly holding up much better than the traditional sources of manufacturing- and export-led growth.

In this important sense, the current slowdown highlights the delicate nature of China's economic balancing act – downward pressures intensifying in the old growth model with newfound support emerging in the new model. That only underscores the need for Beijing to shift away from an old model driven by external demand to a new model driven more by internal demand. With the world economy still quite weak in the aftermath of the crisis of 2008-09 – and likely to remain so for so time to come – this shift is all the more urgent.

At the same time, the continued softness of incoming economic data in early 2015 underscores

the need for vigilance by Chinese policymakers. Recent monetary policy actions are very much consistent with such a cautious approach. With two cuts in policy interest rates and two reductions in bank reserve requirements since last November, the Chinese leadership seems to be drawing a line in the sand at 7% GDP growth. That means if the incoming data continue to weaken, additional policy actions can certainly be expected.

The good news is that if that turns out to be the case and growth risks tip further to the downside, there is still ample scope for further policy easing to contain the damage. That's especially the case for monetary policy, with both interest rates and reserve ratios remaining well above levels set in the depths of the Great Recession. That provides Beijing with an important cushion that should enable it to stay the course and avoid backtracking on the transformational reforms that are now under way. Ironically, such backtracking would expose China to the pitfalls of the middle-income trap at its point of maximum vulnerability – just the recipe for the hard landing that so many fear is now in the offing.

### *Opportunities in Services*

While the China slowdown presents risks it also offers great opportunity. That's because of the shifting mix in economic activity highlighted above. For the first time in modern China's history, services-led growth is now the main engine of this powerful economy. And this nascent shift has nothing but upside. Consistent with the structure of most modern upper middle-income economies, China's services sector should rise from 48% of its GDP in 2014 to around 60% by 2025.

The potential growth of China's now rapidly growing but still embryonic services sector is likely to be broad-based. Relative to the United States – the world's quintessential services economy – footprints in Chinese services are especially small in wholesale and retail trade, hospitality and leisure, and professional and business services; scale deficiencies are especially the case in the healthcare sector, where the need to expand is particularly vital for a rapidly aging Chinese population (*see Figure 5*). As China now focuses on building out its services sector, three important developments need to be stressed:

First, services are the infrastructure of consumer demand. The delivery of basic public services such as water and electricity, as well as healthcare, is the essence of a modern society's well being. Nor can households become active members of any economy without being connected to services-based retail sales and wholesale distribution networks. And they can't spend newfound labor income on discretionary leisure activity without transportation systems, hotels, and family-focused amusement facilities. China is woefully deficient on virtually all of these counts – to say nothing of lacking the more sophisticated professional service providers such as lawyers, accountants, consultants, financial analysts, software engineers, and the like.

Second, services are the key to slower and, by inference, more sustainable growth. All services-led economies grow more slowly than those fueled primarily by industrial activity. For China, this need not pose a threat to its daunting labor absorption imperatives. As noted above, the services piece of the Chinese economy requires 30% more workers per unit of GDP than does

manufacturing and construction activity, combined. That means it would only take 7% GDP growth for China to achieve its labor absorption objectives with a labor-intensive services-led economy rather than the 10% GDP growth that was required by the old model more reliant on capital-intensive industrial activity.

The GDP report for the first quarter of 2015 underscores this important point. As noted above, the tertiary (services) sector expanded by 7.9% from its year-earlier level – fully 1.5 percentage points faster than the weakened 6.4% gain in the secondary (manufacturing and construction) sector. All the handwringing in the West over China’s current growth slowdown focuses on headline GDP and misses the critical insight that the mix of Chinese economic growth is now shifting to labor-intensive services activity. Contrary to widespread perception, social stability in China is not imperiled by slower services-led economic growth.

Third, shifting to a slower growing increasingly services-led economy can help China make good on its promise to improve the *quality* of the growth experience. Significantly, services have a minimal carbon footprint compared with manufacturing – critical for reducing environmental degradation and pollution. Moreover, history tells us that urbanization and services employment growth go hand in hand. This confluence is uppermost in China’s mind as it moves ahead with an unprecedented urbanization strategy – with its latest plans calling for another 100 million rural citizens to locate to new cities by 2020, and a good deal more than that in the years beyond (see Figure 6).

The last thing China needs is to relocate rural workers to urban areas without providing gainful employment. Urban residents in China have per capita incomes that run roughly three times their counterparts in the rural countryside. It follows that new employment opportunities in services industries, in conjunction with this wage differential, should not only boost personal incomes and consumption, but could also go a long way in reducing inequality – a key objective on the quality agenda of the Next China. Services development effectively legitimizes the economic underpinnings of Chinese urbanization.

Notwithstanding the important domestic implications of services-led development in China, there are major global implications as well. My estimates suggest that the growth in the Chinese services could amount to approximately \$12 trillion (in current US dollars) between now and 2025 (see Figure 7).<sup>3</sup> But unlike earlier examples of services-led growth and development, the Chinese strain is likely to be very different in one key respect: Services used to be thought of as “nontradables” – meaning that most activity in the sector was provided by domestic companies operating in relatively closed domestic markets. However, in an era of IT-enabled connectivity and an increasingly well-educated global workforce, a significant portion of services activity is now tradable and can be delivered by connected knowledge workers from offshore platforms.

That leads to a potentially powerful conclusion: Under the admittedly optimistic assumptions of ongoing services reforms, deregulation, and increased foreign access to domestic Chinese services markets, between \$4 and \$6 trillion of the coming expansion of Chinese services could be divvied up between foreign services providers over the next decade.<sup>4</sup> With the U.S. having

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<sup>3</sup> See Stephen S. Roach, *Unbalanced: The Codependency of America and China*, Yale University Press, 2014.

<sup>4</sup> See Roach, *Unbalanced*.

the world's largest and most competitive services sector – currently accounting for 14% of global services exports, twice the share of the next largest competitor – America is well positioned to capture a significant share of the coming bonanza in Chinese services. From retail chains (i.e., Wal-Mart) and leisure (i.e., Disney) to domestic transportation (i.e., United) and healthcare's vast array of insurance and hospital systems, U.S. multinational services companies have precisely what China is lacking in terms of strategy, talent, systems, analytics, and quality-focused cultures.

Unfortunately, with all the hand wringing over the perils of China – from growth and debt risks to property bubbles and cyberhacking – there is a distinct possibility that the United States could fixate on the threats and miss out on participating in an extraordinary transformation of the Chinese economy. That would be a real pity. A shift to consumer- and services-led growth could create the world's greatest bonanza of new growth in aggregate demand in the first half of the 21<sup>st</sup> century. Growth-deficient America can hardly afford to squander this opportunity.

For the United States, the timing is particularly ideal. With the U.S. economy mired in a sluggish post-crisis recovery largely because of lingering pressures on household balance sheets, America's growth agenda needs to tilt away from over-stretched domestic demand toward exports and foreign demand. The imperatives of China's services-led development provide just such an opportunity.

### *Seizing the Opportunity*

Of course, it's one thing to dimension the opportunity. It's another matter altogether to seize it. Key in this regard is “market access” – namely, the ability of foreign multinationals to participate in the accelerating growth in Chinese domestic demand. This won't happen by osmosis. Both China and the United States have a long history of putting such limits on each other's cross-border investments through the caps on minority ownership stakes in joint ventures that nations typically impose on each other in efforts to protect their most sacrosanct industries such as services. That's especially the case in finance but also true of most nonfinancial services.

Fortunately, there is a mechanism available to address the conflicting agendas of the United States and China. The Strategic and Economic Dialogue (S&ED) was established nearly six years ago for one reason – to address the contextual issues playing on both nations while enabling them to develop a strategic framework for advancing what could well be the world's most important bilateral dialogue on both economic and security matters. Such negotiations take on added importance in the context of the ever-changing challenges bearing down on both nations. That is especially the case in light of the opportunities presented by China's unprecedented services- and consumer-led rebalancing.

In recognition of the potential benefits that could be gained by relaxing restrictive foreign ownership requirements, nearly two years ago at the 2013 Strategic and Economic Dialogue both the United States and China entered into serious negotiations over a “Bilateral Investment Treaty.” This is a fairly common arrangement between nations around the world. There are some 3,000 such BITs currently in effect, according to the Paulson Institute, that, among other

things, allow for a significant liberalization of heretofore stringent requirements on foreign ownership of domestic companies.<sup>5</sup> As common as such treaties are, no such arrangement currently exists between the United States and China.

Typically, BIT negotiations are framed in terms of a “negative list” – industries or sectors that one nation views as off-limits to foreign control. As these negotiations currently stand, China appears to have a very long negative list when compared with that of the United States. That, however, should not be viewed as discouraging. China started out with an equally long negative list when it began negotiating for entry into the WTO – a list that was subsequently pruned down dramatically prior to formal accession in 2001. The negative list construct is helpful in framing the debate and the agenda for subsequent negotiations.

The potential upside of a breakthrough on a U.S.-China BIT is huge. It would not only open up services trade between the two nations, but the compliance protocols of a BIT could also set the stage for China’s participation in broader multilateral trade arrangements, such as the Trans-Pacific Partnership. That would be a major plus for the global economy.

Those of us who have been optimistic on an improved Sino-American relationship have been counting on further progress in BIT negotiations as a means to pry open each country’s markets to the other. While the potential from such progress is enormous, it can only be achieved if there is a more constructive tone in the broader relationship between the two nations. The recent flare-ups over cyberhacking, geostrategic tensions in the East- and South-China Seas, and currency policy all risk sidetracking the agenda from its core objectives. These issues are important and should not be ignored – but they need to be set in context.

### ***The Sino-American Trust Deficit***

Notwithstanding the potential of a successful completion of BIT negotiations, the latest strategic and Economic Dialogue between the United States and China, held in Beijing in July 2014, was a major disappointment. It lacked strategy at a time when both countries face formidable challenges on many fronts. And what passed for dialogue was a series of speeches and tightly scripted talking points. But the biggest disappointment was that it failed to address an increasingly corrosive trust deficit that poses the most serious threat to Sino-American relations in 25 years.

Conditions were tough heading into the talks. The US Treasury was complaining yet again about the Chinese currency, which had depreciated by 2.4% against the dollar in the first half of 2014, after having appreciated by 37% over the previous eight and a half years. The US State Department and China’s Ministry of Foreign Affairs were engaged in a war of words over mounting territorial and sea-lane disputes in the East and South China Seas.

The darkest clouds were on the cyber front. Two months before the 2014 S&ED, the US Department of Justice indicted five officers of the People’s Liberation Army (PLA) on 31 counts

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<sup>5</sup> See Daniel M. Price and Michael J. Smart, “BIT by BIT: A Path to Strengthen US-China Relations,” Paulson Policy Memorandum, July 2013.

of charges ranging from computer fraud and hacking to identity theft and economic espionage. In response, China suspended its participation in bilateral military-to-military exchanges on cyber threats. Meanwhile, revelations of the pervasive scope of US cyber-espionage activities reverberated from Capitol Hill to Berlin, giving rise to legislation aimed at controlling America's largely unchecked National Security Agency (NSA) and casting a pall over the US-German relationship.

Charges and countercharges on the cyber issue have focused primarily on motives. The US has been quick to distinguish between commercial and military espionage. But for China, this distinction rings hollow. Chinese officials see little difference between the cyber threat posed by the NSA and that posed by the PLA, especially given that America's cyber intrusions have also been aimed at foreign companies, trade negotiators, and international leaders – all of whom are directly or indirectly engaged in commercial activity. In the end, moral hair-splitting is less important than the blame game itself – a visible manifestation of the deepening bilateral distrust wrought by the destructive phase of Sino-American codependency.

Against this backdrop, it was hardly surprising that the 2014 S&ED produced so little. Cyber exchanges between the two militaries were not restarted, and negotiations over the bilateral investment treaty were especially disappointing. Despite the encouraging breakthrough on such a treaty in 2013, there was a setback in 2014, as the onset of explicit negotiations over which industries would comprise the always-contentious negative list was deferred until 2015.

The problem with “kicking the can down the road” is that the road is leading directly toward the upcoming US presidential election cycle – a time when the debate over China always intensifies. Add to that a polarized and dysfunctional Congress, and the timeframe for concluding a US-China investment treaty is beginning to appear eerily reminiscent of the decade-long process that was required for Chinese accession to the World Trade Organization in 2001. That would be too bad for both countries, as each now faces urgent economic challenges.

In this context, the failure of both US and Chinese leaders to recognize the mutual benefits of a bilateral investment treaty is disturbing, to say the least. Going slow on such an obvious “win-win” reform suggests either that each country attaches little importance to their collective growth imperatives or that they are unwilling to address that urgency by facing up to the increasingly insidious trust deficit that divides them.

I suspect it's the latter. Leaders on both sides understand their countries' growth challenges. But neither seem willing to address the intensification of distrust that has arisen during the past year from the cyber issue. Here is where the blame game belies the obvious: Both countries hack, and both have lost control over their hackers. Moreover, cyber-hacking itself is growing at an exponential rate in today's interconnected world. In other words, the cyber blame game is pointless.

Acceptance of shared responsibilities in coming to grips with cyber tensions is essential if the US and China are to re-engage on the other geo-strategic and economic challenges they both face. The failure of the 2014 S&ED was a serious warning shot, yet another indication that the bilateral relationship is headed in the wrong direction. Staying that course is not an option.



## ***Two Risks***

If it is successful, the rebalancing of the Chinese economy could well translate into one of the most important growth opportunities for the global economy in the 21<sup>st</sup> century. After decades of under-consumption, the world's most population nation is on the cusp of creating an enormous pool of middle-class consumers. Notwithstanding the benefits likely to arise from this transition, there can be no mistaking the risks that could prove problematic for China and the rest of the world. Two such risks are particularly noteworthy – Chinese currency policy and pressures on the world's commodity supply chain.

***Steady on the Renminbi.*** Currency wars are raging worldwide, and despite the slight weakening of the renminbi in early 2015, China is bearing the brunt of them. The Chinese currency is up sharply over the past several years, exports are sagging, and the risk of deflation is growing. Under these circumstances, many suggest that a reversal in currency policy to weaken the renminbi is the most logical course. That would be a serious mistake.

Yes, on the surface, the situation appears tough for China. According to the Bank for International Settlements (BIS), China's real effective exchange rate – an inflation-adjusted trade-weighted average of the renminbi's value relative to the currencies of a broad cross-section of China's trading partners – has increased by 27% over the four years ending February 2015.

China's currency has, in fact, appreciated more than any of the other 60 countries that the BIS covers (apart from a dysfunctional Venezuela where the figures are distorted by multiple foreign exchange regimes). By comparison, the allegedly strong US dollar is up just 13% in real terms over the same four-year period. Meanwhile, China's emerging-market BRICs counterparts have experienced sharp currency depreciations, with the Russia ruble falling by 32%, the Brazilian real by 20%, and the Indian rupee by 11%.

This currency shift is, of course, the functional equivalent of a large hike in the price of Chinese exports. Add to that continued sluggishness in global demand, and the once-powerful Chinese export machine is suffering – underscored by the worrisome 15% year-over-year plunge in export demand in March 2015 noted above. In conjunction with recent signs of further weakness in industrial output, fixed investment, and retail sales in early 2015, further downward pressure in exports would hardly be an inconsequential development. After all, despite all the talk and hope of rebalancing, exports still account for about 25% of Chinese GDP.

At the same time, a stronger renminbi has made imports less expensive, putting downward pressure on China's price structure. Unsurprisingly, this has exacerbated fears of deflation, with the headline consumer price index (CPI) rising by only 1.4% year-on-year in March 2015, and the annual decline in producer prices steepening, to -4.6% over the same period. Nor are these trends being amplified by plummeting world oil prices; China's core CPI inflation rate (which excludes volatile food and energy prices) was also running at just 1.5% in March 2015.

Against this background, it is easy to see why many anticipate a tactical adjustment in China's

currency policy, from appreciation to depreciation. Such a move would certainly seem appealing as a way to provide temporary relief from downward pressures on growth and prices. But there are three reasons why such a move could backfire:

First and foremost, a shift in currency policy would undermine – indeed, undo – the progress that China has made on the road to reform and rebalancing. In fact, a stronger renminbi is consistent with China’s key objective of shifting from export-intensive growth to consumer-led development. The generally steady appreciation of the renminbi – which has risen by 33.6% against the US dollar since mid-2005 – is consistent with this objective and should not be reversed. It strengthens the purchasing power of Chinese consumers and reduces currency-related subsidies to exports.

During the recent financial crisis, China’s renminbi appreciation policy was temporarily suspended and the exchange rate was held steady from mid-2008 through early 2010. Given that current circumstances are far less threatening than those in the depths of the Great Crisis, the need for another tactical adjustment in Chinese currency policy is far less acute.

Second, a shift to currency depreciation could inflame anti-China sentiment among the country’s major trading partners – [especially the United States](#), where Congress has flirted for years with the prospect of imposing trade sanctions on Chinese exporters. As noted above such tensions always seem to intensify around election cycles, and current developments are playing out very much according to this script.

Indeed, in February 2015 a bipartisan coalition in the House of Representatives introduced the so-called Currency Reform for Fair Trade Act, which would treat currency undervaluation as a subsidy, allowing US companies to seek higher countervailing duties on imports. Similarly, the Obama Administration recently brought yet another action against China in the World Trade Organization – this time focusing on the legality of subsidies that China provides to exporters through so-called “common service platforms” and “demonstration bases.” In this contentious climate, if China pushes its currency lower, US political support for anti-China trade actions would undoubtedly intensify, pushing the world’s two largest economies ever closer to the slippery slope of protectionism.

Finally, a reversal in the renminbi would undoubtedly lead to a sharp escalation in the global currency wars that have now broken out. In an era of unprecedented quantitative easing, competitive currency devaluation has become the norm for the world’s major exporters – first the US, then Japan, and now Europe. If China joined this race to the bottom, others would be tempted to escalate their actions in response and world financial markets would be subject to yet another source of serious instability.

Just as China resisted the temptation of renminbi depreciation during the Asian financial crisis of 1997-1998 – a decision that may have played a pivotal role in arresting that virulent regional contagion – it must stay the course today. That’s all the more the case in the potentially unstable climate fostered by the new strain of monetary policy known as QE, or quantitative easing. In the QE era, China’s role as a currency anchor may take on even greater importance than in the late 1990s.

***Downside for Commodity Producers.*** Chinese rebalancing also has profound implications for natural resource markets, where the so-called commodity super cycle has turned with a vengeance. The sudden collapse in the prices of oil, coal, base metals, and other natural resources is not an aberration. A number of factors are at work – those grounded in financial markets, especially currencies, as well as those on the real side of the global economy. Technology is also a factor, especially the so-called shale revolution and its eventual impacts on the supply side of world energy markets. But the most important development in shaping current trends in resource markets may well have been made in China.

That's because of the transitional shift in the mix of Chinese economic activity that has been stressed repeatedly above – a shift from unsustainable resource-intensive industrial activity to slower growing and more sustainable commodity-lite services. Add to that the reduced carbon footprint of services, and this structural rebalancing is also an important plus for China's horrific problems of environmental degradation and pollution. In short, services-led development may well hold an important key to successful implementation of China's longer-term sustainable development strategy. Yet for a world hooked on the legacy of China's hyper growth, and for financial markets addicted to the same outcome, this transformation has come as a rude awakening.

Oil is the most prominent example. Over the decade ending in 2013, surging Chinese oil demand accounted for fully 45% of the total increase in world oil consumption. Yet over that same period of time, Chinese GDP growth averaged 10.2%, with an energy intensity (total energy consumption per unit of GDP) that was more than double the average of the developed world. With China now shifting to a slower, increasingly services-intensive GDP growth trajectory – where the carbon content of services is only a fraction of that in energy-guzzling manufacturing – the major impetus to growth in world oil demand has suddenly hit a wall. The sharp plunge in world oil prices is hardly unconnected to this major development.

Coal is another important case in point. China derives fully 68% of its total fuel from coal – 3.5 times the 19% share elsewhere in the world. Yet coal is by far the most carbon-intensive source of energy – putting China's coal-fueled economy in the cross-hairs of its daunting environmental and pollution challenges. After years of handwringing, China finally appears to be making progress in addressing its excess reliance on coal. Recent data reveal significant drops in coal production (-2.5%) and coal demand (-2.9%) in 2014 – the first such declines in 14 years. While it is tempting to attribute this to the slowing economy, that interpretation is very much at odds with China's increased demand for both crude oil (+5.9%) and natural gas (+8.6%) in 2014. In short, China finally appears to be shifting the mix of its fuels away from coal – hardly a trivial consideration in explaining the nearly 50% decline in international coal prices that has been evident since 2012.

The same can be said for other segments of the commodity market – from base metals and industrials to foods and fibers. For example, according to research by Elizabeth Economy and Michael Levi of the Council on Foreign Relations, China's share of global iron ore consumption went from 30% in 2005 to 67% in 2010; for bauxite (the principal ore of aluminum), China's global share went from 7.5% to 17% over the same five-year period, whereas for soybeans the

jump was from 11% to 25% over the 2005 to 2010 timeframe.<sup>6</sup> While Chinese demand for foodstuffs is unlikely to falter as it ups the ante on urbanization, the shift away from the manufacturing-led impetus to exports and investments toward services-led consumption should have important and lasting implications for China's seemingly open-ended demand for those segments of resource markets tied most closely to industrial activity.

This outcome should also prove to be a real jolt to two major constituencies in the global economy – resource-intensive economies, such as Russia, Australia, Canada, Brazil, and many African nations, as well as a host of institutional investors who have elevated commodities to the status as an asset class in their diversified portfolios. In both cases, the China-led commodity super cycle has been extrapolated well into the future – pointing to a resource consumption trajectory widely presumed to be underpinned by a Chinese economic juggernaut that basically stays the course of the past 30 years. By contrast, little consideration has been given to a China slowdown driven by a services-led, commodity-lite structural transformation. With such a slowdown now under way – and likely to continue for years ahead – both commodity-long investors and resource economies have been hit especially hard.

Much has been made, of course, of new technological breakthroughs on the supply side of many commodity markets – especially the hydraulic fracturing (fracking) that has led to new sources of oil and natural gas. For the United States, fracking has been widely billed as the hope for energy independence – eventually enabling America to wean itself from an otherwise worrisome dependence on foreign oil. While there can be no mistaking the potential significance of this development – despite the pushback of environmentalists and the recent fracking ban in New York state introduced by Governor Andrew Cuomo<sup>7</sup> – these technological breakthroughs on the supply side of the energy equation are hardly a surprise. Markets have been discounting this possibility for years.

But as sharp recent declines in the prices of base metals and other industrial materials suggest, there is more to the sudden downturn in commodity markets than oil. The big story is China – specifically, fears that the slowdown now under way is but a prelude of the dreaded hard landing. While those fears are overblown, there is good reason to believe that the world's most voracious appetite for natural resources is now in the process of being tamed by a long awaited structural transformation. As China moves from resource-heavy manufacturing to resource-lite services, the commodity super cycle appears to have lost an important source of oxygen. And so, too, could the growth aspirations of commodity-intensive economies that have benefited the most of the old strain of Chinese economic growth.

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<sup>6</sup> See Elizabeth C. Economy and Michael Levi, *By All Means Necessary: How China's Resource Quest is Changing the World*, Oxford University Press, 2014.

<sup>7</sup> See Clare Foran, "New York State Moves to Ban Fracking," *National Journal*, December 17, 2014

### *Looking to the 13<sup>th</sup> Five-Year Plan*

With the 12<sup>th</sup> Five-Year Plan nearing the end of its planning horizon, China's strategists and policy makers are now hard at work in drafting the 13<sup>th</sup> Five-Year Plan (2012-17). These plans are still important insofar as they frame the medium- to longer-term debate for Chinese policy – and often signal important shifts in priority and focus. As seen from that perspective, I do not expect the new plan to be radically different from the one that is now ending.

It is far too early to tell, of course, but I suspect that the 12<sup>th</sup> Five-year Plan could well go down in history as one of the more pivotal developments in the evolution of the modern Chinese economy – comparable to the Fifth Five-Year Plan (1976-80) that ushered in the “reforms and opening up” of Deng Xiaoping and the Ninth Five-Year Plan (1996-2000) that featured the revolution in ownership triggered by the first wave of state-owned enterprise reforms. Both of these earlier plans were key milestones in the development of China's producer economy. The 12<sup>th</sup> Five-Year Plan is equally significant, in my view, in laying out the broad architecture of the consumer economy. While it has had mixed success, as noted above, it has provided the basic framework that could well define subsequent strategic shifts on the road to China's consumer society.

In looking ahead to the 13<sup>th</sup> Five-Year Plan, the most likely outcome is that China will stay the course that was set in 2011 and further refined by the Third Plenum of 2013. And staying the course for an increasingly services-led economy underscores the likelihood that Chinese economic growth could continue to decelerate even further from a 7% average pace over the next five years to an underlying trend in the 5% to 6% zone in subsequent plans (*see Figure 8*).

There are, of course, no guarantees that such a transition will be smooth. In response to unexpected developments both at home and abroad, China's pro-consumption rebalancing strategy will need to be modified and adjusted as the economy transitions from the old model to the new one. Just as the Third Plenum was aimed at addressing many of the deficiencies of the 12<sup>th</sup> Five-Year Plan – especially pertaining to the social safety net – it seems reasonable to expect the 13<sup>th</sup> Five-Year Plan to offer similar strategic refinements to China's services- and consumer-led growth strategy. As such, I would look for the next plan to clarify China's strategic response to its safety net imperatives, its environmental degradation and pollution challenge, as well as provide a more detailed timeline for currency and other financial reforms.

Finally, I think it is safe to presume that the 13<sup>th</sup> Five-Year Plan will take special note of China's emerging global leadership role. China has long been dependent on the global economy for providing the sustenance of its powerful export-led growth accomplishments. But the shift in focus from external to internal demand puts China in a very different role – providing what could well be an increasingly important source of global consumption. Along with China's potentially powerful role in shaping global demand, comes a greater sense of responsibility and accountability to the global community. I suspect the 13<sup>th</sup> Five-Year Plan will also focus on China's role in addressing major global problems, including, but not limited to, environmental degradation, pollution, climate change, and global health.

The Chinese planning process has changed dramatically over the past 60 years. Gone are the

detailed production targets of the Soviet-style plans of the 1950s. The current 12<sup>th</sup> Five-Year Plan only has a few broad macro targets – GDP growth, the services share of GDP, urbanization of the population, energy intensity, and environmental degradation. To the extent that China further embraces the market-based themes of Third Plenum reforms, the 13<sup>th</sup> Five-Year Plan is likely to follow suit by continuing to promote growth in the private sector and growth in the privatization of state ownership.

Targeting, itself, seems increasingly out of sync with China's newfound commitment to a market-based –system as stressed repeatedly in the Third Plenum of 2013.<sup>8</sup> As such, I suspect that the 13<sup>th</sup> Five-Year Plan will go considerably further in dismantling the planning process as it is currently embedded in the National Development and Reform Commission – China's modern day counterpart to the old State Planning Commission. The death knell of Chinese central planning could well become increasingly evident over the timespan covered by the 13<sup>th</sup> Five-Year Plan.

### *At the Crossroads*

China is at a critical juncture on the road to economic development and sustained growth. So, too, is a still sluggish post-crisis global economy. In an interconnected world, shifts in one economy have important implications for other economies. That is especially the case for the linkages between the United States and China, where a powerful codependency has played a key role in shaping the character of both economies since the early 1980s.<sup>9</sup> In such a codependent relationship, changes in the behavior of one partner can be especially unsettling to the other (*see Figure 9*).

And the United States is certainly unsettled over China these days. In one sense that should not be so surprising. History tells us that dominant powers have always struggled to cope with rising ones. In the same vein, China, burdened by 150 years of perceived humiliation by the West, does not take kindly to that reaction.

That leaves the world in a rather uncomfortable place. It's not just that China's economy is rising – and is likely to continue to do so if it successfully executes its long-awaited rebalancing. It is also that America, the hegemon, finds the expansion of China's global economic footprint so disturbing. Borrowing from the nomenclature of ancient maritime and overland shipping routes, China calls this outreach “One Belt, One Road” – an ambitious multi-faced campaign to link the Chinese economy to the rest of Asia, the Middle East, Europe, and even Africa. Just as China has depended on external demand from the rest of the world to support the export-led phase of its development miracle, it is now forging a global integration strategy to augment the next phase of its rise.

Drawing on the lessons of reconstruction, recovery, and economic development in the aftermath of the devastation of World War II, China recognizes the importance of institution building as the means toward this end. As such, it has taken the initiative to establish two new lending

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<sup>8</sup> See Stephen S. Roach, “The End of Chinese Central Planning,” *Project Syndicate*, March 27, 2014.

<sup>9</sup> See Roach, *Unbalanced*.

institutions – the so-called New Development (BRICS) Bank and the Asian Infrastructure Investment Bank – both aimed at filling the daunting infrastructure and project finance gaps that must be overcome to bring the One Belt, One Road initiative to life.<sup>10</sup> Washington views this as a threat – hardly surprising in light of its long standing dominance of the existing Bretton Woods institutions (the IMF and the World Bank). Beijing, of course sees it very differently – not just as a complement to existing institutions but also as a response to an increasingly isolated Washington that has balked at IMF reforms, which would give China a greater say in the governance of that institution.

All this is yet another highly visible manifestation of the tensions and frictions that lurk on the dark side of economic codependency. Codependent partners are simply uncomfortable when one strikes out on its own. Yet however uncomfortable it may seem, neither Washington nor Beijing can afford to lose sight of the rebalancing endgame. The preferred outcome would be a symmetrical rebalancing – China saves less and consumes more while America does the opposite by consuming less and saving more. Unfortunately, the more likely outcome is an asymmetrical rebalancing – with China pushing ahead on restructuring while the United States drags its heels.

For Washington, it is time to crack the denial and accept the likelihood of Chinese rebalancing. China's transformation is happening, whether America likes it or not. The strategic challenge for the United States is how to grapple with this development – quite possibly the most important realignment in the global economy in the 21<sup>st</sup> century. For America that means a long overdue focus on boosting domestic saving – weaning itself from relying on Chinese saving that is now being directed more at supporting the safety net of its 1.4 billion people rather than subsidizing the safety of the American people. Reduced government budget deficits, together with a restoration of household saving, must be at the top of America's longer-term saving agenda.

In the end, China's transformation raises profound questions: Is the shift to a services- and consumer-led Chinese growth model a threat or an opportunity – not just to itself, but also to the United States and the rest of the world? In theory, the answer is relatively simple. A successful transition is far more of an opportunity than a threat – it provides a more sustainable growth strategy to China as well as a new source of aggregate demand for the rest of the world. But in practice, there are clear ambiguities that can easily work their way into the equation through trade tensions, dislocations in currency and commodity and markets, and pressures on resource economies – to say nothing of the geostrategic ramifications of a rising China.

At the same time, while the costs of structural adjustment are currently taking their toll on China – and are likely to continue to do so for some time to come – the alternative is unthinkable. The perils of the dreaded middle-income trap imply that there can be no backtracking for China on the road to rebalancing and reform. Strategy has long been China's greatest strength. Time and again, Chinese officials have successfully coped with unexpected developments, without losing sight of their long-term strategic objectives. They should work to uphold that record, using tactical policy adjustments to address problems of excess leverage and property bubbles rather than backtrack on reform and rebalancing. This is no time for China to flinch.

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<sup>10</sup> A widely noted study commissioned by the Asian Development Bank and conducted by the Economist Intelligence Unit places the Asian infrastructure gap at \$8 trillion (USD). See *The 2011 Infrascope: Evaluating the environment for public-private partnerships in Asia-Pacific*.

The same can be said for the rest of the world – not only in dealing with its own structural agenda and the associated dangers of what some fear to be a “secular stagnation”<sup>11</sup> but also in coping with the repercussions of the historic changes now under way in the Chinese economy. That is especially the case for the United States, where Sino-American codependency will force the US to adjust to the Next China whether it wants to or not. There are great benefits if both nations seize this opportunity. There is mounting risk if they don’t. Squandering such an historic moment would be the greatest tragedy of all.

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<sup>11</sup> See Lawrence H. Summers, “U.S. Economic Prospects: Secular Stagnation, Hysteresis, and the Zero Lower Bound,” *Business Economics* published by the National Association for Business Economists, 2014; and Christine Lagarde, “Lift Growth Today, Tomorrow, Together,” speech before the Atlantic Council, April 9, 2015, Washington D.C.



**OPENING STATEMENT OF MR. NICHOLAS CONSONERY  
DIRECTOR OF ASIA, EURASIA GROUP**

MR. CONSONERY: Okay. Great. Commissioner Cleveland, Commissioner Wessel, and all the members of the Commission, thank you for the opportunity to speak before you today on the Five-Year Plan and implications for the Chinese economy, and really my comments today, just in terms of brief introduction, are going to derive just from the experience that we have, that I have at Eurasia Group working with U.S. investors and the financial markets and with U.S. multinational companies in terms of looking at the Chinese government, their reform aspirations, the likely outlook in terms of successes and failures in implementing those reforms, and the implications of that basic outlook for the business environment in the China market and for U.S. companies.

So I just want to make a few couple quick introductory points in my initial comments here, first, in looking at the 12th Five-Year Plan and trying to gauge a little bit as one comprehensive overall effort, as we've already talked about, the government's relative successes or failures in that regard.

I'll share with you some of our views and insights from the work that we do in terms of expectations for reform under the 13th Five-Year Plan and then talk about implications for competitiveness in terms of U.S.-China companies and business and economic activity, and just end with just a few key recommendations for Congress, just to take on that issue that you all asked about directly.

So, first, on the 12th Five-Year Plan, I think just a couple overarching points. I think the first, you know, in our estimation, I think the most significant overriding success of the 12th Five-Year Plan has been that it really is the document that cemented and solidified a tolerance for slower economic growth across the Chinese government. And I think that's the key sort of philosophical shift that was identified explicitly in the plan and that has really guided the overall orientation of economic and even governance and political policy in China over the past five years.

That also I think has fed into what has been some very significant successes in achieving some of the key targets that were identified in the planning process itself, and on this front, I mean particularly those issues that surrounded energy and environmental considerations, where I do think if you look at the key targets they set, you look at in the context of slower growth, which has really driven the relative success in this regard, the reality is that China has actually made significant successes in reducing the energy intensity of GDP, in reducing the carbon footprint of the economy, and also in increasing the share of renewable energy in the overall energy mix domestically.

So no question about it, China has a very long way to go on this, and all the other issues identified in the plan, but there has been some significant success in this regard following from the slower growth environment, and I think we have to recognize that because it feeds into the expectations about policy moving forward.

Finally, I do think in terms of sober assessment, it is true, and we also have to recognize, that many of the structural economic reforms that were identified in the plan do remain largely not unaddressed, but I think unfulfilled, particularly on the issue of reorienting the economy towards higher rates of consumption and pursuing what I think the government intends to pursue, is much more aggressive and comprehensive financial reform. The reality is they have still significant, significant headway to make.

So expectations for the 13th Five-Year Plan moving forward. I think, I agree with my co-testifiers that the 13th will extend and continue many of the aspirations that were set in the 12th. I do think that it will be a document that is even less focused on heavy manufacturing and infrastructure investment and much more on these issues of quality of life, reorienting towards higher rates of consumption and on innovation.

And I do think the government, by the way, will have some significant successes in this regard over the 13th five-year planning period on environmental considerations, on further opening the financial and capital markets, where my expectation is we will see significant progress by 2020, which will be the end of the 13th Five-Year Plan.

And, also, and I think there is some underestimation or some misunderstandings in Western conversation about the government's intentions regarding state-owned enterprise reform. In our view and in my view, I think what is happening clearly is the government is doubling down on its support for national champions across a number of key industries in the economy.

At the same time, what we do see is that in markets and in sectors where the government has determined they don't want to be, that they want market forces to play a greater role, either because they're not strategic or they're not relevant to national security considerations, we will actually see more reform and liberalization in the state-owned enterprise space in ways that actually allow for more private competition.

So implications for competitiveness. I think clearly government policy will be geared towards engineering much more competitive domestic national champions in key sectors that the government identifies as emerging and where they want to be competitive.

But at the same time, I'm actually optimistic about the outlook for foreign direct investment policy in China and the outlook for new openings for U.S. firms to participate in the market. Why? I think two main reasons. First, on the more concerning side, an issue I know you all have grappled with for years is that clearly the government continues to view foreign direct investment as key to their domestic innovation and technology development goals.

But I think also, second, and we can't underestimate the reality of the change that is going on in the domestic economy today and the implications of that change for policy, the economy is slowing, in some areas very dramatically, and in my view that creates just a huge structural incentive for the government to open more channels for inbound investment because, quite frankly, they need the job creation and they need the growth that follows from those investments.

So there is a big structural motivation, in our estimation, for the government to actually further open the inflow channels for foreign investment, and I think we see that playing out in the conversation about the U.S.-China Bilateral Investment Treaty, the negative list approach and the free trade zones. We can talk about that, but I think very important to this overall process.

So, finally, and sort of in my last minute here, a couple of key points in terms of recommendations for Congress. I think the first is I do think--I'll take it on directly--that we should look favorably on a Bilateral Investment Treaty if it's a good deal. And that's the question is sort of what are the criterion that we would want to see that it would make us think this is a meaningful concession from the Chinese government?

And I think there are really two main points to make here. I think we need to see significant broad-based reductions in the number of sectors that are listed on the Chinese negative lists of sectors that are prohibited today. We just got an iteration, a new iteration, of the list this week that showed some incremental progress but much more room to go.

And I think, secondly, what we need to see is concrete binding commitments from the

Chinese government to reducing the informal barriers to investment that many U.S. firms continue to grapple with, the ones that are not written on the page today, and I think it's contingent on U.S. negotiators to make sure that those are on the page in the BIT.

Finally, just one final recommendation, I do think we need to strengthen and solidify the regulations that guide foreign investment in the United States, particularly those that surround state-owned enterprise investments I think on the principle that state-owned enterprises, when they do consider investments, that there will be explicit parameters around whether and in what industries those companies will be considered in the CFIUS national security review process. We can talk more about that.

But thank you very much for your time, and I'll sort of conclude there and look forward to the conversation.

**PREPARED STATEMENT OF MR. NICHOLAS CONSONERY  
DIRECTOR OF ASIA, EURASIA GROUP**

**April 22, 2015**

**Nicholas Consonery**

**Director, Asia at Eurasia Group**

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

**China Ahead of the 13<sup>th</sup> Five-Year Plan: Competitiveness and Market Reform**

**Key views:**

- Beijing has made important progress on reform during the 12<sup>th</sup> Five Year Plan (FYP) period—with the most seismic shift being a growing political acceptance of slower economic growth.
- But many of the structural reforms needed for long term sustainability in the economy remain incomplete.
- Even so, reform momentum is accelerating in 2015 and the Chinese leadership is poised to tackle at least some more significant structural economic reform over the 13<sup>th</sup> FYP period (2016-2020).
- In the state-owned sector, Beijing is “resizing the state,” by doubling down on support in strategic industries while pushing other sectors toward privatization and market forces.
- The US Congress should look favorably on a pending US-China Bilateral Investment Treaty if concrete, binding commitments to reform, new market openings, and a reduction in informal investment barriers are included in the agreement.
- The US Congress should strengthen and clarify regulations surrounding Chinese corporate investment in the US, and support IMF reform to more fully integrate Beijing into the global economic architecture.

**Questions/Discussion:**

- **Assess whether China will meet the key targets of the 12th Five-Year Plan. What have been the greatest successes? Where are the partial successes? What are notable failures?**

The most significant success of the 12<sup>th</sup> FYP has been underpinning a growing acceptance of slower economic growth by the Chinese government. The key theme of the 12<sup>th</sup> FYP was prioritizing the quality of growth over its quantity; since the plan’s announcement the economy has slowed from 9.2% in 2011 to 7.4% in 2014. Moreover the pace of growth continues to slow in 2015. Slower growth is also looking more sustainable, as the resource and energy intensities of growth have fallen in line with the government’s 12<sup>th</sup> FYP targets.

To be sure, the economy’s downward shift is hardly attributable to the 12<sup>th</sup> FYP alone, but is instead emblematic of China’s economic and fundamental realities. The constraints on growth are broadly recognized, even by the government itself: growth has been too resource and capital

intensive, driving massive socio-economic inequalities and unparalleled environmental degradation. Heightened default potential now plagues the financial system as a result of unprecedented stimulus in response to the global financial crisis, while an explosion in local government debt levels constrains Beijing's ability to use any further stimulus to defend the economy.

The government is mostly on pace to hit the 12<sup>th</sup> FYP's key targets. Below is an assessment of specific targets in the plan, and the progress in hitting those targets over the 2011-2014 period (the first four of the five years of the plan). Growth has outpaced the government's official target, as have urbanization rates and growth in the services sector and R&D. Addressing environmental degradation by reducing the resource intensity of growth and increasing the role for non-fossil fuels were also key goals of the plan. On those fronts, while China still has very far to go, key energy and carbon intensity reduction targets are on pace to be met by year-end 2015:

<b>Progress on key targets of the 12th Five Year Plan</b>		
<i>Category</i>	<i>12th FYP Target</i>	<i>2014 Data</i>
GDP growth	7% yearly (nonbinding)	7.4%
Urbanization rate	Increase to 51.5% (nonbinding)	54.77%
Services sector value added as % of total GDP	Increase to 47% (nonbinding)	48.2%
R&D spending as % of GDP	Increase to 2.2% (nonbinding)	2.1%
Patents/10,000 people	3.3 (nonbinding)	4.9
9-year mandatory education rate	93% (binding)	92.6%
High-school enrollment rate	87% (nonbinding)	85% (2013)
Average urban disposable income	Increase by 7% yearly (nonbinding)	8.4% (2011), 9.6% (2012), 7.0% (2013), 6.8% (2014)
Average rural gross income	Increase by 7% yearly (nonbinding)	11.4% (2011), 9.6% (2012), 9.3% (2013), 9.2% (2014)
Urban registered unemployment	Decrease to 5% (nonbinding)	4.1%
Energy intensity per unit of GDP	Decrease by 16% (average 3.4% per	-12.79%

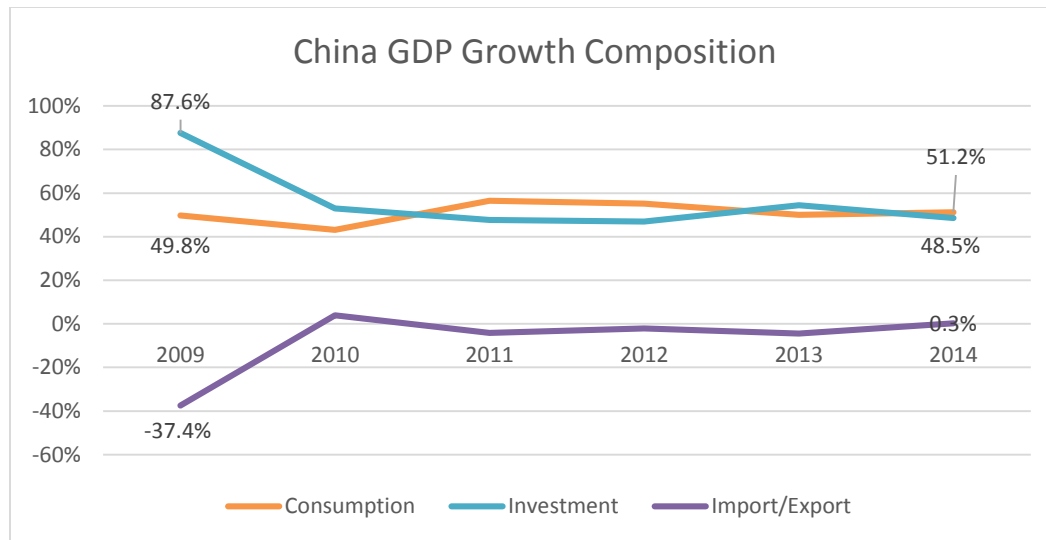
	year)	
Carbon intensity per unit of GDP	Decrease by 17% (average 3.4% per year)	-10.62% (2013)
Non-fossil fuel in primary energy mix	11.4% (binding)	11.1%
Forest coverage	21.7% (binding)	21.63% (Feb 2014)

Sources: Chinese government data, Eurasia Group research

\*Yellow signifies target already met or exceeded

In terms of partial successes or even failures: Another overriding theme of the 12<sup>th</sup> FYP was to increase the role of consumption in growth. On this front, based on available data from the Chinese government at least, the overall composition of growth has not materially changed during the period at hand—in 2014 investment and consumption both contributed roughly 50% of incremental economic growth, with net exports essentially flat. Structurally, investment is decreasing and consumption is increasing, but the pace of change is quite moderate.

This only moderate pace of change in the economy's underlying structure suggests that many fundamental reforms remain unaddressed in this last year of the 12<sup>th</sup> FYP. China's financial sector remains broadly state controlled, for example, with the government setting the terms in which capital is allocated via set interest rates. Growth remains too resource intensive and the return on capital is worsening. The value of the RMB remains controlled by the central bank, though it has been allowed to appreciate significantly in recent years. To be sure, there has been important progress during the 12<sup>th</sup> FYP period, and based on the government's policy designs on issues like environmental policy and industrial consolidation, investment growth will likely slow even further in 2015. But many necessary structural reforms in the economy remain incomplete and Beijing still has much reform work to do in the coming 13<sup>th</sup> FYP period.



Source: China's National Bureau of Statistics

- **Are China's Five-Year Plans still relevant, and why or why not?**

The FYPs are still relevant on two fronts. First, they are used by the central government to broadcast the orientation of policy throughout the bureaucracy and to local levels of government—where resistance to the central government's intentions can often be quite high. Second, the planning process for the FYPs continues to absorb months of bandwidth and attention throughout each of China's major ministries and commissions.

Still, it is important to recognize that the plans themselves are more like guidance for policy than binding blueprints. While the plans have always been called "plans" in English, since the 11<sup>th</sup> FYP Beijing no longer refers to them as plans but as guiding documents. Moreover the economy is becoming less state-driven, and a key theme for Beijing is to find ways to unwind government overreach and control over the economy. So the FYPs are less relevant over time, but they are still major undertakings by Beijing.

- **President Xi Jinping has announced a number of economic reforms, most notably outlining an ambitious agenda in the Third Plenum. What are these reforms?**

The Third Plenum reforms call for the market to play a "decisive" role in resource allocation, for a "deepening of financial and fiscal reform," for a greater role for private firms across the economy, and for a relaxation of investment barriers for foreign firms. At the Plenum the Communist Party promised to "consolidate and develop the publicly owned economy" and develop "fair, open, and transparent" market-based rules for the economy. The Plenum also rolled out administrative and governance changes that should strengthen the leadership's hand in driving reform. Those included the formation of a leading small group within the Party led by President Xi Jinping to drive reform efforts, and commitments to empowering the judiciary and the Party's anti-corruption investigative body.

- **In your judgment, what reforms and/or targets will be included in the 13<sup>th</sup> Five-Year Plan, and why? What facets of the 12th Five-Year Plan might be**

**retained/strengthened, deleted, and modified as priorities in the 13th Five-Year Plan, and why?**

China's National Development and Reform Commission (NDRC)—the super ministry with broad responsibilities for the economy—began the drafting process for the 13<sup>th</sup> FYP in April 2014. The NDRC is expected to complete the draft by the end of this year. Provincial governments are also drafting local FYPs to be completed by year-end. In public statements, the government is already characterizing the next plan as a key period for China's economic transition and a pivotal moment to achieve a longer-standing goal to “become a moderately prosperous society by 2020.” Key themes will be: innovation, economic transition, and reform.

In general terms, the 13<sup>th</sup> FYP will be less focused on “hard” infrastructure and manufacturing, and more focused on “soft” innovation, social benefits, and quality of life. The plan will again emphasize GDP quality over quantity, enshrining President Xi's “new normal” framework for growth into official policy. There is a looming debate over whether the 13<sup>th</sup> FYP will set a growth target at all—many are calling for the administration to abandon the practice of setting growth targets. Reflecting this trend the city of Shanghai did not issue a growth target at all in its work report for 2015. If the 13<sup>th</sup> FYP does set a target it will likely be reduced at least to 6.5% yearly (the 12<sup>th</sup> called for 7% growth per year).

In terms of concrete policy, the 13<sup>th</sup> FYP will commit the government to increased outlays for education and healthcare. It will reinforce attention to environmental degradation and sustain the government's intention to “resize” or refine its role over the state-owned corporate sector by moving more industries toward the market while sustaining support for key strategic industries (discussed at greater length below). It will commit to further progress on capital account, currency, and banking sector reforms. As in past plans, regional integration will also be a key theme—with increased attention to pending development targets including: One Belt One Road, the Yangtze River Economic Belt, and the Beijing-Tianjin-Hebei Joint Development Strategy.

- **What is the outlook for the actual implementation of these reforms? What do the Five Year Plans mean for Chinese competitiveness and US-China competition?**

The Xi administration has sufficient bandwidth and political strength to move forward with reform through 2020, the end of the 13<sup>th</sup> FYP. While this process will not be easy or smooth, President Xi and his closest policy advisors believe that time is not on their side given the unsustainability of the current growth model, and that they have little choice but to pursue significant structural economic reform during the course of their tenure, which runs through 2022. The administration will have two political windows to implement reform: from 2015-2016, and again from 2018-2021. Major political transitions in 2017 and again in 2022 will otherwise distract the administration and absorb their political capacity.

Beijing will make the most significant progress in areas where it faces the sharpest political vulnerabilities, including social and energy/environmental policy. On social policy, Beijing will strengthen social welfare support (pensions, healthcare, education) and push for fiscal



reforms to strengthen the government's ability to fund such efforts. On environmental issues and climate change, Beijing will increasingly fine polluting industries and tax fossil fuels, especially coal and oil as it makes concerted, and visible, efforts to tackle environmental degradation. A primary feature will be resource pricing reform, as the government removes energy subsidies and allows market forces to play a greater role in resource allocation.

The outlook for financial sector reform is also brightening through 2020. The administration will make significant progress on capital account, interest rate, and currency reforms in that time period, with seismic changes in China's currency and capital markets afoot by 2020. Interest rate reform, key for reducing the state's role in resource allocation, now appear poised to move the most substantially and quickly (this year) following a new commitment from Central Bank Governor Zhou Xiaochuan to lift the deposit interest rate cap for banks by the end of the year. The reform, long sought by the central bank, would mark a historic change in China's interest rate regime.

The government will also make progress on opening its capital markets and liberalizing its currency regime by 2020. On the capital markets, the leadership will use nascent "through trains" with Hong Kong to allow more international currency flows in to and out of the domestic equity markets, and it will allow foreign securities firms to play a bigger role in the opening of the capital account broadly. On the currency, Beijing will also likely expand the trading band for the RMB, allowing it to become more responsive to market forces by 2020. The government will engage less on foreign exchange markets to defend the currency's value, but concerns about the RMB's value will not be completely erased: the government will still have significant flexibility to control the currency's value with its massive forex reserves.

China's financial regulators will also broaden private sector participation in the banking sector with significant new opportunities for private financial institutions. The role for foreign firms in the domestic financial sector will also improve, but openings will move more gradually and could be only small and sporadic through 2020.

### **"Resizing the state"**

Significant state-owned enterprise (SOEs) reform is also expected through 2020. But Beijing's intentions regarding SOE reform have been confused in the West: recent media coverage simplifies the government's agenda by arguing either that Beijing intends to liberalize and reform SOEs, or that it wants to double down on state-support for industry while boxing out foreign firms from the domestic market.

The truth is more nuanced: Beijing is pursuing a two-pronged strategy that will tighten state control over strategic sectors of the economy, particularly those earmarked for greater international expansion or identified as strategic for national security reasons, while reducing state control over sectors where market competition is higher and security concerns lower. The policy marks an attempt to "resize the state" – meaning that the government will essentially ring fence its SOE space by doubling down and intensifying support support for and control over some sectors, while opening others to more market competition and even foreign competition. Beijing is currently drawing up lists categorizing its SOEs along these

lines, and the end result will be that various industries move toward either increased market orientation or increased state support, as in the graphic below.

In terms of competitiveness and US-China competition, a primary focus will be to use forced mergers and stronger management oversight to create more globally competitive national brands in strategic industries. The expectation is that larger companies will be more globally competitive and better able to help the economy move up the industrial value chain. Chinese firms will continue to struggle with inefficiencies and weak domestic intellectual property protections. But the government's willingness to invest significantly in new and emerging technologies will indeed mean greater competitive capabilities for Chinese firms in a range of high-tech sectors. It will also mean continued regulatory preferences for SOEs in key sectors in ways that sustain advantages for those firms vis-à-vis US or other foreign firms in the China market.

On the upside, Beijing is also likely to open more sectors for more private and foreign investment. The government recognizes that foreign expertise, capital, and technology is needed as it navigates slower economic growth, and the slowing economy also raises incentives to open up more channels for inbound investment. Sectors that see greater openings will be those where the government sees continued need for foreign expertise, and those that have been classified as "market competitive" and where Beijing is more interested in reducing the state's role.

The recent 21 April 2015 announcement of a common "negative list" of restricted sectors for four new free trade zones underpin these views and give some indication of those sectors that are likely to be more open: the lists offer new openings in construction, numerous segments of advanced manufacturing (including auto electronic equipment, aviation engines, certain classes of pharmaceuticals), retail, water and environment, and real estate. Yet each sector will have a distinct story about how the government balances the need for new investments against the desire to protect local firms. Resistance from vested interest groups will remain substantial, especially in strategic sectors such as energy and finance.

The new negative list will also facilitate progress on the US-China Bilateral Investment Treaty (BIT) which is currently under negotiation. The current version of the negative list (as of 21 April 2015) does not offer the kinds of sizable trade barrier reductions that US negotiators will want to see out of negotiations, but is a firmer starting point for those dialogues than previous iterations.



Source: Eurasia Group China Research

- **The Commission is mandated to make policy recommendations to Congress based on its hearings and other research. Assess the implications of China's 12th and 13th Five-Year Plans for United States. What are your recommendations for Congressional action related to the topic of your testimony?**

**Use oversight and approval powers to shape a bilateral investment treaty agreement that benefits US industry and the US economy. And if a good deal is finalized, move forward with speedy passage.** The US Congress has an important role to play in motivating China to double down on and follow through with its reform commitments. The looming conduit for that influence is the US-China Bilateral Investment Treaty (BIT), which is currently under negotiation. The treaty would ideally better protect and facilitate US corporate investments in China, give Chinese firms more clarity and reciprocal treatment in US national security review and other regulatory processes, and ultimately pave the way for increased bilateral investment flows. An increase in Chinese corporate investment in the US market will also give the US government more leverage over China's corporate business practices—firms that are seen as benefiting from intellectual property theft, or those seen to be negligent in food or product safety considerations, will be subject to prosecution and liability claims in US courts, for example.

In its oversight and approval functions, the US Congress should look favorably on passage of the treaty--if, and only if, the agreement includes concrete, binding commitments to reform and new market openings from Beijing. In particular, the agreement must be shaped around sizable explicit reductions in investment barriers from Beijing across a range of sectors under the framework of a

negative list approach. In addition, Beijing must make explicit commitments to reducing the multitude of informal barriers that are too-often placed on US firms across a variety of industries.

To be sure, there is a chance that these aspirations are not achieved and that Beijing is not willing or able to guarantee sufficient new openings in order for the BIT to make sense. But to strengthen the US negotiating position the Congress should give clear assurances that, if those criterion are met, it will move forward passage of the agreement without delay.

**Strengthen and clarify foreign investment and national security laws that affect investment from China.** In tandem with overseeing the BIT process, the US Congress should strengthen and clarify US foreign investment and national security laws and review processes, particularly those that surround the issue of state-owned corporate investment in the US economy. The guiding principles of reform should be that investments from Chinese private companies are welcome across a range of industries, but investments from private firms in strategic sectors, or direct investments by SOEs, will be subject to strict national security review in many instances. Ultimately these stipulations should be made more explicit and transparent in the Committee on Foreign Investment in the US (CFIUS) oversight process. Criterion for national security should also be laid out more clearly by delineating specific strategic sectors (as will be done via the US negative list in BIT negotiations) and mandating more openness from Chinese firms about their ownership structures before investments are approved.

To be sure, strict regulations or even investment restrictions will remain appropriate in many instances. But these regulations are currently too opaque and should be clarified and strengthened so that they do not dissuade investments (particularly those from private firms) that would otherwise be deemed acceptable in national security reviews.

**Approve IMF reform.** The US Congress should approve pending reforms for the International Monetary Fund (IMF) in order to give emerging markets, including China, a greater say in that institution. The Chinese economy is now highly integrated into the global economic architecture and has significant global economic influence. The Congress must use its considerable influence to find ways to shape China's engagement within that architecture rather than excluding China from it. As the recent formation of the China-led Asia Infrastructure Investment Bank (AIIB) makes clear, Beijing does have sufficient capability to create alternative institutions that would risk further global economic fragmentation and undermine the US role in global economic governance.

**OPENING STATEMENT OF MR. OLIVER K. MELTON  
SENIOR ECONOMIC ANALYST, U.S. DEPARTMENT OF STATE**

MR. MELTON: Okay. Thank you very much. It's an honor to be here, and I appreciate the invitation--

HEARING CO-CHAIR WESSEL: Microphone.

MR. MELTON: Oh, sorry. Sorry, the technology is overwhelming here. So thank you very much. I really do appreciate the opportunity to be here. It's an honor, and I hope that I can be useful in some way.

To reiterate again, my views do not represent those of the State Department, the administration or any aspect of the United States government. I'm not even sure that I would know what those views would be if we had them with respect to the Five-Year Plan.

As you noted, I think that the Five-Year Plan is better thought of as a planning and coordination system. It's an institution. It doesn't really even last five years, and it isn't really fully contained in the blueprints that are released at the end and the beginning of 2015 and 2016.

These are very broad-based outlines that list, are more of a to-do list of what the government is going to do over the next several years that doesn't really come to fruition until literally thousands of documents and policy programs are released much later in the plan. And then there's a sort of formalized institutional evaluation system that collects information and sort of monitors the process of implementing those plans and helps in correcting them.

So while there are really prominent industrial policy plans that we need to focus on, I guess it's at least important to note that the planning system isn't inherently used for industrial policy and can be used to do things, can be tweaked in ways that can be supportive of things like educational reform or even IPR reform or other things like that.

So it isn't inherently anti-competitive or anti-market even though there are pretty strong tendencies in that direction. We can get back to that.

I think that the plan plays a pretty fundamental role in China's decentralized government system that's important to understand despite the fact that it's an authoritarian one-Party state. By most metrics, it's actually rather remarkably decentralized in terms of the actual autonomy of local policymakers even in pretty core economic issues. Outside of monetary policy or financial policy or regulation, most industrial policies at the end of the day are run by local governments, even though the national government does have a pretty significant hand in defining the parameters of those policies.

And so what you have, as everybody knows, is this tiered system of Party control where at the sort of provincial level and then city and county level Party secretaries enjoy pretty significant autonomy by design. This is not an accident, and the way that the Communist Party balances this, this delegation, that in most countries would really limit the power of the central government, is by maintaining absolute control over personnel movements and so the political fortunes of all leaders at all levels of government, and so it's really through this Party channel that Beijing is able to focus the priorities of the leaders and set general parameters.

And the reason that that's important is because the Five-Year Plan and, in general, the Communist Party's policymaking system really relies on the sort of "fire and forget," you know, we're going to give you a series of tasks, sort of clear instructions on what we want to accomplish, sort of a one-page sheet, and we're going to monitor you and promote you or punish you based on how well you perform with respect to those criteria, but then you're basically going to go and run your own show by yourself with resources or guidance from the center in terms of

how things might be done or what you need to do in order to get subsidies, but, by and large, you're going to have pretty significant autonomy.

And that really comes sort of to the center in industrial policy issues and some of the key economic issues that we can get back to that are having an effect on U.S. industries because the institutions, the governments, and the central ministries that ultimately cause the problems, that cause problems in subsidizing or distorting markets, are usually under pretty significant pressure from this Party system to produce quick results, and so even in cases where they know better, and we have statements from ministers and private conversations where they actually have a pretty robust understanding of the ideal way to use markets to create a more healthy environment, they have a five-year or three-year political horizon in which they need to demonstrate pretty significant results to their superiors, which leads them to addressing policy with the tools that they have, which often involve excessive intervention or heavy-handed support for preferred industries.

And, in particular, this incentivizes people to support, or local governments, in particular, to support their own champions. So we all know about China's national champions, but equally important, if not more important, in the sort of global distortions that Chinese industrial policy creates is the fact that every local government wants to protect its steel companies or its solar company, and so you get this cycle where when the market starts to soften or its firms get into trouble, there's actually a perverse incentive to intervene at that moment and provide even more support, both because you want your company to survive, but also because you know that Beijing might come along and start to try to rationalize the industry or consolidate it.

And so if you can have the largest firm or the tenth largest firm, you might be able to survive that consolidation process, and so you get something similar to what we saw with the solar example, where rather than backing off investment at the moment where it started to become clear that there was a degree of overcapacity, many local officials really started to double down and increase funding so it just, it exacerbates the problem.

I'll just say very briefly that the 13th Five-Year Plan, or--sorry--the Third Plenum that outlines China's overarching strategy for economic reform was extremely ambitious and could have pretty significant implications for some of these industrial policy issues that we'll talk about, and in some cases, Li Keqiang and even industrial policy ministers have indicated that they understand that excessive government power and pressure to intervene in the markets is actually one of the sources of overcapacity and one of the major problems itself.

So, at least, in theory, there is some hope that they may be changing the sort of philosophical orientation of the bureaucracy, but the planning resources that they have access to, again, the sort of institutional capacity and pressures to use the tools that they do have, probably won't go away, and so this is often sort of cast as an issue of the leadership fighting the vested interests and the local government, but I think--which is blamed for frustrating reform efforts, but I think it's also important to understand that it's sort of an inherent function of the way the policymaking system works in practice.

**PREPARED STATEMENT OF MR. OLIVER K. MELTON  
SENIOR ECONOMIC ANALYST, U.S. DEPARTMENT OF STATE**

**China's Five-Year Planning System: Implications for the  
Reform Agenda**

Testimony for the U.S.-China Economic and Security Review Commission<sup>12</sup>

**April 22, 2015**

**Oliver Melton<sup>13</sup>**

The Chinese leadership is confronting flagging growth and intensifying public concern over key quality of life issues, including alarming environment conditions, rampant product safety problems, and a general sense of economic and social inequality. As a result, Beijing has embarked on an extremely ambitious strategy to revitalize the economy and dramatically increase the quality of governance throughout the country. It aims to transform the role of government, by reducing state intervention in markets, improving the effectiveness of key regulatory bodies, and increasing the quality and equity of social services.

The complexity and scope of this agenda will strain every aspect of China's Communist Party (CCP) and state policymaking institutions. The Five Year Plan is Beijing's core mechanism for coordinating and implementing policy across national ministries and local governments, and will play a central role in the reform program. By looking closely at how the plan works in practice, this report identifies the strengths and weaknesses of the planning system, and highlights implications for the CCP's agenda.

- Section I outlines the mechanics of the planning system and its evolution from a tool of socialist economic planning to a dynamic political and policy institution.
- Section II reviews the 12<sup>th</sup> Five Year Plan (2011-2015) and highlights the conditions under which the planning process is effective and when it falls short.
- Section III offers a preliminary assessment of the role the 13<sup>th</sup> Five Year Plan will play within a market-oriented reform program.

## **Section I: The Modern Planning System**

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<sup>12</sup> This testimony borrows heavily from Heilmann, Sebastian & Melton, Oliver (2013). "The Reinvention of Development Planning in China, 1993–2012." *Modern China*, 39(6), 580-628, as well as Melton, Oliver (2010), "Understanding China's Five Year Plan: Planned Economy or Coordinated Chaos?" *China Insight* (GaveKalDragonomics), 9 November 2010, 1-19. The author gratefully acknowledges the contributions of his editors and his coauthor, Sebastian Heilmann, to this paper.

<sup>13</sup> The views expressed in this testimony are the author's alone, and in no way represent or reflect those of the U.S. Department of State or any other government agency.

In the spring of 2016, China's National People's Congress will approve the 16<sup>th</sup> Five Year Plan Outline, which will guide economic and social policy through 2020. The roughly 100-page document will set policy goals for almost every aspect of China's state bureaucracy, and will contain dozens of quantitative targets for things as diverse as GDP growth, urbanization quotas, CO<sub>2</sub> emissions, and health care coverage rates. The language and ceremony surrounding the document will be reminiscent of the socialist planning system, and will, by design, present an image of a powerful central government firmly in control of the nation's future. Perhaps as a result, some observers will see it as an anachronism, divorced from the reality of an increasingly freewheeling economy and local governments whose behavior on the ground often veers far from the ideals mandated in the capital.

Despite superficial similarities—in particular the precise targets and terse edicts for policy outcomes—the Five Year Plan has fundamentally transformed since the early 1990s, and has long abandoned its role dictating economic and social behavior. Though once wedded to socialist economic planning, and therefore inherently a tool of the command economy, the modern planning system is now highly flexible, and is used to support increasingly diverse initiatives. The 11<sup>th</sup> and 12<sup>th</sup> Five Year Plans solidified the shift toward new policy priorities, such as environmental protection and social welfare programs, and recast economic objectives in terms of the health of the economy, rather than the quantity of output.

China's Five Year Plan (FYP) is not actually a single, coherent plan, nor is it even fully contained within a discrete five-year period. Rather than a static policy blueprint, the Five Year Plan is better thought of as an evolutionary planning and policymaking process. It is a dynamic institution for systematically bringing information up from the grassroots to the central government, processing and analyzing that information to support policy decisions, delegating and coordinating the implementation process across the bureaucracy, and then monitoring the effectiveness of those policies—and the officials who implement them.

It is also a political tool that strengthens the hand of central leaders, who use the planning system to shape the priorities and incentives of diverse ministries and local governments. Yet the Five Year Plan is actually designed to preserve the high degree of institutional leeway and local autonomy that typifies China's highly decentralized government. Arguably, central planning reinforces the system of tiered control and central oversight that ensures Beijing has ultimate control over key policy parameters, but without over centralizing decision-making power or micromanaging local officials.

## **The Cascade of Plans**

The first official document in the FYP cycle is the Communist Party's brief, fairly general "Guidelines" approved at a plenary session of the Central Committee in the fall before the first year of the plan. This document solidifies the strategic consensus of the CCP just after the midpoint of the party's five-year political cycle, which means the plan is offset from the leadership transition and therefore ensures a degree of continuity across administrations. The State Council then drafts the "Outline," which is approved by the



National People's Congress the following spring. This document—commonly cited as China's Five Year Plan—clarifies objectives and points to individual policy strategies, but remains fairly vague. A parallel process of Guidelines and Outlines ensues among local governments over the same time period.

Later in the first and second year of the plan cycle, the individual paragraphs or targets in the national and local plan Outlines are then used as the basis for the real core of the FYP system: hundreds of sub-plans that contain the first level of practical detail on how the main objectives of the new five-year plan outline are to be realized. These plans provide individualized regional targets tailored to local conditions and resources, define the general parameters of policy strategies, and set initial guidance for how progress will be measured and evaluated—sometimes a contentious process arbitrated by the State Council and CCP bodies. Finally, government departments at all levels must still develop a series of “work programs” and “implementation programs” that contain the level of specificity needed to allocate resources and adjust procedures and regulations. It is only at this point, after thousands of provinces, cities, and counties have produced supporting initiatives, that individual policy programs are mature enough to implement nationally.

This creates a nested web of plans, found in almost every single policy domain in China and across the three core levels of the state: the center, provincial-level governments, and counties and county-level cities—which, not coincidentally, correspond with CCP supervision and authority structures. This system of sub-plans has become increasingly institutionalized since the 11<sup>th</sup> FYP, and central ministries are reducing their direct role in managing projects, except in cases where there is a clear reason for an active central program, such as cross-regional issues or national defense. Instead, national plans set general strategies and outline the content of a policy plan, but leave many details and management functions to local governments. These local departments are the locus of most policy implementation and have substantial leeway over issues not specified in the national plans—and very often reinterpret or reprioritize the content of their instructions. Importantly, many of the key policy documents that translate Five Year Plan strategies into practice are not explicitly identified as subcomponents of the plans that mandated their creation, which helps obscure the sustained coordination process in the planning system.

In general, the large, national thematic sub-plans are released in the first year of the plan, and the follow-on implementation documents following the second and third year. Fiscal support measures and evaluation procedures often lag even further, meaning that the full web of national and local policies is generally only complete in the latter half of the plan period. This delay is particularly acute for programs that require new regulatory, institutional, or fiscal support structures, such as social welfare programs or environmental monitoring. One feature of this lagged process is that local governments and ministries are forced to improvise while the details are being finalized. This can produce a degree of chaos, fueling the impression that Beijing is out of touch with reality on the ground, particularly for difficult or underfunded priorities that local officials might hope to shirk. But it also creates space for China's distinctive method of policy experimentation and pilot projects, which often precede national plans and are used to inform subsequent implementation details.

Just as these policies are coming into effect, a mid-term review process begins at all levels of government and for most thematic plans as specified early in the planning process. There has been a trend—or at least an aspiration—to involve independent third-party evaluators since the 11<sup>th</sup> Plan, which has had varying degrees of success. The results of the review process are released in the third and fourth years of the plan, including a formal presentation to the National People's Congress and local equivalents, and are meant to provide feedback to calibrate initiatives as they mature, spreading successful models and correcting unsuccessful ones. By the time this review process has concluded, the party and state bodies charged with drafting the strategic guidelines of the next Five Year Plan are starting their preparatory work. The assessment of outstanding problems thereby feeds back to the center as the process begins anew.

### The Planning System's Role in Party Governance

Though the Five Year Planning system is primarily a mechanism for the state to coordinate and implement policy across central and local bureaucracies, it derives its influence from its role within the Communist Party's power structures. The modern CCP exerts its control over the political system largely through the management of cadres—the nomenklatura system—which institutionalizes its control over personnel within a tiered central and local hierarchy of party secretaries. The center appoints and monitors all officials at and above the vice-minister and vice-provincial rank, and delegates similar powers to the party secretaries at the provincial level, who in turn make appointments and oversee leading cadre in the counties and county-level cities in their jurisdiction, and so on.

This structure creates a concentration of power within the party apparatus at each successive level of government, where party secretaries enjoy immense authority over their subordinates in all state institutions, with few effective checks other than the party institutions above them. This gives them wide latitude to use legal and extra-legal powers as they see fit, and leads to a widely discussed tension between vertical and horizontal authority relationships. On paper, central ministries have policy authority over the corresponding departments in local governments, but the local ministers are also subordinate to their respective party secretaries, who are far more important to their career prospects and budgets than Beijing. In all but a few special cases, namely the military and central bank, the result is that the priorities of the local party leadership trump tenuous vertical institutional linkages.

The importance of the cadre management system has withstood the sweeping economic reforms of the past 35 years, even as the party has withdrawn from direct administration of economic activity and professionalized the bureaucracy, which have greatly reduced the scope of its appointment powers. It has adapted by retaining control over key choke points in the economy, namely state-owned enterprises and financial institutions, whose leaders are still appointed by the party. Despite a long-standing trend of decentralizing budgetary and policy authority, the CCP has also retained control over local governments' policy strategies and objectives through increasingly institutionalized oversight and evaluation systems. (There are actually three overlapping evaluation systems, not further addressed here.)

The cadre management system is opaque and gives wide latitude to party secretaries to appoint and promote whomever they want, often leading to corruption, patronage networks, and abuses of power. Yet the system on the whole has been effective at shaping priorities and allowing the center to retain broad influence over policy decisions. This is the core of China's unique—and deliberate—balance of centralized political control and the substantial devolution of policymaking authority. When the Central Committee meets ahead of the Five Year Plan period, it is not just providing instructions to the State Council and central bureaucracy. It is codifying the strategic priorities of subordinate party bodies and endowing the FYP Outline with political significance.

The relationship between the plan and the party's political control mechanism was formalized within the plan's target system in the 11<sup>th</sup> Five Year Plan. Quantitative targets were divided into new categories, "binding" and "predictive." The party's evaluation criteria were then updated to include these targets, wedding the plan's core priorities to the party's primary political enforcement mechanisms. The binding targets were subsequently allocated to provincial-level governments and were in turn allocated to county and country-level cities, ensuring that each level of party leadership had a direct interest in its subordinates meeting their quotas. By contrast, "predictive" targets were not given the same weight and were not introduced to the cadre evaluation criteria (though GDP growth, a predictive target, retained a place in the criteria with a lower weighting).

The purpose of the binding targets is to create a sort of veto over career advancement for leading cadres who do not meet key goals, and the plan's mid-term and final review processes are therefore imbued with substantial political importance. The agencies responsible for the evaluations—often the National Development and Reform Commission and its local counterparts, or the lead ministries in thematic plans—gain a degree of political power within the vertical and horizontal power structures, because their assessments affect the careers of local leaders.

### The Planning System in Operation

China's government is highly decentralized relative to most countries, but its authority relationships are dynamic. The levels of independence enjoyed by lower-level policymakers vary over time and the roles of party and state bodies shift at key junctures of the planning cycle. At the start of the process, central party leaders define strategic priorities and articulate the substance and distribution of key targets. High-level party deliberations are opaque, but in the past a Politburo Standing Committee member has overseen the process, with drafting and coordination work handled by ad hoc and standing leading small groups, composed of high-ranking party officials and relevant ministers. Day-to-day work is handled by the leading groups' "offices," which are housed in key ministries or other party bodies. The break between party and state responsibilities is not precise—not least because the Premier and Vice Premiers of the State Council are on the same party leading groups, as are the local governors and vice governors, mayors and vice mayors, and so on.

In the first and second year of the plan, as the cycle moves to the national FYP Outline

and the subsequent cascade of national-level policy documents, control of the process shifts from purely party bodies to the State Council and its staff. They take the lead coordinating individual plans and then delegating further work to individual ministries and their local counterparts, who are ultimately responsible for implementing the programs. Thus as the planning cycle progresses, the locus of decision-making shifts from party leaders to state entities, and from the center to local governments.

In practice, the party leadership can reassert its influence at any point to adjust or renegotiate its mandates. However, given the limited capacity for—and desire to avoid—micromanaging lower levels of government, the general trend is to allow local governments and ministries wide latitude to implement policy once the party has set the parameters. Thus for the majority of the time and the majority of issues, China remains a highly decentralized government with a high degree of local autonomy. The precise balance of power between the apex of party power and low-level policymakers is a function of both the issue and the policy cycle.

The planning system is meant to help mitigate the problem of limited high-level bandwidth by institutionalizing a regular, comprehensive coordination process. But interagency disputes and low priority issues can still fester for long periods of time without resolution, in part due to Chinese policymakers' reliance on delegating responsibilities. The leading small groups are meant to help resolve such problems on an ongoing basis, but cannot overcome the fundamental capacity constraints Beijing faces managing an enormous country and a large number of extremely complex problems.

### Pathologies of the Target System

The target system can be effective at setting red lines for minimum performance or incentivizing a small number of discrete priorities. But it is ill suited for balancing contradictory objectives, alleviating resource and capacity constraints, or altering external incentives. The reliance on this system produces several categories of common problems, which are reflected in the Five Year Planning system.

#### *Lack of Objective Data*

The target system depends heavily on objective measurements of quantifiable policy goals. Local governments and ministries are almost always responsible for collecting the data used to evaluate their own performance, which leads to misrepresentation and obfuscation. But even without the problem of bias, China's statistical system has severe institutional limits, meaning that policymakers at all levels frequently lack reliable data simply because it is not being collected properly. Finally, this problem is compounded because Beijing is shifting its focus from easily quantifiable economic goals to more subjective priorities that do not lend themselves to quantification, making it difficult to apply rigid target-based quotas.

#### *Abuses of Power*

The party's target-based management system functions because local party secretaries

have wide latitude to deploy packages of policies to meet the objectives assigned to them. However, this same autonomy and influence often leads to corruption, which can also play a role behind the scenes in cadre evaluations and appointments. Favored candidates can also receive plum assignments where targets are easier to meet, or they can negotiate friendlier evaluation criteria at the outset. These flaws can undermine the effectiveness of the system by altering the

### *Superficial Implementation*

The high-pressure target system creates incentives to produce measurable evidence of policy results under tight deadlines, which produces a huge range of undesirable outcomes. Even when officials would prefer to do otherwise, they are pushed to pursue strategies that do not effectively address underlying problems, because it rewards superficial or pro forma policies. Additionally, costs or unintended consequences that are not measured by the party can be safely ignored by local leaders, which means the problems reflected in the targets are often exacerbated or replaced by new ones.

#### **Prerequisites of Effective Policy**

The Chinese policymaking system works best when the leadership crafts policies with its deficiencies in mind, properly allocating resources or compensating for—or at least anticipating—the countervailing pressures.

- Capacity: Officials have appropriate resources and policy tools to address problems.
- Incentives: There are not countervailing priorities and costs are small or offset.
- Measurable: Tasks can be evaluated objectively and quantitatively.
- Transparency: There is reliable, objective data about policy outcomes.
- Focus: There is a narrow set of clear targets and discrete objectives.

### *Focus on GDP*

In many ways, the proliferation of binding targets can be seen as an effort to limit the negative spillover of the overemphasis on GDP growth in formal evaluation criteria. However, there are structural incentives that ensure that GDP will remain a major priority for all local officials, which can be balanced but not eliminated by other political incentives. In particular, growth is essential for other party objectives, such as employment and household consumption. And a strong economy provides revenue, which is necessary to fund other priorities, such as social welfare spending.

### *Capacity Constraints*

Local governments and ministries face significant capacity constraints, and are often unable to achieve goals set for them—or must do so at the expense of other priorities or in ways that produce undesirable outcomes. Local government fiscal resources are closely linked to the size of the local economy, which makes it very difficult for poor regions to expand social services or invest in new programs. Additionally, ministries that lack appropriate resources often resort to using whatever powers they have to accomplish their mission, even when those tools produce unwanted outcomes. As in any other country, Chinese policy plans are only effective when they ensure that implementing agencies have the capacity to deliver appropriate policies.

### *Limited Scope*

Finally, the system has been effective at focusing attention on a small number of very high priority goals, such as economic growth and population control. But it can break down when local leaders are given a large number of diverse targets. Priorities are diluted and cadre devise strategies to maximize their performance rating as they make trade-offs with finite resources and contradictory objectives. The party's personnel management system has tried to address this scientifically, with a growing list of carefully weighted targets. But it is unlikely that the party can solve the problem by adding more layers of nuance to the targets.

## **Section II: The 12<sup>th</sup> Five Year Plan**

The 11<sup>th</sup> and 12<sup>th</sup> Five Year Plans solidified many new institutional features of the planning process and fundamentally shifted the plan's priorities in ways that will almost certainly persist in the 13<sup>th</sup> Plan. The system is maturing, and its ability to address new challenges is increasing, albeit unevenly and with significant limitations. The recent experience of the 12<sup>th</sup> FYP is therefore instructive, and helps identify what Beijing will need to do to make the 13<sup>th</sup> Plan successful.

The use of binding, party-backed targets to enforce key redlines has become more institutionalized. The 11th five-year plan contained 22 primary targets, of which eight were binding. The 12th five-year plan contained 23 targets, of which 13 were binding. These targets were disseminated to provincial-level governments and then to cities and counties, and were a key focus of the review process.

### Targets of the 12<sup>th</sup> Plan

<b>Economic Growth</b>		
GDP	7% Annual Growth	Predictive
Per Capital GDP	Eliminated	

**Economic Structure:**

<b>New</b>	Service Industry / GDP	4ppt Cumulative Growth	Predictive
	Employment in Service Industry / Total Employment	Eliminated	
	R&D Spending / GDP	0.4ppt Cumulative Growth	Predictive
	Patents / 10,000 People	1.6 Cumulative Growth	Predictive
	Urbanization Rate	4ppt Cumulative Growth	Predictive

**Population, Resources, and the Environment**

<b>New</b>	Population	< 7.2% Cumulative	Restrictive
	Energy Consumption Per Unit of GDP	16pp Cumulative	Restrictive
<b>New</b>	CO2 Emissions Per Unit of GDP	17% Cumulative Reduction	Restrictive
	Non-Petro Chemical Energy / Non-Renewable Energy	3.1pp Cumulative Increase	Restrictive
<b>New</b>	Water Consumption Per Unit of Industrial Value Added	30pp Cumulative Reduction	Restrictive
	Effective Use of Irrigation Water (Utilization Coefficient)	0.03ppt Cumulative Increase	Predictive
<b>New</b>	Rate of Comprehensive Use of Solid Industrial Waste	Eliminated	
	Total Acreage of Cultivated Land	No Cumulative Change	Restrictive
<b>New</b>	Total Discharge of Major Pollutants		
	Sulfur Dioxide	8pp Cumulative Reduction	Restrictive
<b>New</b>	Chemical Oxygen Demand	8pp Cumulative Reduction	Restrictive
	Ammonium nitrate	10pp Cumulative Reduction	Restrictive
<b>New</b>	Nitrogen Oxide	10pp Cumulative Reduction	Restrictive
	Forest Coverage	1.3ppt Cumulative Increase	Restrictive
<b>New</b>	Total Stock of Forest	600 Billion sqm Increase	Restrictive

### Public Services, People's Livelihoods

New	Enrollment in Higher Education	4.5ppts (to 87%)	Predictive
	Completion Rate of Compulsory Education (9 years)	3.3 ppts (to 93%)	Restrictive
	Coverage of Urban Basic Old-Age Pension	100mn Cumulative Increase in People Covered	Restrictive
	Coverage of the Three-Point Rural Medical Care System	3% Cumulative Growth in the Population	Restrictive
New	New Social Housing	36 Million Units in Five Years	Restrictive
	New Jobs Created for Urban Residents	45mn Cumulative Jobs Created	Predictive
	Rural Laborers Transferred to Non-Agriculture Sectors	Eliminated	
	Urban Registered Unemployment Rate	Fewer than 5% Throughout	Predictive
	Per Capita Disposable Income of Urban Residents	> 7% Annual Growth	Predictive
	Per capita net income of rural residents	> 7% Annual Growth	Predictive

During the 12<sup>th</sup> FYP, the division of responsibilities between central and local plans has become clearer and more systematic, as envisioned during the lead up to the 11<sup>th</sup> FYP. At the regional level, the State Council and NDRC have approved hundreds of city-level development plans, and, in a process originally outlined in the 11<sup>th</sup> Plan, have very slowly divided all county-level units into four categories of “functional regions.” These centrally approved regional plans are meant to establish major objectives and development parameters for localities, while the functional zones are used to craft tailored incentive structures based on districts’ assigned development priorities (e.g. agriculture v. industrialization). Beijing is trying to influence the overall distribution of regional and urban development without micromanaging individual investment and economic policy decisions. Nonetheless, the stringency and specificity of central policy parameters vary widely. In some areas, such as environmental policy, the national plans and central ministries have obtained significantly more authority. Yet in others, national plans are rough road maps and lists of objectives with little direct oversight.

There is also a continued trend toward institutionalizing grater non-governmental



participation. Experts committees have been formed at central and local levels to help review and analyze overarching economic and social conditions, as well as the effectiveness of recent policies. This work is fed directly to the party bodies that will establish strategic guidelines in the summer and fall of 2015. The process is replicated within specific issue areas, such as environmental protection and technology programs. Likewise, the 11<sup>th</sup> and 12<sup>th</sup> Plans both attempted to expand the use of third-party evaluation teams in the mid-term and end-of-plan review process. The influence of these outside groups is difficult to assess and appears to vary considerably by issue and locality.

Finally, one of the most important trends in the 11<sup>th</sup> and 12<sup>th</sup> Five Year Plans has been a robust effort to improve the quality and reliability of data. Particularly as policy priorities shift to areas like environmental protection and energy efficiency, Beijing has had to create new and more objective systems to evaluate the effectiveness of policy and, crucially, the performance of local officials. Given the long lag times of designing and implementing these systems—and the importance of establishing baselines and appropriate targets—this has been an iterative process that extends beyond a single plan period.

### The Effectiveness of the 12<sup>th</sup> Five Year Plan

When it was released, the 12<sup>th</sup> Five Year Plan was heralded as a potential breaking point, reflecting Beijing's desire to transform China's growth model and address striking social and environmental problems. It called for a fundamental turn away from China's unsustainable reliance on investment and exports to an economy driven by domestic demand and innovation. It enshrined stringent environmental and energy efficiency goals, and called for substantial improvements in the equity and quality of social services. The results were uneven, and while there were some successes that will be extended in the 13<sup>th</sup> Plan, it fell short in many ways.

Given the massive scope of the associated policy initiatives, it is difficult to provide a full assessment of the 12<sup>th</sup> plan's effectiveness. However at a very broad level, it is possible to conclude that it was least effective at reorienting the development model by increasing the share of consumption in the economy and reducing China's reliance on unsustainable sources of growth. It was most successful at reducing emissions of specific pollutants, improving energy efficiency, and other concrete, measurable objectives that were enshrined in a small number of binding targets. The results were mixed with respect to innovation, as policies were fairly effective at achieving the goals they set for themselves, but the broader utility of some of these goals is questionable and possibly even counterproductive.

### *The Growth Model*

Though domestic consumption and household incomes grew rapidly in absolute terms, their share in GDP increased only modestly over the plan period, such that China made minimal progress toward rebalancing its economy. Debt-fueled investment in industry, real estate, and infrastructure remained major source of growth, and has started to slow only in the face of substantial excess capacity and a mounting debt repayment burden for firms and local

governments. The Five Year Plan seems to have had no ability to curtail such trends, and to the extent that there is a correction, it will be because there is finally no other choice.

However, the key macroeconomic policies that fuel China's domestic economic distortions were not directly addressed through the five year planning process. Instead, major issues like as financial sector reform and the redistribution of resources in the fiscal system have been handled on an ad hoc basis by the senior leadership. Additionally, it is important to distinguish between the broad ambitions enshrined in the plan and the preferences revealed by policymakers when forced to make trade-offs.

The Hu-Wen administration repeatedly chose to preserve rapid growth in ways that exacerbated long-term structural problems. For example, laudable macroeconomic plans were included in the plan—such as interest rate liberalization—but Beijing preferred to pursue incremental reform of the financial system, rather than overhauling everything at once. By limiting the role of market forces—such as bankruptcies—and failing to curtail local governments' influence in markets, this gradualist strategy helped fuel the explosion of state-backed investment and debt that is now a major vulnerability for the economy.

Finally, the plan was not a total failure in its attempt to reorient the growth model. The policies identified to support higher consumption in the 12<sup>th</sup> Plan were focused on better social service provision and a greater role for the service sector. Both are necessary to boost household income as a share of GDP, because services pay more in wages relative to output and social services reduce precautionary savings within households. Some policies in the 12<sup>th</sup> Plan, such as expanding value-added tax reform and pension coverage, will promote incremental progress.

### *Innovation*

The 12<sup>th</sup> FYP's efforts to increase the role of innovation in the economy have had mixed results. Policymakers at the national and local level seem almost exclusively focused on improving China's ability to develop advanced technologies and capture larger and more sophisticated segments of global manufacturing networks. Over time this would be an important source of growth, but, given China's level of development, the economy might benefit more from less glamorous policy initiatives that increase efficiency or the adoption of productivity enhancing technologies. Moreover, the specific shortcomings Chinese policymakers have identified—low R&D expenditure by firms, lack of marketable technologies from research institutes, insufficient financial resources for small technology firms, and the uneven performance of Chinese firms abroad—are reflections of broader failures of China's legal and institutional environment, which would be better addressed at their source. Finally, there is questionable economic benefit to investing huge amounts of money to produce domestic variants of technologies that other countries already offer. Less nationalistic innovation policies would have the same—or greater—economic value at a much lower cost and fewer distortions in the economy.

China's innovation strategy hasn't missed this entirely, and the 12<sup>th</sup> Five Year Plan and its associated policies have focused on supporting institutions, like intellectual property rights, changes to tax policy, and reforms to science and technology programs to improve incentives

to invest in marketable technologies. Nonetheless, Premier Wen revitalized the large industrial programs that his predecessor, Premier Zhu Rongji, had tried to curtail.

Beijing sought to boost “indigenous innovation” under the 11<sup>th</sup> Plan, including the contentious 2006 Medium- and Long-Term Science and Technology Development Plan, and redoubled support for a range of advanced manufacturing sectors, especially in the wake of the global financial crisis. The 12<sup>th</sup> Five Year Plans revitalized state support for strategic industries and technology programs in the form of the Strategic Emerging Industries.

More recent iterations of industrial and innovation policy in the 12<sup>th</sup> Five Year Plan have attempted to be more responsive to market forces by tweaking funding and program management mechanisms. But fundamentally, these programs still lead to significant state involvement in the economy, which exacerbates corruption, misallocates resources, and distorts the market in harmful ways—even when it produces successful Chinese companies or new technologies. The 11<sup>th</sup> and 12<sup>th</sup> FYPs channeled immense resources into new industries, such as solar and wind power, which massively expanded China’s global market share in these sectors. However, the exact same policies then fueled a boom-bust cycle that has had global ramifications during the 12<sup>th</sup> Plan period. One of the chief problems is that local governments, by design, use their control over key resources to supercharge the growth of priority sectors. Yet officials respond to political incentives rather than market signals, and may even expand their support for local firms when they run into trouble. This fundamentally upends normal market forces, and easily leads to overcapacity and excessive investment.

When plans incentivize policymakers to meet specific industrial or innovation targets, it is not surprising that they respond by producing superficial results, such as meaningless patents, ignore unwanted side effects, like excess capacity, or adopt aggressive protectionist policies, such as procurement regulations that exclude foreign firms from certain markets. These problems are, in part, an inherent outgrowth the planning system’s pathologies described above. But it is also just bad policy, and individual leaders bear responsibility for incentivizing the wrong kinds of government behavior.

### *Environmental Protection*

Environmental degradation in China is extremely severe, and continues to deteriorate in many important respects. However, the 11<sup>th</sup> and 12<sup>th</sup> Five Year Plans made preliminary progress limiting certain types of pollution and improving energy efficiency, which is a closely related issue given the importance of coal power in China. The 11<sup>th</sup> Plan introduced sulfur dioxide and chemical oxygen demand as restrictive targets integrated into party<sub>2</sub> evaluations, and the 12<sup>th</sup> Plan added ammonium nitrate, nitrogen oxide, and CO emissions. Both plans included energy intensity targets. The official mid-plan review concluded that China met or came close to its environmental targets in the 11<sup>th</sup> Plan and was on track to meet them again in the 12<sup>th</sup> Plan, with the exception of ammonium nitrate. Even more importantly, however, many localities failed to meet their individualized targets. The system is being used to apply pressure to local governments, which seems to be working.

From the start of the 11<sup>th</sup> and 12<sup>th</sup> Plan period, central and local government agencies initiated the planning and policymaking cycle described above, producing a range of diverse policies designed to improve efficiency, reduce emissions, and close outdated factories and power plants. However, because pollution and energy intensity targets were new and lacked supporting institutions, it took almost a decade for the party's high-powered incentive structures to come into full force. Basic monitoring equipment and measurement criteria took years to deploy during the 11<sup>th</sup> plan period, and are still incomplete today. It was only well into the 12<sup>th</sup> Plan that policymakers had a thorough understanding of China's baseline pollution conditions, a sufficient network of monitoring technologies installed in key regions, and specific criteria and procedures to evaluate the effectiveness of policy programs.

As new pollutants are added to the list of binding targets, there will be similar delays as the institutions and incentives catch up to the problem. This creates a long lag between initial policy programs—such as the air pollution action plan released halfway through the 12<sup>th</sup> Plan, which included PM 2.5 in its targets—and the mechanisms necessary to ensure their success. This leads to an initial period of weak or poorly coordinated enforcement, even for programs that are ultimately effective.

One interesting feature of the 11<sup>th</sup> and 12<sup>th</sup> Plans' environmental initiatives is that center-local bureaucratic authority relationships were essentially unchanged. Central-level policies were generally limited to providing technical guidance and funding, while local officials continued to manage their own programs, including the monitoring stations and pollution data that national officials rely upon. The main difference was that national-level policies were extremely specific about which monitoring technologies could be used, where they could be installed, and how the data would be transmitted to central officials. Additionally, the central government provided significant transfer payments to help offset associated costs for industry and local bureaucracies.

On the whole, the system seems to have worked, in part because Beijing relied on the strengths of the target system—setting small number of clear, measurable targets—and helped offset the costs of compliance. In other cases, such as early efforts to control energy efficiency in the 11<sup>th</sup> Plan, Beijing was less successful because it failed to provide appropriate policy tools and resources, and local officials could manipulate the statistics used to evaluate their progress. China is evidently becoming more skilled at enforcing environmental policy, but faces challenges in the future if, for example, the number of targets proliferates, making it hard for policymakers to focus their efforts, or if the source of emissions and pollution is outside of their jurisdictions.

### **Section III: The 13th Five Year Plan and the Reform Program**

In November 2013, roughly halfway through the 12<sup>th</sup> Plan period, the new Central Committee of the Communist Party met to forge a consensus economic reform strategy. The resulting plenum “Decision” outlined an extremely ambitious agenda, which would transform

the role of government in China's economy and society. If executed, it will mark a new era in China's reform period, contributing to a more sustainable and equitable growth trajectory.

Yet the plenum's core objectives are very similar to the party Guidelines issued ahead of the 12<sup>th</sup> Plan, almost exactly three years earlier. Beijing's strategic orientation—and even many of its core policy plans—did not change sharply with the Decision. (This is not surprising since it is a consensus party strategy, and all of the new national leaders, including President Xi and Premier Li, held prominent positions in the previous administration.) Instead, the reason the Third Plenum Decision was such a powerful signal is that it offered a credible strategy to address underlying structural problems that frustrated previous reform efforts. Indeed, its prescriptions reflect a clear assessment of the 12<sup>th</sup> Five Year Plan's strengths and weaknesses. 13<sup>th</sup> Plan will expand initiatives that have been successful, and attempt to correct efforts that failed.

#### **The Third Plenum: Assessing the Structural Challenges to Reform**

- Macroeconomic imbalances and China's unsustainable growth model stem from distorted factor markets—namely land, energy, natural resources, and labor—that artificially depress the price of resources.
- Overcapacity in industry and the weakness of small, innovative firms stem from excessive government involvement in the economy.
- Poor and enforcement of laws and regulations, unchecked government powers, and powerful state firms lead to corruption, unfair competition, a stunted service sector, and economy-wide inefficiencies.
- The distorted fiscal system creates social and regional inequality, incentivizes excessive investment, and makes local government's dependent on land sales.

#### **Addressing Structural Problems**

The leadership has repeatedly described current challenge as requiring “top-level design” due to the fact that China has entered a “deep water zone.” The long-standing practice of delegating incremental policy reform to local governments, embodied by the notion of “crossing a river by feeling the stones,” has reached its limits in several key dimensions. As described above, China's unbalanced fiscal system, distorted factor markets, and excessive government powers have become obstacles to long-term reform goals and are sometimes themselves the core source of economic problems.

Beijing recognizes this, and has recently initiated a series of reforms to address the root problems. Given the importance of these policy issues and the far-reaching effects of interrelated reform plans, this process must be handled centrally, with careful coordination and preparatory work prior to and during implementation. As a result, Beijing cannot delegate core responsibilities to lower levels of government, nor can it rely on decentralized experimentation to incrementally identify workable policy solutions—at least not to the extent that it normally does. Accordingly, the Third Plenum Decision called for a large new leading small group to bolster central-level policy coordination and execution, given the fact that demands on the central policy-making systems will be much greater.

#### 2012-2015 Structural Reform Initiatives

- Overhauling the fiscal system;
- Trimming and clarifying government powers;
- Relaxing controls over energy prices;
- Liberalizing the financial sector;
- Strengthening regulatory capacity;
- Reducing investment approvals;
- Improving equity of social services;
- Relaxing the hukou system;
- Preparing for incremental land reform; and
- Experimenting with SOE reform.

In this context, the Five Year Plan will not be the vehicle for many of the major structural reform initiatives in the current reform agenda—at least not initially. Instead, the Politburo Standing Committee and State Council will remain at the forefront, adjudicating a far greater number of individual policy decisions than they normally would.

However, the planning system will still play an important supporting role. The institutional demands of the

reform agenda are enormous, and the planning system will help coordinate resource allocation, the creation or expansion of regulatory bodies, the refinement of implementation plans once approved by Beijing, and, crucially, the assessment of policy effectiveness and the identification of new issues that need central attention.

#### *Areas of Continuity*

In areas where previous plans have been effective, the 13<sup>th</sup> Plan will continue to play a central role in enhancing and expanding existing policy initiatives. In particular, environmental protection policy will almost certainly build off the approaches used in the 11<sup>th</sup> and 12<sup>th</sup> Plan, expanding the scope of binding environmental targets to include new pollutants—most notably with PM 2.5, heavy metals, and soil and water pollution—and further enhancing the monitoring and evaluation systems needed to assess policy effectiveness and enforce political incentives. Other environmental infrastructure investment, such as waste treatment and water management, will also rely heavily on central and local plans, particularly in poorer regions that require central subsidies.

Targets for social service provision will also likely be included in the 13<sup>th</sup> Plan, which is closely related to ongoing hukou reform efforts and changes to the fiscal system, possibly including the pooling of various social welfare funds at a regional or even national level. Related sub-plans could help identify workable transition models as cities liberalize residency requirements. They could also help promote fiscal redistribution efforts, if, for example, they target provincial-level health insurance coverage rates according to certain standards of care.

Regional planning will also expand at a national and local level, with a focus on rebalancing the distribution of urban infrastructure investment, transportation networks, and resource- and pollution-intensive industries. Regional planning efforts will also be central for issues that span jurisdictions, like air and water pollution, where the causes and consequences of policy decisions are not contained within a single local government's borders. For example, the Beijing-Tianjin-Hebei air pollution initiative requires a coordinated supra-provincial approach that can implement policies at their source—e.g. Hebei—while measuring the effectiveness elsewhere—namely, Beijing. In particular, the planning system will be crucial for altering the associated political incentives—and compensating for the economic effects—of

shuttering industrial firms in Hebei to improve the air in Beijing, which is one of the main functions of the planning system.

The planning system will also continue to play a major role in other major national-level initiatives, such as science and technology research programs, defense- and security-related industrial development, and international initiatives, like the 21<sup>st</sup> Century Maritime Silk Road and Silk Road Economic Belt—China's new regional economic and diplomatic outreach effort. In most of these areas, the structure and sequence of the plan cycle will likely remain unchanged, even if the content evolves in new directions.

### *Planning for Market-oriented Reform*

One of the key questions for the 13<sup>th</sup> Plan is how it will use the decentralized planning system in policy areas where the objective is to reduce excessive government intervention. In particular, the sub-plans that deal with state-owned enterprises, regulatory reform, urbanization, improvements in the legal system, and industrial and innovation policy will have to walk a fine line to avoid endowing lower levels of government with new powers that could be counterproductive. This problem is particularly acute, because the delegation of implementation authority and program design would most naturally be given to the agencies whose powers Beijing wants to trim.

Central plans could, in theory, be used to define stringent parameters of appropriate market-friendly policy tools—such as the types of financial assistance available for technology programs, the metrics for state-owned enterprise reform, or performance criteria of regulators and judges—and then allow local agencies to manage plans and institutional reforms accordingly. Recent efforts under the current administration to improve tax policies and create market-oriented investment funds for strategic emerging industries, could be one early model. However, such programs are prone to abuse by local governments and economic ministries, who have a strong interest in retaining control over such initiatives— and funds. Additionally, when there are incentives to produce quick, measurable policy results, it is often more expeditious to intervene directly in the economy rather than fostering a market environment that will more effectively achieve the same goals over a longer period of time. This leads to the question of how Beijing can use its planning and cadre management system to produce high-quality governance, rather than specific, measurable outcomes.

### **The Challenge of Using the Planning System for Good Governance**

As Beijing pursues the regulatory, fiscal, and legal reforms outlined in the Third and Fourth Plenum Decisions—meant to formalize and constrain arbitrary local powers—it will necessarily alter the authority structures of local governments and central ministries. This will complicate China's long-standing approach to decentralized governance, which has relied on these same powers to implement party mandates—often with ad hoc, experimental approaches to new policies. If successful, officials will lose many of their powers to influence economic decisions in their districts and will be bound more closely to their formal authorities. The challenge for the reform program would be managing the sequence of change to ensure that new institutional and regulatory oversight of the economy mature as quickly as old powers are

eliminated. However it is much easier to reduce controls than it is to build effective, unbiased regulatory institutions.

Moreover, it is not clear that the planning system will be effective at promoting higher-quality social services and regulation. The mobilization of resources and creation of new agencies or institutions—which are indeed important steps—are easy to measure and evaluate. But the planning system has little to no ability to monitor the quality of subsequent regulatory performance or services, which constrains the party’s ability to incentivize good governance in a decentralized system. In some cases, such as healthcare, the crux of the problem is creating the right market incentives for hospitals and clinics to offer quality services, which can be managed through the iterative policy-making process of the planning system. In other cases, such as enforcement of the antimonopoly law or the protection of intellectual property rights, the problem is more complicated. Beijing must build and enhance relevant institutions, but then the challenge is inducing officials to provide efficient, unbiased enforcement of those regulations. Altering authority relationships can help—for example, by placing certain officials under higher-level party supervision, as with the central bank and military—but within limits.

Fundamentally, these dilemmas reflect questions about the CCP’s method of governance. In the near-term, many of China’s problems are so severe that the planning system can be effective by setting a general orientation, building necessary institutions, and making initial progress addressing the most pressing issues. However, in the longer-term, China must increasingly focus on improving the general quality of governance across a wide range of public services and regulatory functions. China’s policymaking systems—including the Five Year Plan—are good at mobilizing resources to attack discrete problems. But they will struggle to substitute for a political system that is more responsive to grass roots, low-level demands.



## PANEL I QUESTION AND ANSWER

VICE CHAIRMAN SHEA: Thank you very much.

I have two questions, one for Dr. Roach and then the second one for Mr. Melton. I don't know whether I'll get to Mr. Melton's question. But, Dr. Roach, I read your book *Unbalanced*, and I thought it was a great book. I mean you make the point that China needs to save more and consume less and the United States simultaneously needs to--

DR. ROACH: The other way around.

VICE CHAIRMAN SHEA: Or needs--yeah--China needs to spend more and save less and the United States needs to save more and consume less, and I'd say produce more, as well, and it's within the U.S.' own power. U.S. should be focused on U.S. domestic policy to promote its own objectives. So I agree with that.

When I'm reading your written testimony, you lose me when you sort of downplay issues like cyber hacking. You call it handwringing, and you say that the Chinese don't understand the difference between what we do and what they do, and I would submit they understand full well, but the benefits are so great and the costs are so negligible that they desire to continue.

And then you call what's going on in the East China Sea and the South China Sea flare-ups when, in fact, this is a fundamental challenge to U.S. position in the region, and those flare-ups are impinging on territorial interests of U.S. treaty allies.

So you say these issues should be taken in context, but you don't explain what the context is. So we're the U.S. Economic and Security Review Commission, and I'm wondering how do you think as a man who's an economics expert, how do you integrate the security issues into your thinking about the U.S. relationship with China? What is the context, I guess, is the question I'm asking?

DR. ROACH: Yes. It's a great question and I'll do my best to try to be responsive. I think the United States needs, first and foremost, to be explicit and clear in defining what its core security concerns are in Asia and, in particular, to a rising China. We're elliptical in doing that.

We talk about an Asian pivot. What is an Asian pivot? The Asian pivot was outlined as a redirection of our force projections after the successful conclusion of a couple of tragic wars elsewhere in nearby regions. It's not clear that that key premise has actually been achieved in a way that enables us to now pivot in the way that we're talking about.

Certainly the perimeter issues in the East China Sea and the South China Sea are disconcerting, especially the satellite imagery that has been published in recent weeks about land reclamation in the Spratly Island area, and this worries me. I'm not an expert in this, and I leave that to you to consult with the experts on what this means for China and for allies in the region that we do have treaty obligations with.

What we do know, and I guess my basic response, and I'm avoiding the cyber hacking issue for the second, but I'll come back to that if you want--

VICE CHAIRMAN SHEA: Sure.

DR. ROACH: --is that China's outward intentions, which for 25 years have been driven by the 24 character strategy of Deng Xiaoping, "hide your strengths and bide your time," are now being supplanted by a more assertive policy espoused by Xi Jinping in the form of the China Dream, which speaks of rejuvenation. Rejuvenation is very different than hide your strengths and bide your time.

And we need clarity from them, and a state visit by President Xi coming up in September of next year should be used as an opportunity to get greater clarity from the leader of China on

what "the dream" means to defining the context that you've asked me to comment on.

But the core of my testimony is to talk about the shifting economic model, which occurs not in a vacuum but in the context of these issues that you correctly raise, and we need to understand the economic structure as it is occurring in that broader context. It's often hard to draw the line between economics and security issues, which is I guess why you have the ampersand in the name of this Commission.

VICE CHAIRMAN SHEA: Exactly. Right. Right. Well, thank you very much. I appreciate that.

Oh, I'll ask Mr. Melton if I have time. I'm a little over. But I thought the written testimony was excellent, and, Mr. Melton, I found the last paragraph of your testimony sort of what I call artful obfuscation, but I'm asking you--

HEARING CO-CHAIR WESSEL: Diplomatic.

VICE CHAIRMAN SHEA: I'm trying to find it here. Excuse me. Yeah, you write these dilemmas--this is your last paragraph--these dilemmas reflect questions about the CCP's method of governance. In the near-term, many of China's problems are so severe that the planning system can be effective by setting a general orientation and making initial progress. However, in the longer term, as improving the quality of Chinese governance becomes the core objective, China's system of government may not be able to deliver.

So are you saying that the objectives that the Chinese government seeks to achieve will not be able to achieve them absent a change in the style of government? What were you trying to say there? It's very artful.

MR. MELTON: Yeah, I was trying to artfully obfuscate so you've called me on it because it's a really difficult question. I mean honestly this is something that I think China watchers are debating continuously and have been for decades actually.

The point I was trying to make is that the planning system and the Party's policymaking management system and political system are particularly good at discrete, concrete, measurable objectives, but they're pretty bad at balancing complex and nuanced priorities and tradeoffs. So, whereas, in a democracy, you can optimize a relatively complex function of competing priorities, when you have a top-down quota, or target-based management system, it doesn't leave a lot of room for nuance or adaptability, and, in particular, you need to change the political system and political evaluation criteria in long-time cycles.

So it doesn't allow for a lot of adaptation and responsiveness. So, in addition, things that are more amorphous, like providing higher quality legal institutions, or so, for example, one of the major functions of the current reform agenda is to transform the role of the government and provide things like sort of better or relatively unbiased enforcement of things like competition law, and so we have the new Anti-Monopoly Law, which is part of a much broader effort to provide sort of contemporaneous ongoing oversight of industries rather than using heavy-handed controls over say investment policy that sort of act as gates.

So rather than preventing people from coming in and then controlling their personnel, you would have an ongoing regulatory system that provides legal services the way any other country does. That kind of thing is incredibly difficult for the Party to manage at a distance. You can't just set a criteria and say, hey, we're going to evaluate you based on whether or not you have good legal performance or your police system is fair.

I mean these are not things that are easily measured from a distance, and all the people who know if they're doing a good job or a bad job are the ones who are responsible for providing the data to their superiors about that, about their performance. So it's very difficult.

I mean I don't know how would the President evaluate the quality of the State Department's work? It's only if something really bad goes wrong that gets into the news and then it feeds back up to the top. I mean it's amorphous and very difficult to evaluate, whereas very concrete things like fixing pollution in a river are easily achieved.

So I mean again this is the same tension. I think that the point would be that there are so many horrible problems facing the country right now that are so obvious that they can probably get by for another five or maybe ten years using essentially exactly the same system that they have now with some tweaks, but in 20 years or maybe sooner, in places like Shanghai or parts of Beijing where you're not facing a crisis everyday, but you're just trying to improve the general quality of government, I don't know that the system is really geared towards that. And they're going to have to increasingly integrate social groups or industry groups into decision-making processes, and they're experimenting with doing that, but it's essentially a voluntary process; right.

They have to say I want you to provide information to me, and I will decide if I like it, and if the problem is my behavior in the first place, I may not do it. So I don't think we know yet if they're going to be able to pull that off.

VICE CHAIRMAN SHEA: Thank you.

HEARING CO-CHAIR CLEVELAND: Mr. Wessel.

HEARING CO-CHAIR WESSEL: Thank you all for being here. It is fascinating and I appreciate all the work that went into the testimony, as well as your experience, and, Mr. Melton, I am thrilled that while you're representing yourself, that a government employee is looking carefully at China's 12th Five-Year Plan, and your testimony was very thorough.

I was a little troubled by your comment, although I agree with it, when you said that you're not sure whether you would know what the views of our government are, and I think there are a lot of people who share that concern, which brings me to a question that I have for each of you. I appreciate and admire what China is doing with its five-year plans, and the fact that they have a holistic view of what the changes are that are necessary in their economy from looking at urbanization to health care and all the various other things.

They've got a Five-Year Plan. You know I think we have a two-year plan, and our two-year plan is what's the next election is going to bear, and how do we have one or two deliverables rather than a long-term plan with goals in mind, maybe different goals.

Congressional views are not only to look at, how China deals with its own problems, but how we deal with the challenges that come from that. So I'd like each of you to look at the 12th Five-Year Plan and the 13th Five-Year Plan from domestic perspectives.

Mr. Consonery, you've said, for example, that you think--correct me if I'm wrong--that the opportunity for FDI in China will improve. If you're a domestic worker here, that's not necessarily good news in the sense that, as I understand it, a substantial portion of China's exports come from foreign invested enterprises, that they would prefer that Honeywell, whatever the company is, invest here and export to China.

So FDI in China, and I know it's not a zero sum game. I know that you'll have the propensity to utilize U.S. inputs, et cetera, all of that. But step back for a second and look at the 12th Five-Year Plan from the congressional point of view, or the domestic worker, how would you like your government to be responding? What do you think the challenges are? What do you think are the opportunities? Are they directly aligned with how you testified, or do you think from a domestic perspective we need to address certain issues?

Mr. Consonery, you want to start?

MR. CONSONERY: Yeah, sure. Thank you for the question, Chairman, and I think I tried to touch on this a little bit in the recommendations, but I can maybe expand just a bit on some of those views.

I mean I do think I agree with the thrust of your comment that my view is that it's very much not a zero sum game in terms of bilateral trade and investment, and that I think particularly what we have to appreciate is that while we are considering these potential liberalizations in the trading relationship with China, the Chinese economy itself is also undergoing very fundamental and dynamic changes.

So this old model of investment-oriented, heavy manufacturing economic growth clearly is something that the government has designated as the old dying model of growth that they do want to move away from, and I expect that particularly as we look at the expectations we have for much more significant financial reform in China over the next few years that the overall role for consumption and services-oriented growth in the Chinese economy will grow very dramatically.

So the outlook in terms of exports from the United States into China, along those lines, I think will commensurately increase as a result of that.

HEARING CO-CHAIR WESSEL: In terms of financial and other services?

MR. CONSONERY: Right, exactly. Yeah. There will be--

HEARING CO-CHAIR WESSEL: Logistics, all the various--yes. Okay.

MR. CONSONERY: --opportunities. Yeah, absolutely. And I do think at the same time when you're looking from the U.S. economic perspective, and that's why I tried to touch on this issue of the guidelines around and the parameters around investment from China into the United States, no one is advocating that we just open the doors for SOEs to come dominate our strategic industries. Of course not; right.

But I do think it's the case that the opacity around the existing regulations, or lack thereof, do potentially dissuade Chinese private companies from coming and investing in the U.S. in sectors that we would otherwise encourage and that would create jobs here in the U.S., and there are some recent examples of that.

So the question is at the end of the day if we, unless we're assuming that we want to just go full isolationist and try to do this on our own without participating with China on these economic terms, then we have to find some ways to guide the bilateral investment in ways that are more favorable for our companies and for our citizens.

So I think the BIT could be an important factor there, but as I try to lay out, it has to be shaped in the right way.

HEARING CO-CHAIR WESSEL: Do you--and the rest of you hopefully, we'll have a second round--one of the challenges we've had, and in terms of looking at research for the Commission, is to try and understand better how Chinese companies are operating in the U.S. market. You talked about the BIT and CFIUS, et cetera. It's a pretty opaque issue.

Commissioner Slane and myself have talked about the Smithfield transaction, for example, several years ago without understanding the cost of capital, the question about pricing and sensitivity to profit maximization, et cetera. Chinese firms don't have the same profit maximization pressures that firms that are traded on our exchanges might have.

Does that mean that therefore when Shuanghui after their procurement buys pork, they may be pressing down on prices because they have less of a profit motive, and everyone else in the food chain--no pun intended--has to do as well? We've been trying to get a more transparent view into how these entities are operating. Have you seen any good sources that allow you to do

that?

MR. CONSONERY: Yeah. Just a few points here. I do think, I very much agree with you in this concern, and this speaks to this issue about whether and to what extent policies can be shaped in ways that address the differentiation between the private companies and the state-owned companies.

And I do think within the CFIUS process, and maybe even within the BIT process, there can be increased expectations about ownership transparency from the Chinese side surrounding these corporate entities, and those can be key criterion incorporated in these plans so that is a direct recommendation that I address as well, but I'll defer to my co-testifiers here as well on this.

HEARING CO-CHAIR WESSEL: Do either of you have a good vision into what some of these companies are doing?

DR. ROACH: Well, I would--

HEARING CO-CHAIR WESSEL: Quickly because--I apologize.

DR. ROACH: --just note that in terms of the transaction that you just raise, the Shuanghui-Smithfield, to the best of my understanding, is a bolt-on acquisition that has not altered the strategy of Smithfield domestically in the United States or pork prices worldwide. The advantage for the parent company was to learn from Smithfields. I think the efficiency disparities between pork production in China versus the U.S., are extraordinary. So they learn from technology, and they also learn a lot about food safety, which, of course, is a major issue in China.

Your broader question, though, in terms of the domestic response is the right question to ask with respect to China's structural transformation. I addressed that explicitly in my testimony, and I tried to summarize it briefly at the end of my opening remarks. Our best response to China's structural transformation is to get our own house in order from an economic point of view. We need to focus on domestic economic strategy in the U.S.

I think you're being generous in saying we have two two-year plans in the United States. I wish we did. We don't plan, period. Our planning is done by the invisible hand, which is watching over us right now. In this part of the country -- right here on Capitol Hill, the invisible hand has been far too invisible for far too long. It's lost its ability to really function effectively in governing our economy.

Saving, competitiveness, and learning to support growth on our terms rather than rely on others to support our growth is not the right way to go. We need to address that urgently. People like me and others have been saying this for years, and it just goes in one ear and out the other, not, of course, with illustrious commissioners like you, but with your overseers--

HEARING CO-CHAIR WESSEL: Thank you.

DR. ROACH: --who sit in elected positions in the hallowed halls of Congress.

HEARING CO-CHAIR WESSEL: Well, on the next round I'll have some more questions. Thank you.

HEARING CO-CHAIR CLEVELAND: Between the hallowed halls and up here, I'm impressed with your spirituality.

I'm interested in the dynamic between Beijing and the provinces or municipalities and what the implications are in terms of confidence in the objectives and success of the next five-year process.

I liked your line, Mr. Melton, about firing and forgetting on these tasks that go out, and, Mr. Consonery, your report that you gave the Commission on mapping China's regional

economies, you note that in January, Beijing mandated that the provinces report outstanding debt and cap it, which prompted local officials to inflate the amount so that they could continue with funding of their local priorities.

How do you see this dynamic playing out? Are there provinces that will do better than others? And I'm particularly interested in the question of bonds and local fundraising and whether or not there's the potential to sort of flip the iceberg, and you'll start seeing lending--I know when I was at the Bank, we talked about subsovereign lending. I'm wondering if there is a risk there? I know this is a long complicated question. But is there a risk there that we're not paying sufficient attention to at the provincial level when it comes to debt and lending, and given the fire and forget conceptual framework that you laid out, Mr. Melton, is it an even greater risk?

So whoever would like to take on that iceberg.

MR. MELTON: I'll start and then I'll leave the harder parts to Nick. Yeah, I'm glad you focused on this. I think, and I've been trying to argue for a long time now, that the fiscal system in China is probably the most important issue that we should all be paying attention to because it underpins all the structural incentives of all the most important parts of the government.

And so just as quick side note, one of the reasons I'm actually fairly optimistic about the prospects of the Third Plenum is precisely because they started with the fiscal system, and so this move to replace informal debt with formal debt, with formal bonds, is about bringing these things on to the balance sheet and making sure that there's enough transparency and clarity about responsibilities to prevent a financial crisis.

We can discuss the risks of that later if you want more. So, in short, yes, I think there are risks associated with the local debt. So basically what's going on is that Beijing has authorized local governments to issue their own bonds, which is a really revolutionary change in institutional and legal authorities, although we all know that they've been issuing, they've been borrowing enormously for decades now, but particularly in the last three or four years through informal measures.

So I think it's hard to say that they're going to be more reckless than they've been in the past so, if anything, there's a modest improvement in their transparency of this lending, and so I'm not worried from that perspective.

I think one really important issue is essentially political, and Finance Minister Lou Jiwei has addressed this before in public, is that you can't have a functioning bond system for local governments if you don't have transparency about their balance sheets.

So you end up being forced into one of two positions--actually a third position, which leads to a capsizing iceberg--which is that either Beijing essentially authorizes and backs all of your debt. Okay. So basically what you have is subnational borrowing, but it's just Beijing, and you get to write your name on the bond, but it doesn't really matter. And so you end up with significantly empowering the Ministry of Finance or possibly the National Development and Reform Commission or other central bureaucrats, who basically get to dictate what your fiscal system is going to look like, what your revenue and investment options are.

Or you have to have very significant degree of transparency in order for a bond market to function. I mean we're nowhere near the point now where a bank in China, much less institutional investors or regular people, can decide whether or not, Wuxi's latest debt issue is safe given all of the implicit debts that they have or implicit obligations they have to back their firms. And until you get that, it's not going to function.

And that would require an absolutely remarkable change in the political system in China. They've been surprisingly clear about how they want to increase budget transparency. So one of

the biggest things that's supposed to happen in 2015 is an increase in local level reporting about what their budgets are, and then, at some point, in theory, a disclosure of what their overall assets are.

This isn't the personal assets that touch on corruption and how many apartments you own, but just in terms of, how many billions of dollars do you have in terms of SOEs or land or what not in your balance sheet, and so this is going to take a really long time before it starts to function.

The third option is that they muddle through, and you don't have market incentives protecting investors or preventing excessive issuance of debt, but you don't have a strong central hand. I think that that's pretty unlikely. Beijing is terrified of this. So I'm not particularly worried about that.

HEARING CO-CHAIR CLEVELAND: Thank you. Mr. Consonery.

MR. CONSONERY: Sure. Thank you very much for the questions.

I'll just make two quick comments on these two issues, and they both surround this idea that in neither area is this story static right now. On this question about governance and capability at the local levels and also on the government's response to potential financial crises in terms of local government debt, what we actually see in both areas is that at the central level, the administration has significant plans and policies meant to address these concerns.

So that's why I say it's actually a very dynamic, not static, process; right. On the governance issue, it's actually amazing--I think this is the longest conversation I've had about China in two years where we haven't yet talked about the implications of anti-corruption, and what that means in terms of policy implementation capability, changing incentive structures within the bureaucracy.

Certainly there are many different components of the government's aspirations and goals with anti-corruption, but clearly one of the most direct and tangible ones has been--and this follows from the Third Plenum commitments that they've made to even empower the anti-corruption investigative body in the Party even further--is that this administration is thinking about using that kind of a tool to enforce better compliance at local levels with their reform efforts. So that is one sort of very dynamic and interesting issue right now. We can talk more about that.

Very quickly, on the financial issue, I do think many of our clients in the U.S. financial markets, incredibly concerned about the ramifications in terms of risks regarding the government's ability or inability to manage through the massive problem that they've created for themselves in terms of local government insolvencies connected to stimulus in response to the financial crisis.

But, again, a dynamic story. I mean what we actually see is that Beijing--and this is my political view--actually has a very active political program to try to manage through these risks. They set up a very aggressive debt swap program last month that has basically enabled them to manage through this year, and the sense that there's acute risk surrounding this story in the markets has really come off in a very sizable way.

I don't think they're flat-footed about this. I think they're clearly looking at the local government balance sheets, mandating more transparency. There are risks there, but, again, I think the government actually has a very aggressive posture and is more likely than not to be able to manage through it. So just some quick comments there.

HEARING CO-CHAIR CLEVELAND: You speak fast. I'm not sure the comments were quick.

MR. CONSONERY: Sorry.

HEARING CO-CHAIR CLEVELAND: No, they were very, very thoughtful. I appreciate it, and I hope to come back in a second round.

Commissioner Tobin.

COMMISSIONER TOBIN: Thank you and thank you, all, for your testimony.

We've been focusing this year increasingly on China and Central Asia, and as I was reading the testimony here, I know, Dr. Roach, you spoke about China paying more attention to its role as a global leader. So I wondered if you, in particular, and the others, too, could comment on how China's investment in the New Silk Road is proceeding, how exactly is that going to serve the current and future five-year plans?

Will it offset what you talked about, Mr. Melton, the cascading oversupply? Can they divert some of that energy to that Silk Road?

So if each of you would paint a picture on the New Silk Road, Central Asia, in particular, and how that connects to the five-year plan we have and going forward?

DR. ROACH: Well, it sort of gets to the core strategic goals of China. The plans are a means to the end. They're not the end. The plans, whether they're 12th or 13th or Third Plenum, I think are directed at this broad goal of building a moderately well off, prosperous society, and a core piece of that is to look at regional integration and global integration as an integral building block in that aspirational objective.

China believes that, and I think this is a reasonable presumption to operate under. I would add that regional integration and the infrastructure required to achieve that, could certainly qualify as an important source of growth for the region that would spill over in providing important new sources of growth for China, its companies, and most importantly its people.

And so whether it is the very contentious AIIB, the BRICS Bank, the commitment recently unveiled in the Chinese press to begin to deploy over \$60 billion of foreign exchange reserves into funding its domestic policy banks to help enable that objective--here I'm talking about the China Development Bank and the Export Import Bank in China—China is on the move in its economic outreach. I would be derelict in my responsibility if, at the same time, I didn't note that we're talking about taking the funding of our own Export Import Bank in America down to zero, and they're going the other way. Our approach stands in sharp contrasts to these important parts of this outward-looking objective of China to utilize a regional integration strategy as a source of economic growth.

And they have the wherewithal to do that because of their surplus saving. Again getting back to the points that were addressed earlier, we don't save so we don't have the wherewithal to do that. They save and they do, and that, again, underscores the big disparity between their ability to execute regional and global integration strategies and our inability to do that because of our failure to get our own economic house in order.

COMMISSIONER TOBIN: Thank you.

Mr. Melton and Consonery.

MR. MELTON: Sure. Thank you.

The One Belt One Road initiative I think is going to be extremely important for a very long time to come. It seems to be sort of the centerpiece of China's regional diplomacy, which is going to rely very heavily on economic engagement. It definitely and very clearly is meant to serve strategic objectives and have political implications, but I would say that, at least, in intention, it seems to be meant to move with a light touch.

I think the idea is that if economic engagement goes well, if China can help develop the



regional economies, this will lead to stability and positive feelings, and that the political harvest will come later. I don't think it's meant to be crude quid pro quos of, you know, if you vote for this, I will give you a bridge or whatever, although it very well could devolve into that.

The planning system is going to be most useful for this project in allocating resources and creating the funding institutions, in particular that are necessary to sustain it.

The \$62 billion, much of which go into the policy banks, much of which will be used for the Silk Road, but not entirely, which is important to note, plus the \$50 billion of the Asia Infrastructure Investment Bank, plus the 40 billion of the New Silk Road Fund that's going to be managed by the Central Bank, are very, very sizable resources, and some of the time frames on this lending are pretty remarkable and probably exceed what Central and Southeast Asia can absorb, frankly.

So there are many, many problems left to identify. I will note two things. One is that it is possible that China could take some of the pressure off of its heavy industries, in particular things like steel and heavy manufacturing, and I haven't looked very carefully at the numbers, but I can't imagine that they're going to be able to have a significant impact at a macroeconomic level. So it will take some of the pressure off, but that's it.

The second thing is that increasing your exports to these regions is not necessarily a way to make friends so China is competing with a lot of these countries. So in contrast to its relationship with the United States, where we have fairly complementary economic structures, China's a direct rival in manufacturing to Southeast Asia. So to the extent that it alleviates pressure, it might actually just alienate people and exacerbate unemployment.

The second thing is that despite the sort of public perceptions, Chinese overseas investment is actually fairly market oriented within a very distorted system that has sort of perverse incentives. So most of these companies, the vast majority of these companies, actually are looking to make money, and they don't give money away.

So they're going to be cutting deals to trade mines or access to other resources in exchange for building highways and trains and what not. So it will be interesting to watch, I guess, and I don't know that it will necessarily have the diplomatic effects that they intend.

COMMISSIONER TOBIN: And if we have a second round, I may come back to a question to that.

MR. MELTON: Sure.

COMMISSIONER TOBIN: Nick.

MR. CONSONERY: Sure. Thank you for the question, Commissioner, and just very quick comment from me on this. I mean I think I overall have a little bit more of a cynical view on One Belt One Road. I think that the government has been opportunistic in terms of the realities of their foreign exchange reserves and needing to basically find something to do with those assets.

I think the strategy itself has been very cart before the horse. I think they initially were talking about a One Belt initiative, and apparently the eastern coast provinces protested that they didn't have their own initiatives, and then it was a One Belt One Road initiative. And so it seems like a hodgepodge coming together of a random couple of different initiatives.

And I think at the end of the day, the reason--like what we see right now is that throughout the bureaucracy, many of the SOEs are lining up to be aligned behind this One Belt One Road initiative, but I actually think a big part of the reason for that is because anti-corruption has created such a culture of fear and aversion in the bureaucracy that absent these areas where the government has clear stated policy goals, no companies can act, and ministries

and policymaking is very constrained by that reality.

So One Belt and One Road, its apparent emphasis in the government is overemphasized by these fundamental realities that force people to focus on what the central administration has already approved. So just some quick comments.

COMMISSIONER TOBIN: Thank you.

HEARING CO-CHAIR CLEVELAND: Mr. Melton, so far you're winning the lines of the day with your "fairly market-oriented within a distorted system with perverse incentives." Between that and "fire and forget," I'm impressed.

So Commissioner Slane.

COMMISSIONER SLANE: Dr. Roach, the first time I met you eight years ago, I walked into your office in Hong Kong, and the first thing you said to me was our country is in trouble, which was exactly how I felt. Given the profound change that's going on in China today, I'm wondering if you still feel that way, if you're worried about our \$18 trillion debt, and the effect that this change is going to have on long-term interest rates and what your thoughts are today?

DR. ROACH: So by higher math, that means we met in 2007. That was a few--

COMMISSIONER SLANE: 2008. Yeah. I think it was 2008.

DR. ROACH: Well, those were not the most propitious moments to extol the virtues of America's brilliant powerful economy. So I stand by my observations at the time. We went through the mother of all crises, the worst recession since the 1930s, and despite all the celebrations of America being back, we remain in the midst of the worst economic recovery we've ever had.

The numbers are very clear. I mean the recovery has averaged 2.3 percent GDP growth since we troughed out in 2009, and that's two points below the historic norm of a 4.3 percent recovery. The unemployment rate has come down, but we can't celebrate the miracles of a recovery that is generating such paltry gains in output, even though it's employing more workers -- and presumably doing so on a lower productivity growth trajectory than has been the case in the past.

And that just gets me to the key point that I've emphasized a couple times earlier. We need to figure out how to grow again. If we can put in place domestic strategies that enable us to grow again, then I'll feel much better about our economy. I come back to savings and competitiveness, which are the points I stress in my written testimony.

If we can save more and reinvest that saving in human capital, in infrastructure, and in physical capital, we will then build a more competitive U.S. economy that will enable us to be much more effective in tapping newly emerging markets in China and anywhere else around the world.

China is going to expand domestic demand -- consumption and services. We've all talked about that today. That's a huge opportunity provided we can bargain effectively for market access. The BIT that we've talked about is a key piece of that, and I might add parenthetically it's too darn bad that we've chosen to do TPP without China because this would be another way for us to be much more effective in trying to compete for market share in the world, what will soon be the world's largest markets.

So it's about America's growth strategy, and right now, six years after the end of the worst crisis, we don't have a strategy, and we need to think about what that strategy would look like to enable us to both be more optimistic about prospects for the U.S. economy, in my opinion.

COMMISSIONER SLANE: Mr. Consonery, did you have any thoughts?

MR. CONSONERY: I just quickly would say on the TPP that I think just a little bit of a disagreement with Professor Roach, that I think that the exclusion up till now of China from the TPP process much more derived from decisions made in Beijing than decisions in Washington, and that were China to have a different orientation and willingness to actually have meaningful conversations about industrial policy in a number of other areas surrounding the way their financial markets operate, then an inclusion of China in that process would have been much more likely.

And I actually think moving forward without China now is advantageous because it further motivates Beijing to pursue the kinds of reforms that ultimately will enable them to participate in the process. So I actually look at that longer term in a more positive direction, and I do think China will see significant motivation to participate down the line. So just a quick comment there.

COMMISSIONER SLANE: Thank you.

HEARING CO-CHAIR CLEVELAND: Commissioner Reinsch.

CHAIRMAN REINSCH: I only have six seconds left.

[Laughter.]

CHAIRMAN REINSCH: For what it's worth, I think the last comment by Mr. Consonery was exactly right. I think it's convenient to have the elephant in the room but not at the table because we can set the standards, and I think you're right, they'll come in ultimately, but when they come in, they'll have a higher standard to meet than they would if they were negotiating it right now.

But that's not what I wanted to ask about. Mr. Melton, I want to go back to a couple of things you said in your testimony and pursue one of Commissioner Cleveland's questions, which because it was a long complicated question, you cleverly avoided answering part of it, which was to see if you could make some comments about regional or provincial or local differences in the sense that your point about the degree of independence, if you will, that the localities are granted in administering all these processes provides an opportunity for some people to shine. A lot of your comments have focused on the people that don't shine and the way they inflate the numbers and do various things to get around the mandates in order to avoid retribution.

Can you cite some examples of brilliant provincial leaders who have done the right thing or large municipalities that have managed in this system successfully?

MR. MELTON: Not off the top of my head and not with specifics, I'm afraid. But--

CHAIRMAN REINSCH: I mean are there none or is your--

MR. MELTON: Yeah, no, no, no. No, there are a great number actually. NGOs that work in China, I mean it's a sensitive place, and it's difficult for international NGOs to work there. But people I know that are working on things, ranging from domestic violence to pollution efforts to legal reforms, to even the protection of labor and promotion of unions, have found remarkable diversity in terms of the willingness of local governments, usually at the very lowest levels of districts within cities, to be creative and collaborative and to try to find better policy solutions.

And so you have situations where manufacturing centers are actually trying to find ways to reform the union system to ensure that labor disputes don't happen in the first place because the official union is so ineffective and easily controlled. You have efforts to significantly improve the legal system. When these trials for things like the new IPR courts come up, usually what happens in some sense is that Beijing offers a degree of policy space and then people have to sign up and put forth their own resources to volunteer.

So there is enormous amount of local initiative, and many times they do really good things that then translates into national policy if successful.

Part of the problem, though, is that it's difficult because rotations are fairly formalized and people move on and are intentionally moved out of their districts into other places. People have found that even really fairly successful democratic experiments at a very local level or changes in government or things like that have a tendency to shrivel up and die after that leader has left unless it is formalized and sort of subsumed within a larger Party process.

And particularly for things that happen at the grass-roots level, unless it's a very top level central priority as well, that leap is often too hard to make so the system can break down.

CHAIRMAN REINSCH: Are there things the U.S. government or Americans can do to encourage the good parts of the process you're talking about or is this something we just observe and comment on?

MR. MELTON: I think so. I think that one of my frustrations, and maybe this actually leads indirectly into a recommendation for Congress, is that I don't think we have enough resources as a country dedicated to understanding the variety of policy in China.

I mean we clearly spend a lot of money and have a lot of people looking at the Chinese economy and China issues, but not relative to its size and its GDP and its complexity and diversity. If we talked about Europe the way we talk about China regularly, and I'm very guilty of this, we'd be laughed out of the room appropriately.

So I think that to the extent that we can dedicate more resources --and things like the Center for Naval Analysis and RAND spend enormous amounts of money understanding those institutions and processes by which the military or the intelligence services are managed--if we spent a fraction of that trying to understand the differences in the way legal institutions are run across the country, I think we would be in a lot better position to respond to that variety.

I think right now for U.S. companies investing in China, for example, it's relatively difficult although they certainly have a strong capability because of people like the Eurasia Group to understand where the differences are and where there might be policy advantages. And because it's difficult for us to respond to that variation, we don't have a robust reward system. You know it's not the case that a mid-tier city in Guangdong can pioneer legal institutions and attract significantly more investment yet.

And so I think that to the extent that we can add information and transparency through better research and reports and actually things like this, like the reports that the Commission produces, I think that we can help enhance that process.

CHAIRMAN REINSCH: Do either of the other witnesses--

DR. ROACH: Can I just add one quick thing?

CHAIRMAN REINSCH: Yes, please do.

DR. ROACH: I would take issue with your comment that there are no good provincial leaders in China. One name--

CHAIRMAN REINSCH: My comment or his comment?

DR. ROACH: I thought you said you want--you didn't know if there were any good provincial leaders in China; right?

CHAIRMAN REINSCH: I'm not saying there aren't any. I'm just trying to find out if there are any.

DR. ROACH: I think there are. There are plenty of them. They have, I think, a pretty good system. They have some bad ones, but I would give you one name, the governor of Shandong Province, Guo Shuqing. Guo is an excellent, highly skilled macro policymaker. I'd

also point out that Xi Jinping was also a very effective provincial leader as well, and China has a long history, I think, of cultivating excellence in its provincial leadership structure. Oftentimes that's where the senior central government leaders come from.

CHAIRMAN REINSCH: Mr. Consonery, do you want to comment too? Okay. Thank you.

HEARING CO-CHAIR CLEVELAND: Did you say Guangdong?

CHAIRMAN REINSCH: Shandong.

DR. ROACH: Shandong Province.

HEARING CO-CHAIR CLEVELAND: I'm just looking at Mr. Consonery's report on regional economies, and they had a 8.7 percent GDP in 2014 so they're doing something right.

MR. CONSONERY: Could I just add on that since you mentioned that? And thank you for mentioning it. It is a relative point because Shandong actually, Guo Shuqing is assumed to potentially take over the helm of the PBOC. Shandong has the lowest level, almost the lowest level of outstanding debt of any province in the country today and is actually leading the effort behind financial reform and fiscal reform in terms of bond issuance. So that is actually a very interesting regional story.

HEARING CO-CHAIR CLEVELAND: Commissioner Goodwin.

COMMISSIONER GOODWIN: Thank you and thank you, gentlemen, for your time this morning.

I'd like to continue this conversation about the dynamic between the central government, the five-year plan, and the provincial governments, but perhaps from a more political context, and I'd like you all to share with us some insight into those instances in which the goals and indeed mandates of the five-year plan conflict with the political goals of the provincial leaders and the concerns of the local populace.

How are those concerns and tensions and conflicts addressed, discussed, and resolved, starting first I suppose with the non-binding objective such as growth figures? And the question is for the panel.

MR. CONSONERY: Thank you very much for the question. I can take a first crack at it and defer to my co-testifiers here.

But I do think the question you asked is really at the heart of the fundamental challenge that the Chinese government is facing right now, which is that they clearly have arrived, as many emerging markets before them have, at the turning point where it's not simply enough for the government to deliver economic growth and job creation to actually address the demands of the population.

That what we see increasingly across the board in China is that a growing middle class is putting a fundamentally different set of demands on the government, right, about things like quality of life, access to education and health care, environmental degradation, the ability to drink clean water and breathe clean air. These are the core issues that the government increasingly recognizes that they need to address.

So where you get this sort of rub at the local levels today is that clearly the central government has recognized, and this is embodied in the five-year planning process, that the economy does need to reorient in ways that are commensurate with addressing those basic goals; right.

Heavy manufacturing, resource-intensive activity needs to be moved away from very dramatically in many instances and the economy needs to shift in very fundamental ways. The problem is, and this is what we see going on in China right now, is that by definition, that

transition is going to involve significant unemployment pressures.

And the question that we all face as China analysts today looking at the story is basically what's the government's actual tolerance to navigate an environment where unemployment becomes a more meaningful reality, and what are the red lines there, and we're seeing that very much right now today with the seven percent growth target, the government considering more aggressive monetary policies to basically boost growth in ways that I think we have to have an honest assessment are potentially going to be contradictory to the overall reform process.

So I think, just to conclude these thoughts, that what we do see under this administration, the Xi administration, is a relative empowerment and strengthening of the central government's initiatives vis-a-vis the local governments. So that using anti-corruption, empowerment of that body, potentially empowerment of the judiciary, not in an autonomous way but as a tool to enforce compliance at local levels, and increasingly we will see policies at local levels being implemented that are more commensurate with the shift in growth than they are with this old more employment-intensive, in some areas, model, and I'm sure some of my colleagues have interesting thoughts on this issue as well and have written about it.

DR. ROACH: Yes, this is a point where I must, with all due respect, take considerable issue with what you just heard. The urban employment targets for China in 2013 were ten million jobs a year. The actual growth numbers were 13.2 million in each year. China is surpassing its employment goals as it shifts from increasingly capital-intensive manufacturing to an increasingly labor-intensive services.

If you do the math on the labor intensity of the major sectors of the Chinese economy, the services sector needs about 30 percent more jobs per unit of output than does manufacturing and construction combined. And so as you move from capital-intensive manufacturing and construction to increasingly labor-intensive services, you can achieve the labor absorption, which is employment growth and poverty reduction with slower GDP growth.

And, again, not to pile on because you made some great comments, but you made the statement in your opening comments that the key point of the 12th Five-Year Plan was to send the message that China was accepting slower growth.

The only way China accepts slower growth is if they can achieve the labor absorption required for social stability, and they're doing that by moving to labor-intensive services. The big debate I think in high circles about China is what should they really be emphasizing in articulating their strategic views of economic management to their own people as well as to the broader world?

Should they have a GDP target? I've raised this in high level Chinese circles, and actually the Chinese leadership is very sympathetic to moving away from this construct of GDP targeting for a country that emphasizes social stability. I don't think that China is going to be experiencing nearly the types of employment dislocations that were just alluded to by this structural transformation that features labor-intensive services. They do job creation with slower growth.

COMMISSIONER GOODWIN: I'm sorry. If I could jump in there just because I think this is a very interesting point and one that was really what motivated my question.

The concerns that lead to these objectives--with the chair's indulgence since I'm over my time--the concerns that lead to these goals in the five-year plan are not monolithic across the country, I would assume. And increased employment in the urban areas does not necessarily mean that in more rural provinces perhaps, to use the hypothetical that my colleagues on the Commission have heard me talk about before, a rural province whose economy is heavily

dependent upon natural resource extraction.

So when these binding mandatory goals in the five-year plan come down in a way that creates tension with the local populace in those rural provinces, in a way that creates political problems for those local provincial leaders, how are those political problems resolved?

MR. MELTON: Messily I think is fair. I mean the policy tensions that exist, particularly when it's really concrete like that, and the local interests are directly antithetical to the national interests, are usually in plain view. We are watching it unfold right now between Beijing and Hebei so the air pollution problems near the capital in Tianjin are largely created by industrial firms in the surrounding areas within a few hundred miles.

So you have a situation in which a very large population center and a politically important one wants to clean up its air by forcing another district to shutter its industrial plants. This, because of the concentration of industries--it's something like half the steel in China is made within a couple hundred miles of Beijing--this would lead to a significant unemployment. It's not a firm here or there. That would have major implications for huge districts.

There have been stories in the press about Xi Jinping personally, essentially, I don't want to say threatening, but reminding the Party Secretary of Hebei = what his responsibilities are and what his priorities need to be, and presumably the Party Secretary is reminding all the local officials the same thing.

But when it's their livelihood, and the further down you get the more sensitive they are to it, it's very difficult for Beijing to alter those authority structures.

Basically to the extent that they are successful, usually it's because they provide, when there are extremely high costs of executing policy, they're successful because Beijing also provides fiscal resources or other policy support measures that allow them to succeed in ways that minimize the costs.

When it means shutting down your entire local economy though, I don't know that there's much of a way around it. This is an area, though, where the fact that China does not have a very robust welfare system really starts to hurt them. I mean there's no backup aside from working in a steel plant in some of these places to cushion the blow.

So I don't think that's a very satisfying answer because it's pretty messy when it does happen, but it's iterative, and they tend to make progress slowly over time when they have to.

COMMISSIONER GOODWIN: Thank you. Thank you.

HEARING CO-CHAIR CLEVELAND: Commissioner Bartholomew.

COMMISSIONER BARTHOLOMEW: Thank you very much. I regret that I missed your testimonies this morning.

Professor Roach, in particular, I'm interested if you could talk a little bit about the wage structures in China as you talk about as employment is shifting from capital-intensive manufacturing to labor-intensive services? What's happening with the wage scales?

I ask that particularly because when I hear that we need to increase savings in this country, which we do, when you look at the reality of what's happening to the middle class, and that people who have lost their well-paying manufacturing jobs are being moved down the wage scale to burger-flipping service jobs in this country, it's very difficult for people to save when their income is going down.

So I'm just wondering about the wage structure in China, what's going to happen as people move more into services away from manufacturing, if that's going to make a difference, and what that might do for domestic consumption there?

DR. ROACH: Yes, that's a very important point, and I appreciate your raising it. In the

U.S., we do make that comparison from manufacturing to services, and it's appropriate for a country like ours grappling with its post-industrial future. I would add that the image, though, of the burger flipper is really a bit antiquated, especially in light of I think the declining demand for burgers in the United States as McDonald's recent earning report--

COMMISSIONER BARTHOLOMEW: So, okay, we'll say burrito, burrito making.

DR. ROACH: Even that's a stretch. But I think in China, it's premature to talk about the shift from manufacturing to services because the real story that's going on that bears on your question is the shift from rural to urban China. The bulk of the transformational migration trends driving the overall wage structure reflects the fact that in urban areas, per capita incomes are three times that of rural areas.

China is moving about 20 million citizens a year from rural to urban areas, and unlike other countries that do urbanization first and job creation second -- and I would cite India as an example of that -- China has coupled its urbanization strategy with its services development. The history of urbanization shows that it's most effective when it works with services-led job creation.

So provided that China can employ the workers that are migrating from the rural areas effectively with the development of the services sector, this is a huge impetus to the growth in labor incomes in China. But it gets to the point that was just made by Mr. Melton, if you don't have a robust social safety net, the newfound labor income is not going to be spent. It will be saved out of fear, and so the safety net piece is a key part of that.

But the structural shift from rural to urban will be a very powerful impetus in boosting overall income and wage income, labor income in China.

COMMISSIONER BARTHOLOMEW: Is there a national minimum wage in China?

DR. ROACH: There is, and I think the government has been moving to raise minimum wages especially for migrant workers on a sort of province-by-province basis every other year since the labor reform act of 2004.

COMMISSIONER BARTHOLOMEW: Okay. Thank you.

HEARING CO-CHAIR CLEVELAND: I'd like to actually follow up on what Commissioner Bartholomew raised in terms of I was going to ask about the wage scale.

I'm interested, we talk all the time about safety net and how essential this is to the transition to this new economy. I think I read in one of your testimonies, or perhaps somebody else who is coming later, that we have more unemployed Ph.D.s in China right now than we have anywhere in the world, and I think we're educating some of them at GW.

Given my current affiliation, I'm particularly interested in the five-year plan's anticipation of education reform and how that will factor into the economy. When we were in China, when I was in China last, we spent a lot of time visiting vocational training facilities adjacent to large corporate enterprises, and they were essentially sucking up the labor market, training them to suit their needs, and it was the only way they could get the kind of labor force that they were interested in.

So where do you see, and I think, Mr. Consonery, you mentioned it in your testimony, where do you see education reforms fitting into the five-year plan and economic, and this economic transition?

MR. CONSONERY: Thank you, Commissioner, for the question, and just I think the overriding point here is that we're at a moment where there's still a bit of a mismatch between the labor pool, particularly in urban areas, and the realities of the job market for particularly highly-educated college graduates and above in China, and what we actually see in many of those



populations is structural underemployment pressures where one interesting statistic I saw recently was that a recent college graduate in Shanghai from one of the leading universities there could reasonably expect to make in their first year of employment about what a migrant laborer in Guangdong would make working in a factory. So there is still a long way to go.

I very much agree with Professor Roach that I think the long-term trajectory is actually positive in terms of job creation for this population. I think he's absolutely right about that, but the reality is that that's an iterative process that is really now starting to build on itself as the services sector does start to take off, and that will absorb these jobs. So I do very much agree on that point.

The second issue, and final point for me on this, is that I do think that one of the key demands of the 13th Five-Year Plan in terms of education reform is that the government needs to do significantly more to enable the losers in the reform process, right, the coal miners in Shanxi. The reality it's very difficult to take someone who is losing a job from mining coal in Shanxi and have them work in financial services or logistics, right, that transition.

It doesn't mean there's no losers in the process even if the broad-based employment metrics do hold up. So the government has significant progress to make in terms of rolling out support structures for those components of the population that they are trying to drive into urbanization, but the reality is that when these people arrive in the cities, they have no employment potential. So that, I think, is the big structural problem that they face.

HEARING CO-CHAIR CLEVELAND: And do you see training or education as being a part of support?

MR. CONSONERY: Yeah, absolutely. And I think those programs that you alluded to that you observed yourself are a big part of that. Yeah.

HEARING CO-CHAIR CLEVELAND: Mr. Melton or Mr. Roach?

MR. MELTON: Yeah, the business surveys that are conducted by a variety of organizations regularly show the ability to recruit and obtain highly-talented, well-educated people is one of the biggest concerns of operating in China, sometimes often much bigger than many of the things that we frequently read about in market access issues.

So it's a huge problem, and it's actually fairly tragic. China did a remarkable job increasing the average level of education over the last 20 years, and one of the reasons wages are going up so steadily right now is we're getting the first where the real bulk of the population is shifting from having been very poorly educated rural migrants to fairly well-educated middle school and high school students, from relatively low percentages to very, very high percentages of the population of the workforce, which has been remarkable.

But the flip side of that is that the rapid build-up of college degrees and training programs have left, have a lot to be desired. And even some of the more elite universities are not training people with the skills that they need. So that hurts the economy, of course, but it also hurts people, and it leads to pretty sad stories.

I will say that with this huge pipeline of increasingly educated people entering the labor market, you are getting more and more of this experience of underemployed people that could, in theory, become a political problem, either if people's wages are not increasing as quickly as they would like, and they are increasing fairly, actually quite, impressively, and have been for awhile, but also just sort of the disappointment of not being able to do the kinds of things you want to do--rolling burritos instead of being a services expert like us here.

The trick here, though--

HEARING CO-CHAIR WESSEL: Knowledge workers.

MR. MELTON: Knowledge workers. Yeah, exactly--is that the success of these industries depends very heavily on government deregulation, SOE reform, and overhauling innovation policy in a way that allows small startups or institutions associated with universities to really thrive. So this is one of many reasons why the government really does face an enormous amount of pressure to get itself out of the economy in pretty key ways.

DR. ROACH: Just one quick thing. China's labor market is a good example of an incomplete labor market. It focuses on entry level and recruiting and job placement. As the economy matures, they are woefully inadequate in having sort of a secondary labor market to facilitate the types of transitions we're talking about, job to job, that we do a lot in this country on a regular basis.

And this takes a long time to develop, but there's a shortcut available to a spectacular U.S. company by the name of LinkedIn. I mean take LinkedIn, move them to China, and let them with the push of a button create a secondary labor market that will facilitate the transitions in China.

But it would also provide an extraordinary opportunity for growth of a dynamic American company by the name of LinkedIn. So this is not just about risks in China but about opportunities for our companies.

HEARING CO-CHAIR CLEVELAND: Interesting.

Commissioner Wessel.

HEARING CO-CHAIR WESSEL: Thank you, and I'll keep it short so hopefully we get maybe one more.

First of all, Dr. Roach, I would beg to differ a little bit that we have a great program, and you didn't say great, that we have the proper programs here for transition. It's one of the reasons we have so many problems with policies.

Mr. Melton, if you feel it appropriate in light of your position--and we're pleased to have these witnesses and the others today. Our staff was great in identifying all of you experts. We had to search hard to find those people who have some insights into the five-year plan.

So when the administration is looking at S&ED and other approaches for this year's upcoming one, how much discussion of the five-year plan process, your great analysis as part of your testimony, are people able to step back and say what does this really mean for us?

How do we look at it? We're pleased here to be able to try and do that. I don't necessarily see that the government is doing what it needs to do--to the extent you can respond.

MR. MELTON: Yeah, I'm not even going to artfully obfuscate. I'm just going to run away and not comment on the current administration's ability to use information.

I will just say that I don't think as a society we do a very good job. I think that when you follow particularly policy, particular policy issues very closely, you start to see key windows where the sort of central leaders or sort of central apparatus are collecting information and are preparing to alter sort of the strategic course, and when you're watching this as an analyst or outside of government, you sort of want to wave the flag and say, guys, if you want to affect what China is going to be doing, do it now. Talk now. Don't wait until they've already started and they've already sort of washed their hands of it at a central level because the work for them to change a policy at that point is infinitely higher than it is for us.

It would be like if a lobbyist showed up on the Capitol the day after a bill was passed, you don't get anywhere that way.

HEARING CO-CHAIR WESSEL: You get paid, but--

MR. MELTON: You get paid, yeah, exactly. So I won't make any comments about the

State Department. But so, yeah, I mean you need a pretty, you need a pretty robust amount of information and analytical support in order to provide that kind of advice or insight into how and when you can influence Chinese behavior.

I try to do that. That's probably about 70 percent of my job in some sense, but I would say that in order to be effective as a government, you'd need vastly more resources allocated to this, and I mean substantially more.

And I don't know the specifics, but I do know that our Open Source Center, the people who specialize in translations, but, in particular, analysis of Chinese language resources, are facing very intense budget cuts, which, to me, is just absolutely mystifying. If anything, I would be increasing their personnel by a factor of ten or 20. So--

HEARING CO-CHAIR WESSEL: Is there any kind of internal report other than NIEs or whatever the agency is doing just as an analysis of what you had in your testimony in looking forward as to what can be expected? Are other agencies, Commerce, et cetera, getting together with you and your colleagues to sort of have that visibility?

MR. MELTON: I really can't talk about that right here.

HEARING CO-CHAIR WESSEL: Okay. Thank you.

HEARING CO-CHAIR CLEVELAND: Commissioner Shea.

VICE CHAIRMAN SHEA: I'm going to ask a question that combines two things we've discussed: political governance and George Washington University. And there's a distinguished professor at GWU named David Shambaugh, who is a long-time China watcher and scholar, and not known for rash or intemperate comments, but he wrote a piece a few months ago in The Wall Street Journal where he asserts that we're in the beginning of the end game of the Chinese Communist rule.

And he cites the political repression, stepped up political repression we're seeing, capital flight from China, but he also says that no one in the Chinese Communist Party at the cadre level really believes in it anymore, and I'm paraphrasing what he said, and he said that the reform package outlined in the Third Plenum, which is pretty forward-looking, is being blocked by entrenched interests, including SOEs and others.

So I'm just wondering if you have comments on what the professor stated in that article, if you're familiar with it?

DR. ROACH: Yeah, I'll just take a shot at that.

HEARING CO-CHAIR CLEVELAND: And I'll take no offense whatsoever to the GW affiliation.

DR. ROACH: That's good. I thought it was a really shoddy piece. I mean he starts out with saying that he alone gets invited to special Chinese conferences, and he noticed that attendees were sleeping during conferences. I can't tell you how many conferences I've been to in this country or how many times I've testified in front of Congress where I've noticed congressmen sleeping.

VICE CHAIRMAN SHEA: Right.

DR. ROACH: Then he comments that the books being sold in China are published by senior leaders and no one is buying them. Well, hello -- this is no big deal. His analysis of the Chinese economy was very poor and very superficial. Nevertheless, I concede that the recent Shambaugh article has received an enormous amount of attention.

And there's another article that was written by a former senior U.S. government official that said that the pivotal point in America's leadership in the world may well have been reached by our resistance to the Asia Infrastructure Investment Bank that we are now in a state of decline.

I don't think either one of these views are correct, but I think the Shambaugh article doesn't really do justice to the issues that we've tried to address in this hearing today. It may well be that China is facing a political or governance crisis down the road, but I don't think this article makes the case for that in any way whatsoever.

VICE CHAIRMAN SHEA: Okay.

DR. ROACH: You want to know how I really feel about that?

VICE CHAIRMAN SHEA: Yeah, exactly.

[Laughter.]

MR. CONSONERY: So in the interest of full disclosure, I'm a GW grad who studied under Professor Shambaugh.

VICE CHAIRMAN SHEA: Okay.

MR. CONSONERY: But my honest, unbiased opinion is that I do think the article, while I think we can have a legitimate conversation about some of the details, did touch on a very important truth, which is that--and identify a very important truth--which is that the core risk in my estimation--this is where I agree with Dr. Shambaugh--is that the core risk for the government in China today is whether or not at the elite political level and within the Communist Party they can hold it together; right?

I mean make no mistake, this administration--and this was the key theme of my testimony--is fundamentally trying to pursue some very difficult and comprehensive reforms in terms of the way the political system operates and the way the economic system operates. And that will create losers in the process, and those losers are going to be at very high levels of the system; right?

So that's the reality of what's going on today, and when we look at risk in China, we have these conversations about the disjunctures of economic reorientation and unemployment, social pressures. I actually think for the most part, the administration can manage through those, and the much bigger concern is whether or not they can hold it together at the top. So I think he was right about that.

VICE CHAIRMAN SHEA: Thank you.

HEARING CO-CHAIR CLEVELAND: I appreciate all of your testimony. I think it was very, very helpful to our thinking. I'm reminded a little bit of Frank Fukuyama's *The End of History* in this context, and sometimes the headlines eclipse the important points that may be essential to our consideration.

I hope you'll all be willing to answer some questions for the record because I for one am interested in the Asia Infrastructure Bank, and what happened there, and I'm sure others have some questions. So if you'd be willing to take some questions for the record, it would be very helpful. We've kept you over what we asked you to invest in terms of time so very much appreciate your helpful testimony. Thank you.

We'll take a ten-minute break and then start the--I can't see the clock--

HEARING CO-CHAIR WESSEL: Yes, 11:00 o'clock.

HEARING CO-CHAIR CLEVELAND: We'll start at 11:00 o'clock with the next panel. Thank you.

[Whereupon, a short break was taken.]

## **PANEL II INTRODUCTION BY COMMISSIONER MICHAEL R. WESSEL**

HEARING CO-CHAIR WESSEL: Welcome back. Thank you. Our next panel will examine the role of China's Five-Year Plans as part of China's industrial policy, in particular, its attempt to build strategic emerging industries and innovation, and its implications for U.S. competitiveness.

Our first witness is Gary Jefferson, the Carl Marks Professor of International Trade and Finance at Brandeis University. I say that with a smile.

[Laughter.]

HEARING CO-CHAIR WESSEL: Spelled differently, I should point out. A specialist in the Chinese economy, Dr. Jefferson's research interests include industrial productivity growth, enterprise restructuring, R&D and patenting, FDI spillovers, and China's research institute sector.

He is the author of numerous books and publications, including Enterprise Reform in China: Ownership, Transition and Performance; "A Great Wall of Patents: What is Behind China's Recent Patent Explosion." I'm sorry. Those are two different publications. And a forthcoming article entitled "Restructuring China's Research Institutes: Impacts on China's Research Orientation and Productivity."

Next, we'll hear from Xiaolan Fu--I hope I pronounced that close to correct--the Founding Director of the Technology and Management Centre for Development, TMCD, Professor of Technology and International Development, and Fellow of Green Templeton College at the University of Oxford.

Professor Fu went to Oxford from Cambridge University, where she was a Senior Research Fellow. Before coming to the UK, she was an Associate Professor in China. She also had five years' work experience in the business sector in China before embarking on her academic career.

She has published over 80 books and papers, including her 2015 book on China innovation policy, China's Path to Innovation.

Our final witness is Dr. Ernest H. Preeg. He is the Senior Advisor for Trade and Finance at the Manufacturers Alliance for Productivity and Innovation, MAPI.

He previously testified before the Commission in 2005, 2006, and 2008. Welcome back. Dr. Preeg was a Foreign Service Officer for 25 years, to include serving as the American Ambassador to Haiti from 1981 to 1983, and a Member of the U.S. Delegation to the Kennedy Round of General Agreement on Tariffs and Trade negotiations in Geneva.

He is the author of numerous books and publications, including The Decline and Fall of Bretton Woods? (MAPI, 2012), and India and China: An Advanced Technology Race and How the United States Should Respond (MAPI and CSIS, 2008).

Dr. Jefferson, we'll begin with you, and our normal rules are seven minutes if you could for your oral testimony. We, of course, will

**OPENING STATEMENT OF DR. GARY H. JEFFERSON  
CARL MARKS PROFESSOR OF INTERNATIONAL TRADE AND FINANCE,  
BRANDEIS UNIVERSITY**

DR. JEFFERSON: Thank you, Mr. Chair, and fellow Commissioners, for the invitation and the opportunity to be here in the presence of such illustrious company. I much appreciate it.

I am the Carl Marks Professor of International Trade and Finance, and I'm not sure whether it's better that the name evoke an image of Karl Marx, the economic philosopher, or Groucho Marx, the comedian. But actually Carl Marks, the Carl Marks, set up one of the first foreign exchange trading houses on Wall Street decades ago.

I need to forewarn you, although it's perhaps evident, I'm foremost an academic. I've never presented testimony before although in an earlier life I was a staff director of a House subcommittee on the House side, but I've never been on this side of the table. So I appreciate the opportunity.

HEARING CO-CHAIR CLEVELAND: You're very kind.

DR. JEFFERSON: And you're very kind.

So I believe you have hard copies of some slides that I would like to briefly describe. I believe there are 11 of those, and I'll describe those hopefully within seven minutes or six-and-a-half.

The first of the slides shows a scatter plot of observations. Okay. And these are all firms that are operating in China. They're actually about, there are over a million of them included in the scatter plot, and they show the relationship between the size of the initial productivity gap of each of these firms with a counterpart U.S. industrial level of productivity. Okay.

So where--and this is an unfortunately log measure so typically it may be that what you're looking at is a firm that has only five percent the level of productivity of a comparable Chinese firm, and then you can go over to the vertical axis on the left and see what rate of growth of labor productivity is likely to be associated with that large a productivity gap or technology gap with the U.S. technology frontier.

And what this shows--I think it's quite a powerful story, or I wouldn't have dragged it here--is that the larger the gap with the U.S., typically the higher the rate of growth of labor productivity of the Chinese firm.

And there's a lot, I think, to be inferred from this. One is that that gap is a very powerful kind of external condition for many Chinese firms in terms of the driver of their labor productivity growth, and as their distance with the American technology frontier becomes smaller, typically their rate of growth of labor productivity will also decline.

So it should not be surprising that over the last decade or so, as the gap has substantially diminished, that the rate of growth of labor productivity in China's manufacturing sector should also have diminished. Okay.

So, in some sense, the fact of China's slowdown in the growth of say the manufacturing sector from ten percent to seven percent may be viewed as a measure of its success as well as a measure of challenge. Obviously, the short-term business cycle does circulate around that trend, but we would expect the trend to be downward in terms of productivity growth in relation to catch-up to the Chinese of the U.S. frontier.

So if you look at the next slide, what this does is basically take and collect or aggregate all that firm level data into a number of what are called three-digit industries, and you see basically the same pattern, but one thing that's interesting about this, I think, is you see this graph

is a little different. It still shows the gap down on the horizontal axis. But rather than showing the rate of labor productivity growth of each industry or each firm, it shows the rate of reduction in the size of the gap.

Now the rate of reduction in the size of the gap depends upon two things. One is, as we've seen before, the growth of labor productivity in that firm or industry, but it also depends on whatever the rate of growth of productivity might be at the frontier. That is how fast the corresponding U.S. industry is growing; right? And the faster the U.S. industry is growing, then it may be the slower the Chinese industry is able to close the gap.

Indeed, if you look in the northwest where I've got a little oval, those are mostly iron and steel-related industries, basic metals-related industries, and those are up there because their counterpart U.S. industries over this period from 1998 to 2007 exhibited unusually slow labor productivity growth. So these industries, given the size of the gap, they were able to catch up quite a bit during this period, whereas, by comparison, the industries that are shown down in the southeast part are those where U.S. labor productivity growth was unusually high, and those included chemicals, apparel, computer and electronic products, and so forth.

So for a given size gap, they didn't close the gap as quickly as some of the other industries did. And so, again, the bottom line of this is that this condition of the gap, the distance to the technology frontier, is a very powerful driver for many of these Chinese industries and firms.

Okay. So moving on, however, there are some sort of more subtle aspects to this, and I want to focus on the iron and steel industry. And what this shows, the heavy solid line here, if you are able to see that, is the rate of capacity utilization in China's iron and steel industry, and what it shows is capacity utilization peaking at around 90 percent in the year 2007, right, and that happens to be the last year we used in our data with respect to the growth of labor productivity, and that's another reason why iron and steel look particularly good because its rate of capacity utilization was ramping up.

But then it falls really quite precipitously after that, and part of that is the international financial crisis. You see some recovery with the Chinese stimulus and then a further drop-off. So if you move--so one point if we were to look at this from 2007 going forward, iron and steel wouldn't look so good. So you have to actually look in the industries to see what's going on in terms of capacity utilization and other conditions specific to the industry, but this industry is quite interesting, although not unique, of course.

If you look at the next slide, this is a slide that was done by Dr. Markus Taube at Duisburg-Essen University, and what this shows is the principal agent problem in China in which you have a number of agents or agencies at the central government level. Here there are four that are shown as part of China Steel Inc., each of which has its set of objectives, some of which are set forth in the five-year plan, much having to do with the rationalization of this industry at the national level, which would entail some mergers and acquisitions and alliances and sort of trying to avoid the tendency at the local level to proliferate the production capacity of this sector, and that's part of the story here, is that there has been this proliferation, ongoing proliferation of production capacity in the iron and steel industry, notwithstanding efforts of the center to try to consolidate that industry, and as a result you see this decline in capacity utilization.

So going forward, the iron and steel industry wouldn't look nearly as good as it had prior to 2007.

COMMISSIONER BARTHOLOMEW: Could I just ask?

DR. JEFFERSON: Sure.

COMMISSIONER BARTHOLOMEW: I just want to confirm, when you're talking capacity utilization, you're talking about utilization within China; correct?

DR. JEFFERSON: Umm.

COMMISSIONER BARTHOLOMEW: Okay.

DR. JEFFERSON: Yes. And these are virtually all Chinese-owned with substantial state ownership.

Okay. In the next slide--

HEARING CO-CHAIR WESSEL: Let me suggest, and I'd appreciate it, I can give you a little more time, but if you could try and--

DR. JEFFERSON: To speed up. Okay.

HEARING CO-CHAIR WESSEL: --if you can try and speed up.

DR. JEFFERSON: I'll do that.

HEARING CO-CHAIR WESSEL: All right. Thanks.

DR. JEFFERSON: Let me just say Table 3 basically looks at the ratios of the productivity of the Chinese firms relative to U.S. firms, and what is interesting about this, I think most interesting, is if you--overall, it doesn't look very good when you look at the average of China versus the average of the U.S., but if you take the top decile of the Chinese firms, you see much reduction in the size of the gap, and then if you take the top ten firms within each of these two-digit industries, you see that in most cases actually the average of the top ten exceeds the U.S. average.

So what this raises is the possibility that China is actually creating its own internal frontier in terms of its own domestic firms being able to try to emulate and simulate business methods and technologies from other Chinese firms rather than having to continuously look abroad for that.

Okay. So what drives the catch-up? Let's look at the next slide. And the research I think is quite interesting, which focuses very much on concentrations of foreign direct investment and concentrations of import competition, such that those industries that are most exposed to foreign direct investment and import competition tend to be the ones that are most likely to catch up, and what we're seeing it seems is catch-up in which the laggards within an industry aren't catching up to the norm, thereby reducing the spread of efficiency within the industry, but instead there seem to be firms that are breaking out.

There are firms that are prospering from this entry of foreign firms and prospering from import competition in substantial part by getting research and development, intensifying research and development, and we see that that research and development has a certain definite factor bias, which means as they spend more money on research and development, the factor mix of the firm tends to change, and specifically it tends to be material using, meaning they're moving up the value-added chain.

Okay. So they're sort of reducing their reliance upon intermediate inputs and internalizing those within the firm, using R&D in the face of competition and opportunity from foreign direct investment and import competition.

Okay.

HEARING CO-CHAIR WESSEL: I apologize. I'm going to have to stop you there.

DR. JEFFERSON: I'm done.

HEARING CO-CHAIR WESSEL: We'll let you make some of the other points during Q&A.



DR. JEFFERSON: Okay.

HEARING CO-CHAIR WESSEL: I apologize. And thank you.

DR. JEFFERSON: Not at all. Thank you.

**PREPARED STATEMENT OF DR. GARY H. JEFFERSON  
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**U.S. - China Commission on Economics and Security**

**The Impact of China's Five-Year Plans on Strategic Industries  
Panel II – April 22, 2015**

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International Business  
School

April 22, 2015

### **1. Introduction**

In this initial draft of my testimony, I attempt to shed light on the following questions:

1. To what extent and in what ways is China's manufacturing sector catching up with US manufacturing?
2. What are the factors responsible for driving the catch-up process? What are the major impediments to catch-up? What are some of the relevant examples?
3. To what extent is China's innovation system advancing and catching with OECD countries?
4. What are the principal weaknesses of China's innovation system and impediments to the catch-up process?
5. What recommendations might emerge from this analysis?

### **2. Manufacturing Catch-up**

In our research on China's manufacturing sector,<sup>14</sup> my research colleague, Professor Paul Deng at the Copenhagen Business School, and I find that two factors are highly statistically robust indicators of the rate of China's manufacturing catch-up, i.e., reducing the manufacturing labor productivity gap with U.S. firms. These two factors are i) the size of the initial labor productivity gap between the Chinese firm and the average productivity of the corresponding U.S. 3-digit SIC industry and ii) the rate of productivity growth of the

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<sup>14</sup> "Will China Escape the Middle- Income Trap?," draft, December 22, 2014.

corresponding U.S. industry.

**Highlights of Figure 1.** The scatter plot shows a very clear relationship within Chinese manufacturing between the rate of firm labor productivity growth and the size of the productivity gap (measured as the log) with the U.S. frontier of the Chinese-based firm. The larger the firm's productivity gap, the higher its rate of catch-up productivity growth. The graph shows that at the firm level, Chinese-based manufacturing firms span a wide range of productivity gaps with the U.S. as well as a wide range of annual rates of labor productivity growth. Despite the variation, the inverse relationship between them is size of the gap and the rate of productivity growth is evident.

**Highlights of Figure 2.** Figure 2 shows the relationship between the same U.S.-China productivity gap and the related rate of *growth of catch-up*, i.e. the annual rate of growth of gap reduction. Because in this figure the firms have been aggregated by their 3-digit industrial classification, the spread is more concentrated than that shown for the individual firms in Figure

1. Since this graph represents the rate of catch-up, the rate of growth of the Chinese firm's labor productivity and the rate of growth of productivity at the U.S. frontier both matter. As shown in Figure 2, the relationship between the rate of gap reduction and the size of the initial gap is also extremely robust. In the figure, the industries in the northwest quadrant and those in the southeast quadrant have been highlighted.

The industries shown to the northwest are largely those in the primary metals sector, such as steel production. It turns out that for each of these industries, the rate of growth of productivity of their counterpart U.S. industries was relatively slow; hence for a given gap, the catch-up rate for the Chinese firms was unusually high. By contrast, for the industries in the southeast quadrant of the figure, the rate of productivity growth for the corresponding U.S. industries was relatively high. Hence, notwithstanding the large gap, this high U.S. productivity growth impeded the rate of catch-up for the corresponding Chinese firms, including petroleum and coal products, chemicals, apparel, and computer and electronic products.

Regression analysis shows that the rate of growth the productivity at the U.S. frontier critically affects the rate of productivity growth and catch-up for the Chinese-based firms. In general, every 1% increase in the rate of productivity growth of a U.S. industry (e.g., from 4% to

5%) boosts Chinese industry productivity growth by 0.3 to 0.4%. On the other hand, the same productivity growth for the counterpart U.S. firm slows catch-up by 0.6 to 0.7%, on average.

That is to say, as the U.S. frontier shifts out its productivity, about one-third of the productivity advance at the U.S. frontier appears to spillover to China within 5 years of the advance; otherwise, productivity growth at the frontier slows the process of catch-up.

**Highlights of Figure 3.** Figure 3 tells a more granular story about the iron and steel industry. As described above, this industry appears to perform particularly well from 1998 to 2007. Figure 3 explains, in part, why that was the case. It shows the capacity utilization in the iron and steel industry rising prior to 2007 and then peaking in that year. Indeed, Table 1 will show that in 2007, the iron and steel industry (i.e., primary metals) had achieved the smallest gap with its U.S. counterpart (i.e. nearly 30% of the U.S. average). However, thereafter, in part due to the international financial crisis but also due to coordination problems, the industry

fell into a period of a substantial decline in capacity utilization, mitigated only during 2009-2010 by the temporary Chinese stimulus.

**Explanation of Figure 2.** Figure 2 (from a paper by Dr. Markus Taube) summarizes China's pervasive problem of multiple principals. It shows the multiplicity of central government agencies that exercise oversight of China's iron and steel industry in which state-ownership is extensive and the vertical divide between these principals of the central government and the local governments and individual enterprises. While the central government is generally intent on rationalizing the distribution, product mix, and capacity of iron and steel, local governments are often hungry to expand their tax bases and employment thus encouraging redundant investment from the national perspective.

In an attempt to address this problem, China's 12<sup>th</sup> 5-year plan acknowledged the problem of a proliferation of Chinese-owned enterprises and plants. Ch. 9 sec. 4 sets forth the following provision: "Drive advantaged enterprises to carry out alliance, cross-regional merger and reorganization, and increase industry concentration with an focus on automobile, iron and steel, cement, machine building, electrolytic aluminum, rare earth, electronic information, and pharmaceutical industries, etc." Still, as shown in Figure 2, within the iron and steel industry the problem of overcapacity became more pronounced during the 12<sup>th</sup> 5-year plan. The problem is reflected in the next table (Table 3), which shows the share of sector production represented by the 10 most efficient industries in each sector. The 10-firm value-added shares for the industries cited in the Plan for consolidation include just 5% of value added in the primary metals sector, 4% in chemicals, and 3% in machinery.

**Highlights of Table 1:** Table 1 shows that for total manufacturing, from 1998 to 2007, the U.S.-China gap in the average levels of value added per worker declined from about 20:1 to 7:1. In both years, the top-decile productivity firms in China exhibit a much smaller gap, i.e. rising from just 30% of the U.S. average in 1998 to 70% in 2007. In the latter period, the top decile firms accounted for 35% of total Chinese manufacturing output, suggesting that the scale of the more efficient firms was well above average (3½ times the average size). In 2007, for 3 of the 18 two-digit industries, China's top decile firms show higher average levels of productivity than the corresponding (full) industry averages for the U.S. Table 1 also shows the average of China's 10 most productive firms in each industry. The ratio of productivity of the top 10 firms to the U.S. average is quite striking. In 1998, average productivity for two of the 18 industries exceeds the U.S. industry average. By 2007, the number of top 10 firm Chinese clusters exceeding the U.S. industry average rises to 15 of 18 industries.

This last result – the finding of the relatively high productivity of the top 10 firms within each industry – raises the possibility that China has created its own internal frontier. That is firms, such as Huawei in telecommunications equipment, BYD in batteries and electric cars, SunTech

in solar panels, Haier in white goods, and Xiaomi in smartphones may themselves represent technology frontiers against which to measure the progress of the lagging elements of Chinese industry.

**Highlights of Table 2.** This table attempts to address the factors that are most important policy-related instruments that are driving China's productivity advance. An extensive literature shows a range of factors that bear upon the dynamic of catch-up, but two of these stand out.

These are: i) technology or productivity spillovers from regions or industries with

concentrations of foreign direct investment to Chinese-owned firms within those regions or industries<sup>215</sup> and ii) import competition that drives firms to upgrade.

Some of these studies also find evidence of a so-called “separation effect”. That is, in the face of foreign entry and FDI and also, with or without FDI, in the face of import competition, Chinese firms that are relatively efficient tend to benefit the most, whereas firms that are relatively weak are more likely to struggle from a loss of market share. Specifically, the research shows that in the face of FDI and/or import competition, the stronger firms tend to load up on R&D in order to upgrade their capabilities, an effort, which may be facilitated by the very fact of FDI and/or import competition. Using R&D resources the more capable Chinese firms use their R&D to capture technology from the foreign firms within the same industry or geographic area or they may use imports in order to reverse engineer products that enter the markets in which they compete. Within these competitive product markets, Chinese firms may, in particular benefit from the phenomenon or “learning by using,” which refers to the process of gathering feedback from markets which are purchasing and using one’s own products as well as those of competitors.

Table 2 shows the China’s top five manufacturing import sectors. Five of the 10 top imports are raw materials. The table also shows that these same five top manufacturing import sectors account for 5 of the 8 principal export industries. The top industry on both lists, i.e. electronic equipment, is a good example as it includes mobile phones and smart phones and computers. Whereas during the 1990s and early 2000s, China was a major importer of these products or the component that it assembled for re-export, presently Chinese companies have moved substantially up the value chain. For the mobile phone industry, the succession has moved from Motorola to Apple to indigenous smartphone suppliers, such as Xiaomi. For the computer industry, Chinese made and exported Hewlett-Packard laptops and printers have successively moved up the value chain as has Lenovo, in part through the acquisition of the IBM personal computer unit. These are key illustrations of the argument that FDI and imports competition are a critical aspect of the rising capacity of Chinese firms to establish a substantial presence on both domestic and international markets. They help to explain the dynamics of the progression of firms, as shown in Figure 1, and industries, as shown in Figure 2, to move down the GAP curve resulting in both a degree of catch-up, but also, in the process, experiencing slower growth of productivity and slower rates of catch-up.

Consistent with this account, my research with Professor Deng gives support to the notion of a separating effect in which as the U.S.-China productivity diminishes, we tend to observe the phenomenon of break-out firms. This is evident from the fact that within 3-digit industries with smaller gaps, we observe a wider spread (or standard deviation) of the firms that comprise those industries. Hence, catch-up seems to be a dynamic of the break out of a sub- group of firms, not so much the alternative in which the comparatively backward firms catch-up to the industry norm or drop out altogether.

The computer chip industry is added to the lists shown in Table 3. This is because it is such a critical industry and also because it may well be in the early stages of the dynamic in which an industry with a high intensity of imports transforms itself into becoming a substantial exporter. This testimony later references the computer chip industry.

Finally, with respect to the efficiency comparisons of the U.S. and China, Table A1, in

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<sup>15</sup> Deng and Jefferson (2011).

the Annex, shows the comparative productivity of 3 U.S. firms and 3 Chinese firms. My colleague, Aiyi Zhang and I prepared undertook this analysis, so that unlike Table 1, which compares various groupings of Chinese firms with the U.S. average, we could instead attempt to compare the a Chinese frontier with a U.S. frontier. The firms used for Table A1, both the Chinese and U.S. firms, are virtually all publicly traded; some of the Chinese firms are well known. The comparisons show that relative to the all-industry gap comparisons, the U.S.-China gap using the top 3-firm data is somewhat smaller. At 2.28, the average 3-firm gap is about 25% smaller than the 3.06 gap for the comparative full-industry average comparisons. Five industries exhibit a gaps of 1.5 or less; while two of these – primary metals and computers – appear to match or better their U.S. counterparts. Clearly, convergence and occasional catch-up are ongoing phenomenon in Chinese manufacturing.

### 3. Comparisons of China's Innovation System with the U.S. and other OECD Country Systems

Clearly the surge in innovation effort and measures of innovation output is a critical part of the story of the rapidly growing scope and capabilities of Chinese industry. Table 6 shows some summary statistics which may be helpful.

*Highlights of Table 3:*

- First, we see from the total column that by 2012, China was well on its way to entering into the 2-3% range of R&D/GDP intensity occupied by most of the larger OECD countries, S. Korea, Singapore, and Taiwan. However, as shown in the basic column, the composition of Chinese R&D spending is notably tilted away from basic research, which accounts for about 5% of total R&D spending. In 2012, for the U.S. that proportion was approximately 18%.
- Higher education accounts for nearly 55% of basic R&D. China's research institutions account for 40%. Over the past 20 years, universities have been playing a larger role in China's basic research, while the relative contribution of the research institute sector has diminished.
- At 76.2%, the principal source of R&D spending is enterprise self-raised funds. This proportion exceeds most OECD countries.
- In 2012, government accounted for 21.6% of total R&D spending in Chinese industry. The R&D contribution of the foreign sector was largely through spending within foreign-invested firms, i.e., the enterprise sector.
- Table 3 also shows the government share of R&D spending by province. Unsurprisingly, due to its concentration of universities and research institutes (e.g., the Chinese Academy of Sciences) at 53.7% Beijing shows the highest proportion of government-sourced R&D. Liaoning Province, the seat of a substantial number of state-owned enterprises, received 23% of its R&D spending from the government. At the other end of the spectrum, Zhejiang Province, known for its robust private sector, shows a government funding share of 8.3%.

**Significance of Figure 5:** Figure 5, trends in Federal R&D, shows federally-funded R&D spending as a share of GDP. While the measure we have used for the Chinese government's share is measured relative to total R&D spending, this figure shows federal R&D as a share of GDP. However, because we know that for the U.S., total R&D spending

is in the range of 2.8% of GDP, we can infer that as a share of total R&D spending in the U.S., the government's share is about 29% of the total. Government's share appears to have declined over the past 30 years; particularly that of defense spending.

**Highlights from Table 4:** While not the only measureable output of R&D activity, the incidence and quality of patenting may be the most important single measure of R&D productivity. This is the case notwithstanding extensive survey literature that indicates that, at least for American firms, with the exception of the drug industry patenting is not the principal means of securing intellectual property.<sup>16</sup> Since China's patent law was established in 1985, the incidence of patenting has surged, so that SIPO now receives more patent applications than any other patent office in the world.

Table 4 documents the distribution of patenting in China's State Intellectual Property Office (SIPO) across three patent types (invention, utility, and design) during 2012. In China, invention patents are typically of substantially higher quality than the alternative utility model and design patents. The former, of 20 years duration, are subject to greater patent review scrutiny than the latter two types, which receive only 10 years of protection. Table 3 also shows the distribution of patenting activity by domestic and foreign patent applicants and patent holders and for domestic patent sources, it shows the type of organizational unit (e.g., enterprise, university, etc.). The lower tier of Table 4 shows some comparative patenting statistics from the U.S. patent office.

Here are some of the highlights from Table 4:

- Only about 1/3 of the patent applications are for invention patents, versus approximately 90% for the U.S. Among these invention patent applications filed with SIPO, approximately 30% are approved.
- Foreign-owned entities within China account for approximately 18% of the invention patent applications and about 33.7% of the patents grants. The vast majority of patents, particularly for Chinese patenting, is concentrated in lower-value utility model and design patents. Because the approval process for utility model and design patents is typically shorter and less rigorous, entities will sometimes file for one of these patent types as a place holder for an invention patent application. Since the review period for invention patents has been shortened and having more than one patent application pending for the same innovation can result in legal complications, this practice has been somewhat curtailed. Table 4 also reports various data from the USPTO for 2007 and 2014 for granted utility (invention) patents. Among the highlights are:
  - In 2012, China granted 217,105 invention patents, of which 143,847 were granted to Chinese applicants. In 2012, the USPTO granted 3000,678 invention patents of which 144,621 were granted to U.S. applicants and 156,057 to foreign applicants, of which 7,236 were Chinese filers.

There has also been a growing body of research concerning patent production functions (i.e. the relationship between inputs to innovation, notably R&D, and patent outcomes), the impact of government patenting incentives on patent quality, and the implications of patent

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<sup>16</sup> See Cohen, Nelson, and Walsh (2000), who find substantial differences across industries in strategies used to secure IP rights. For example, in most industries, secrecy and lead time were cited as more important than patenting as a means of securing intellectual property. The pharmaceutical industry was the only industry listing patents as the most important measure.

production for firm performance, including productivity and profitability.

- Hu and Jefferson (“Great Wall of Patents”, 2007) find a relatively weak link between R&D and patenting, i.e., substantially weaker than counterpart US and EU studies; however, FDI spillovers exhibit a substantial impact on patent production. That R&D is even less important for foreign firms that patent indicates that at least during the earlier 2000 period, most of the intellectual property that foreign firms patented in China was transferred from parent companies.
- Various provincial governments offer incentives/rewards for either filing patents and/or securing patent grants. The research shows that incentives to file patents led to more filings; however, a lower proportion of these were granted. Incentives for securing patent grants seemed to motivate patent applicants to draw the scope of the patent claim more narrowly, thus improving the likelihood of approval while at the same time diminishing the potential value of the patent.
- Recent research by Hu, Zhang, and Zhao (2014) find that: i) a significant portion of the surge has resulted from rapid patent growth in regions and industries that had not previously actively applied for patents; and ii) overall the correlation between patents and R&D and between patents and labor productivity has become weaker over time; particularly for the regions/industries with relatively less patenting activity. This may reflect the establishment of patenting incentives for these regions/industries, thus increasing the incentive to patent and its incidence even as new intellectual property has not been created to the same degree.

#### **4. Comparisons and Weaknesses**

In summary, Chinese manufacturing has been steadily closing the productivity gap with

U.S. manufacturing. It appears that China has created its own technology frontier, although on average the firms constituting that frontier may, on average, exhibit levels of sales per worker that are about one-half that of the U.S.

China’s innovation system has transformed dramatically of the past 20 years. Over this period, China’s R&D/GDP ratio has risen from less than 0.6% to more than 2%, putting it in a range similar to that of the U.S. and other OECD countries. However, the growing parity in quantity has not been matched with respect to quality comparisons.

No more than 5% of Chinese R&D is dedicated to basic research. This proportion compares unfavorably with the U.S., which dedicates approximately 18% of its R&D spending to basic research and to other OECD countries which typically dedicate in the range of 20% of R&D spending to basic research.

Only one-quarter of the patent grants issued by SIPO and still in force invention patents; more than three-quarters are utility model or design patents for which the patent review is relatively cursory and the patent duration is 10 years rather than the 20-year duration assigned to invention patents. Moreover, for domestic patents still in force, only about 15% are invention patents. Notwithstanding, the rates of growth of SIPO invention patents and the fraction of those issued to Chinese residents is growing rapidly. Also, from a low base, patents issued to Chinese residents by the USPTO are growing rapidly, surpassing the U.K. in 2014, but still some distance behind S. Korea and Taiwan. Concerning specific R&D performing sectors, the following weaknesses are evident.



In the enterprise sector, researchers find low returns to R&D. Also, at the firm level, there is evidence of a weak correlation between patenting and firm-level productivity growth. Moreover, while provincial governments often extend incentives to firms for patenting, such as for securing patent grants, the incentive for patent grants appears to motivate filers to narrow the claims on their patent applications, hence lowering the quality of the eventually-approved patents. In the higher education sector, all OECD countries dedicate larger portions of their R&D spending to higher education which performs most of basic research, generally in the vicinity of the share of R&D spending captured by the Chinese universities. Within higher education, researchers often encounter limits to their autonomy insofar as schools and departments operate on a more hierarchical basis, so that grants and rewards may not be well-aligned with merit.

Also, university professors often engage extensively with consulting with little research payoff.

Finally, China's research sector, while reporting a robust publication record, tends to be surprisingly weak on patent production. While China's research institutes account for 15% of total R&D spending, that sector accounts for only 7.8% of basic research and 5.5% of total invention patents granted. One development that may alter the relatively weak contribution of China's universities and research institutes to China's patent production, is the implementation of a Chinese version of Bayh-Dole Act, which in China, as it has in the U.S. enables recipients using government-financed research funds (i.e. universities and research institutes) to secure patents and retain the revenue generated by their lease or sale.

Notwithstanding these weaknesses of China's R&D system, one development that bears particular interest is the growth of university-corporate collaborations. One such notable collaboration is that of the Tsinghua Unigroup, which has developed acquisitions-partnerships with chip makers, including the acquisition of Spreadtrum in which Intel subsequently acquired a 20% share. This mode of collaboration may well be the harbinger of the sustained growth and development of China's semi-conductor industry along the trajectory shown in Figure A.1.

## 5. U.S. Recommendations

The following recommendations are intended to follow from the previous testimony.

While China is substantially reducing the innovation gap with the U.S. with respect to several key measures, in terms of quality, China's measures of the quality of innovation outputs continues to lag substantially behind the U.S. Nevertheless, the quality gap is likely to continue closing over the next several decades. In light of this substantial narrowing of the U.S.-China innovation gap, the U.S. should seek to retain and develop its comparative global advantage, which is that of basic research, including the robustness of U.S. higher education as the focal point of its basic research activity.

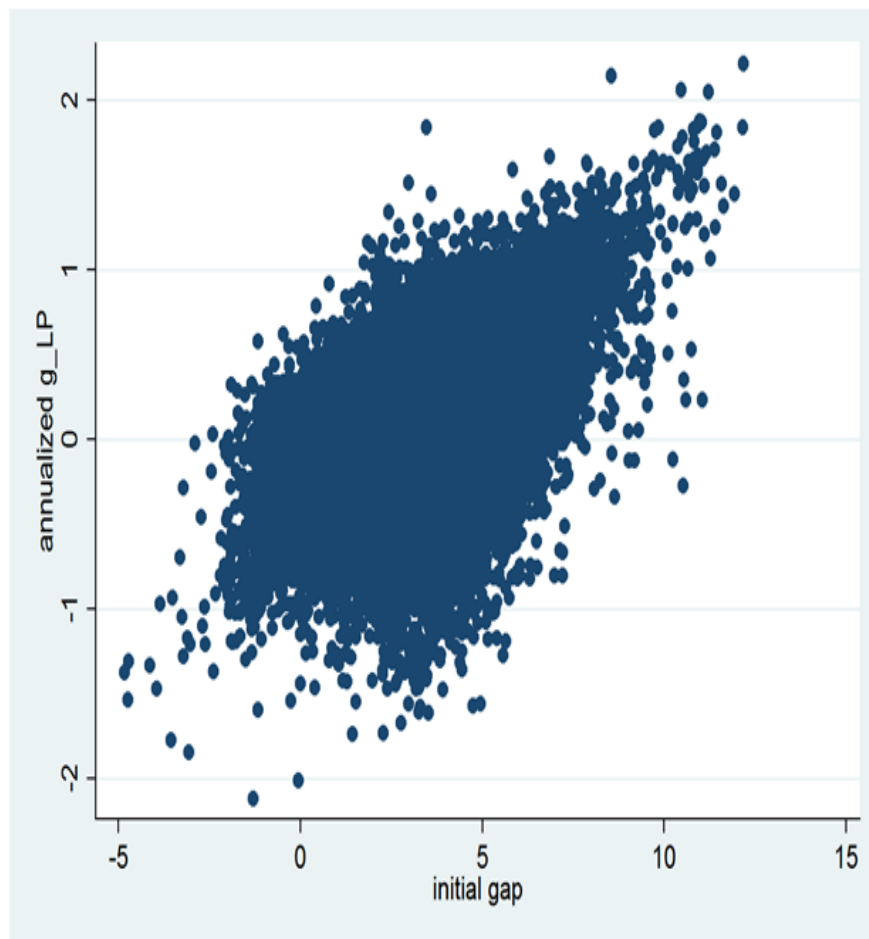
Even if the U.S. sustains and expands its commitment to basic research, the U.S. should anticipate that it is very likely that in many quality dimensions of innovation, China will eventually, e.g. within the next 50 years, if not well before, catch-up with the U.S. If this is managed properly, so that both countries are expanding the international technology frontier, global welfare should substantially gain. From this perspective of likely catch-up, it is very unlikely that in 20-25 years that the U.S. will be able to out-spend China on innovation and defense, much of which involves R&D. More importantly, beyond that, i.e. over a 30-50 year

horizon, it is very unlikely that the U.S. will be able to outperform China as the leading global innovator with the leading defense technologies.

In light of this catch-up trajectory, in the near term, the U.S. should seek to engage with China in ways that are possible so as to establish a record of collaboration. Specifically, for example, the U.S. should join the Asia Infrastructure and Investment Bank (AIIB). Also, for the purpose of engaging, and over time, collaborating and integrating with China's rapidly expanding research capabilities, as suggested earlier, the U.S. government should fund U.S. universities, so that they can

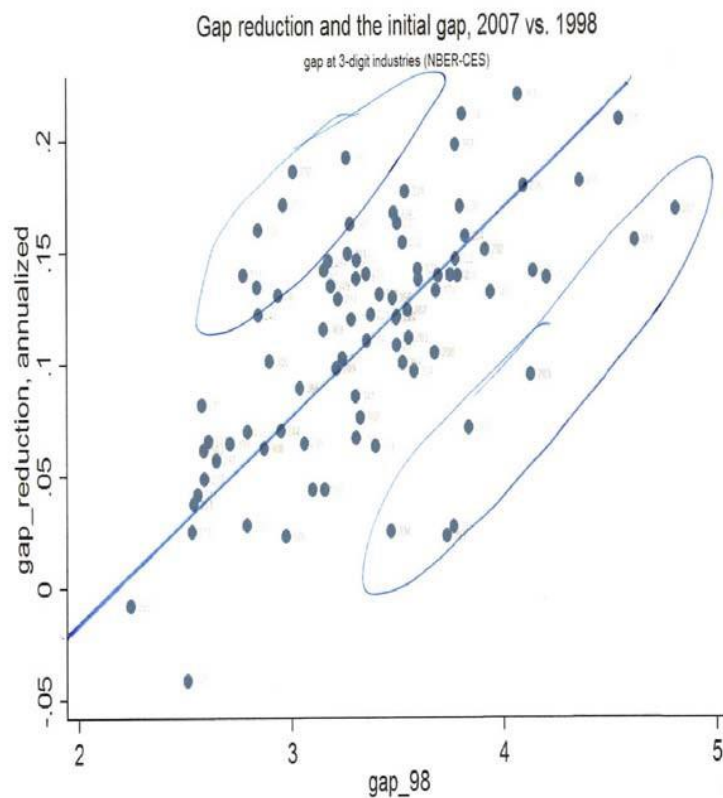
**The following are copies of the slides that were used for Jefferson's presentation on April 22.**

**Figure 1.** Shows how the labor productivity growth (gLP) of Chinese firms responds to the technology gap with the international frontier (i.e., the U.S.)...the larger the gap the greater gLP.

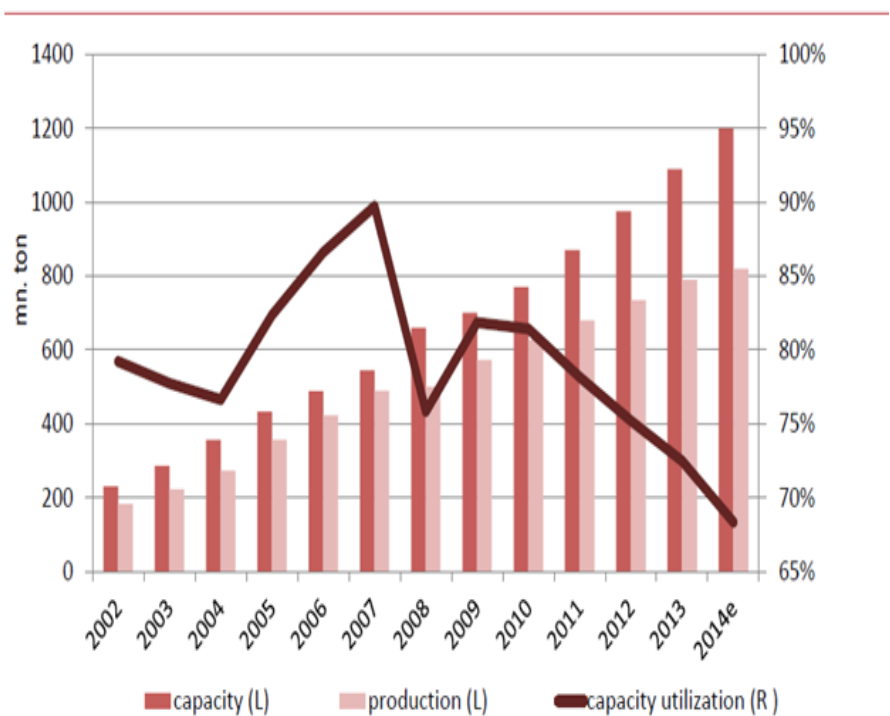


**Figure 2.** Shows a similar relationship for the rate of growth of catch-up (i.e., gap reduction) relative to the size of the U.S.-China productivity gap –

1. industries to the NW (mostly iron and steel due to relatively slow U.S. LP growth);
2. industries to the SE (petroleum and coal products, chemicals, apparel, computer and electronic products due to relatively high U.S. LP growth).



**Figure 3.** Reversals – 1998-2007 rising capacity utilization in the iron and steel industry; sharp post-2007 decline in capacity utilization...

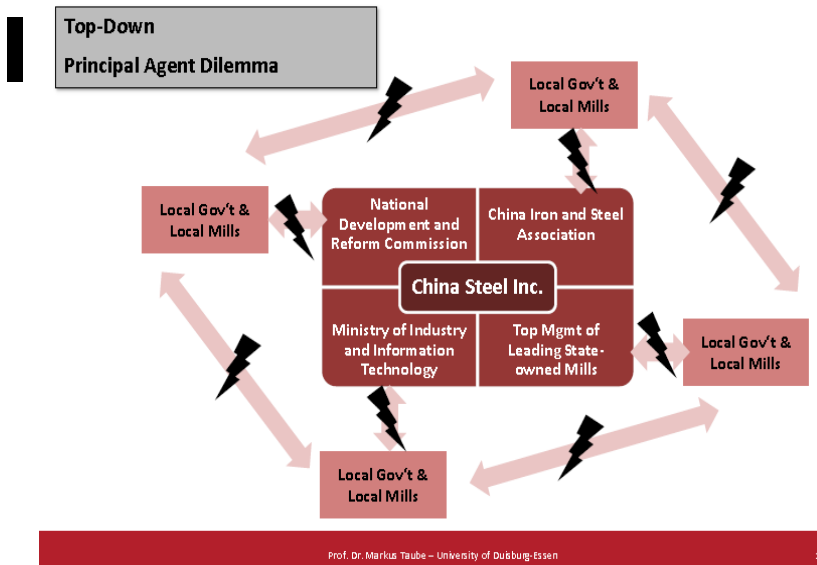


CISA, State Council 2014

**Figure 4.** 12th 5-year plan: Ch. 9 (sec. 4) “Drive advantaged enterprises to carry out alliance, x-regional merger and reorganization, and increase industry concentration with an emphasis on...iron and steel (and automobile, cement, machine building...). **The problem...**

(source: Dr. Markus Taube Univ. of Duisburg-Essen)

#### SOE-Reorganization with multiple principals



### Table 1. Has China developed its own internal frontier?

1. Top decile Chinese firms > U.S. average (3/18) and top 10 Chinese firms >> U.S. average (15/18)
2. 3-firm comparisons (publicly traded companies): U.S./China sales/employee advantage = 2.28 (see Table

Table G. Labor productivity by major industry sectors: Industry mean, top decile and top-10-firm average relative to US frontier\*

mind2	industry	average LP to frontier ratio		top decile to US frontier ratio			top-10 firms to US frontier ratio			max	
		1998	2007	LP_98	LP_07	VA_share_2y_avg	LP_98	LP_07	VA_share_2y_avg	top1 firm vs US frontier ratio 98	top1 firm vs US frontier ratio 98
0	<i>Total Manufacturing</i>	0.05	0.14	0.37	0.70	0.35	0.83	2.47	0.06		
1	Food and beverage and tobacco products	0.09	0.25	0.55	1.45	0.50	2.20	6.15	0.14	5.24	8.64
2	Textile mills and textile product mills	0.05	0.16	0.37	0.67	0.23	0.84	1.76	0.01	1.51	2.40
3	Apparel and leather and allied products	0.10	0.12	0.66	0.58	0.27	0.99	1.54	0.02	1.67	2.81
4	Paper products	0.04	0.13	0.22	0.45	0.34	0.24	0.97	0.07	0.67	3.62
5	Printing and related support activities	0.08	0.20	0.34	0.77	0.41	0.74	1.20	0.07	2.12	1.86
6	Petroleum and coal products	0.02	0.04	0.07	0.19	0.32	0.07	0.35	0.16	0.10	1.02
7	Chemical products	0.03	0.09	0.19	0.51	0.33	0.60	2.08	0.04	1.07	3.50
8	Plastics and rubber products	0.06	0.14	0.37	0.68	0.28	0.43	1.67	0.03	0.67	8.04
9	Wood products	0.07	0.23	0.49	1.01	0.30	0.56	1.44	0.09	1.28	2.23
10	Nonmetallic mineral products	0.03	0.16	0.22	0.78	0.27	0.54	1.47	0.02	1.25	2.35
11	Primary metals	0.06	0.29	0.49	1.19	0.22	0.65	2.74	0.05	0.97	3.56
12	Fabricated metal products	0.06	0.17	0.41	0.84	0.34	0.60	2.22	0.04	1.27	4.17
13	Machinery	0.03	0.15	0.23	0.68	0.29	0.70	2.53	0.03	1.41	7.61
14	Computer and electronic products	0.08	0.11	0.45	0.52	0.51	1.87	2.17	0.05	3.56	3.64
15	Electrical equipment, appliances, and components	0.07	0.16	0.38	0.72	0.40	0.76	1.90	0.04	1.37	2.56
16	Motor vehicles, bodies and trailers, and parts	0.05	0.20	0.34	0.80	0.45	0.93	3.08	0.13	6.25	9.02
17	Furniture and related products	0.09	0.14	0.43	0.72	0.25	0.36	0.75	0.08	0.82	1.10
18	Miscellaneous manufacturing	0.05	0.07	0.44	0.44	0.27	0.43	0.67	0.04	0.99	1.07

\*Note: The sample used in this calculation requires firms, which appeared in 1998, to appear again in 1999; and firms, which appeared in 2007, also existed in 2006. We further dropped firms with VA<0, L<1 and VA=0. For the top 10 firms in each industry, we further limit our sample to LME (large and medium enterprises), and their LP can't exceed 10 times of US average in both 1998 and 2007.

**Table 2. What drives the catch-up?**

1. Domestic firms with an edge benefit the most from FDI and import competition → separation effect with break out firms...
2. Five (5) of top 8 import sectors are also top 5 mfg. export sectors
3. The computer chips sector is on track...

**China's Top 10 Exports**

The following export product groups represent the highest dollar value in Chinese global shipments during 2014. Also shown is the percentage share each export category represents in terms of China's overall exports.

1. Electronic equipment: US\$571,045,520,000 (24.4% of total exports)
2. Machines, engines, pumps: \$400,910,983,000 (17.1%)
3. Furniture, lighting, signs: \$93,390,874,000 (4.0%)
4. Knit or crochet clothing: \$92,002,609,000 (3.9%)
5. Clothing (not knit or crochet): \$81,453,227,000 (3.5%)
6. Medical, technical equipment: \$74,020,496,000 (3.2%)
7. Plastics: \$66,816,299,000 (2.9%)
8. Vehicles: \$64,243,754,000 (2.7%)
9. Gems, precious metals, coins: \$63,212,400,000 (2.7%)
10. Iron or steel products: \$60,685,405,000 (2.6%)
- xx. Computer chips: (2%)

Source: <http://www.worldstopexports.com/chinas-top-10-exports/1952>

**China's top 10 Imports**

The following import product groups represent the highest dollar value in World global shipments to China during 2014. Also shown is the percentage share each import category represents in terms of China's overall imports.

1. Electronic equipment (21.7% of total imports)
2. Oil
3. Machines, engines, pumps (9.2%)
4. Ores, slag, ash
5. Medical, technical equipment (5.4%)
6. Vehicles (4.6%)
7. Plastics (3.8%)
8. Organic chemicals
9. Copper
10. Oil seed
- xx. Computer chips (90.5%, \$163 billion)\*\*

Source: [http://www.worldsrichestcountries.com/top\\_china\\_imports.html](http://www.worldsrichestcountries.com/top_china_imports.html)

\*\*Source International Business Strategies, 2015 estimates reported in the *Wall Street Journal*. <http://www.wsj.com/articles/china-looks-to-prop-up-domestic-chip-makers-1422387551>

**Table 3. China's innovation system...achievements; challenges**

numerical catch-up; quality lag

1. China as an “innovative society”...R&D/GDP = 2.0% vs. U.S. 2.8%
2. basic research share...5.0% vs. U.S. 18%
3. government share...21.6% vs. U.S. ~29%

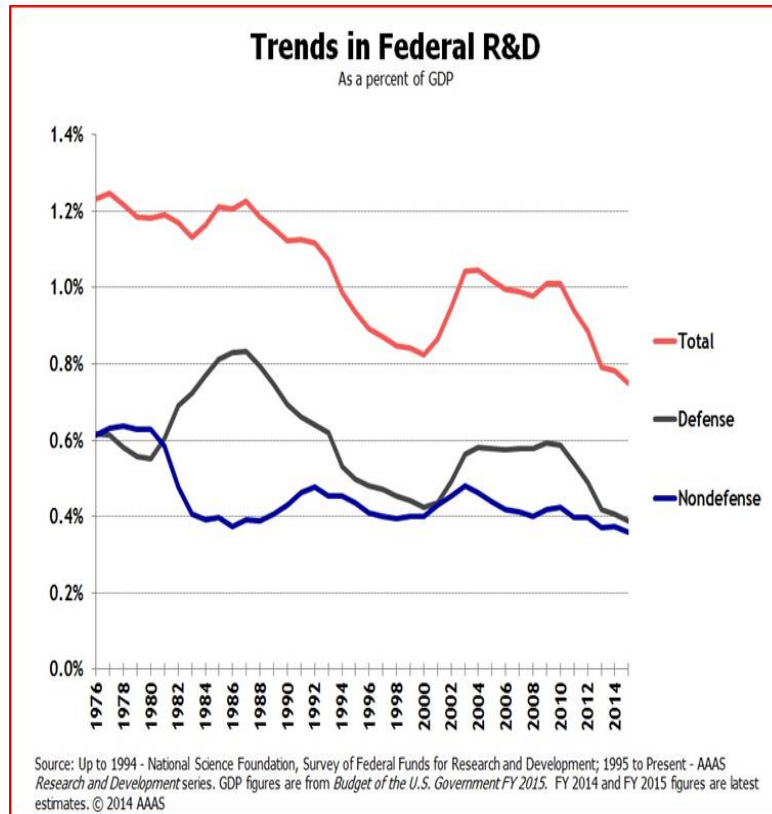
Table 5. Intramural R&D Expenditure by Performing Sector				
year	total	Basic (%)**	Applied (%)**	Experimental Developm
1995 - Total	<b>34.87</b>	<b>1.81</b>	9.20	23.86
2007 – Total				
2012 - Total	<b>1029.84</b>	<b>49.88</b>	<b>116.20</b>	<b>836.76 (83.9)</b>
Enterprises	<b>784.22</b>	<b>0.71</b>	23.89	<b>759.63</b>
Governmentsec	<b>154.89</b>	<b>19.79</b>	<b>46.93</b>	<b>88.17</b>
	(15.00%)	(7.80%)	(20.20%)	(51.00%)
Higher	<b>78.06</b>	<b>27.57</b>	<b>40.27</b>	<b>10.22</b>
Private non-	<b>12.67</b>	1.81	5.11	5.74
Intramural R&D by Source (billion yuan)				
year	Governm ent	Self- raised	Foreign funds	Other funds
2007 – 371.02				
2012 – 1029.84	<b>222.13</b>	<b>762.50</b>	<b>10.04</b>	<b>35.16</b>
Of which				
Beijing - 106.34	<b>56.60</b>	36.86	4.79	8.08
Liaoning –	<b>9.00</b>	29.64	0.08	0.36
Jiangsu – 128.79	<b>13.88</b>	109.86	0.96	4.09
Zhejiang – 72.29	<b>6.04</b>	64.44	0.31	1.47
*Share of GDP; **share of total R&D expenditure				



**Figure 5.** A matter of concern...

> U.S. Federal R&D as a share of total R&D - ~29% and declining...less than most large OECD countries.

> Non-defense federal R&D as a share of total ~ 14%



**Table 4. Key points re: patents and publications:**

1. China has surpassed the U.S. in total patents filed and granted
2. China has surpassed the U.S. in invention patents granted to domestic filers
3. China has surpassed the U.K. in USPTO patents granted; lags S. Korea and Taiwan
4. Ratio of total patents in force low relative to other countries
5. China ranks 2nd in cited papers; 7th in total citations

Table 7. Comparisons of Patent Production								
	Total	Domestic						Foreign
	All SIPO patents	Total	Enterprises	Universities	Research institutes	Government and other organizations	Non-official	All
2012 – China: SIPO								
Invention								
applications	652,777	535,313 (82.0%)	316,414	75,688	29,518	6,807	106,886	117,464 (18.0%)
granted	217,105	143,847 (66.3%)	78,651	33,821	11,248	2,234	17,893	73,258 (33.7%)
In force, of which								
Invention	875,385 (24.9%)	473,187	274,038	96,707	37,639	3,086	61,717	402,198 (45.9%)
Utility model	1,501,044 (42.8%)	1,486,839	973,122	63,650	26,839	10,701	412,527	14,205 (0.9%)
Design	1,132,132 (32.3%)	1,044,997	564,716	17,161	2,671	5,072	455,377	87,135 (7.7%)
Total patents in force	3,508,561	3,005,023 (85.6%)	1,811,876	177,518	67,149	18,859	929,621	503,538 (14.4%)
USPTO, country of origin								
Utility (invention) patents granted	Total	U.S.	Foreign origin	Japan	U.K.	S. Korea	Taiwan	China
2007	157,282	79,526	77,756	33,354	3,291	6,295	6,128	772
2014	300,678	144,621	156,057	53,849	6,487	16,469	11,332	7,236
Citations (Essential Science Indicators, Thomson-Reuters) cumulative (2001-2011)								
Country	India	U.S.	Germany	Japan	U.K.	S. Korea	Taiwan	China
Most cited countries by papers (rank)	11	1	3	4	5	12	18	2
Most cited countries by citations (rank)	16	1	2	4	3	14	Below top 20	7

### Comparisons/weaknesses

- All OECD countries dedicate substantially larger portions of R&D to basic research (3-5x)
- Enterprise sector:
  - Declining patent production returns to R&D ...also, at the firm level weak correlation between patenting and productivity growth.
  - Local government patenting incentives may be unhelpful, e.g., incentives for patent grants appear to motivate filers to narrow the claims on their patent applications → lower quality
- Higher education sector:
  - All OECD countries dedicate larger portions of higher education which performs most of basic research (2-3x)
  - Limits to autonomy-creativity in higher-ed (hierarchical/muddled incentives).
- Research institute sector:
  - Strong on publications; surprisingly weak on patents
  - 15% of total R&D; 7.8% of basic research; 5.5% of total invention patents granted
- Notable Innovations:
  - Chinese version of Bayh-Dole Act – enables recipients (i.e. universities and research institutes to secure patents for government-funded research)
  - University-corporate collaborations (e.g., Tsinghua Unigroup with acquisitions- partnerships with Chip Makers, including Spreadtrum in which Intel has a 20% share)

➤ U.S.-recommendations

- *Increase spending on basic research – retain this comparative advantage as long as possible.*
- Anticipate that it is very likely that China will catch-up...i.e.,
  - It is very unlikely that 25 years from now, the U.S. will be able to out-spend China on innovation and defense or...over the following 25 years be able to out-perform China in these areas.
  - To the extent possible seek to establish coordination and/or joint limits on such spending...
- Specifically...
  - Join the AIIB
  - Increase basic research for U.S. universities and Chinese graduate student research engagement.

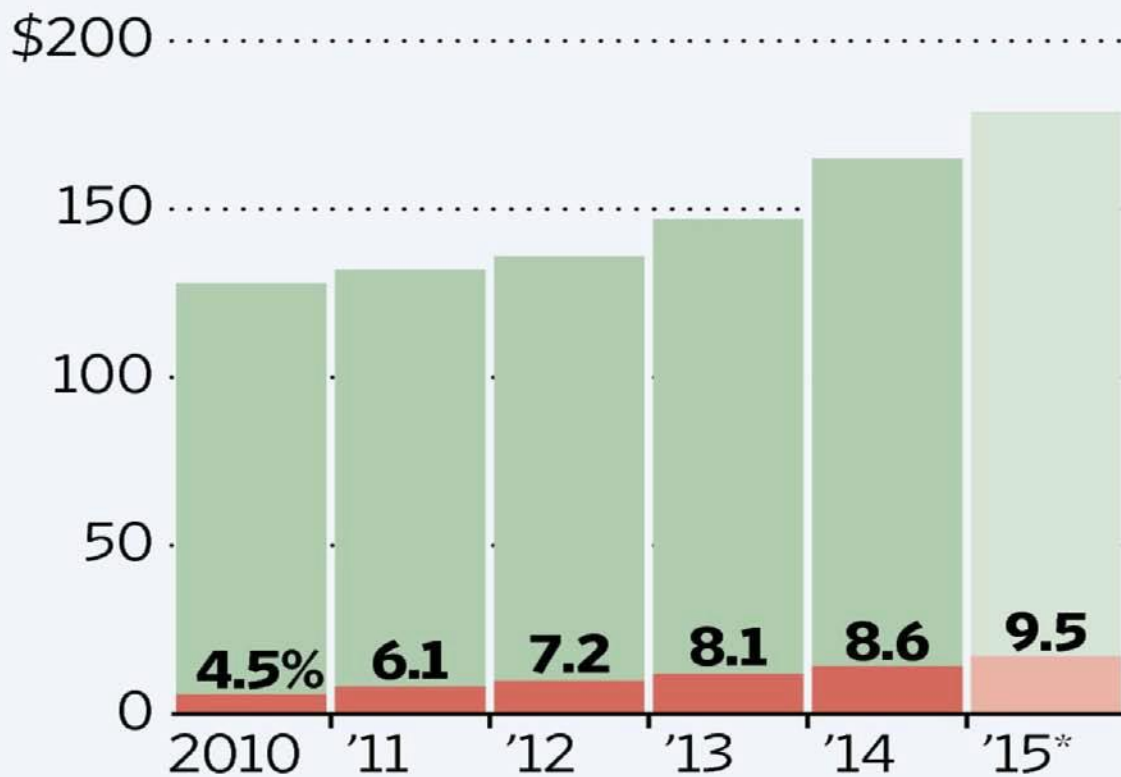
## Annex Additional tables and figures

	Chinese		US		US/China	
	NBS all	3-firm	U.S.- BEA all	3-firm	U.S./China all	3-firm comparisons
Footwear	170.9	247.0	524.9	857.7	3.22	3.47
Textiles	85.7	69.0	216.8	193.7	2.53	2.81
Apparel	54.0	300.1	121.2	348.6	2.24	1.16
Paper	127.2	236.6	431.4	331.5	3.39	1.40
Printing	84.0	102.9	180.8	191.8	2.15	1.86
Petroleum	592.9	710.9	7,149.5	2,936.8	12.06	4.13
Chemicals	187.4	232.9	912.1	1,174.4	4.87	5.04
Plastic	101.8	194.6	311.5	305.0	3.06	1.57
Wood	108.1	103.0	207.9	432.3	1.92	4.11
Non-metal	120.1	117.1	255.3	390.8	2.13	3.38
Primary metals	290.0	746.9	779.6	625.4	2.69	0.84
Fabricated metal	115.8	370.1	232.4	554.6	2.01	1.50
Machinery	126.8	305.7	327.1	409.2	2.58	1.34
Computers	120.3	986.4	316.6	963.4	2.63	0.98
Electrical	132.5	225.0	310.1	344.5	2.34	1.53
Motor	168.6	327.6	513.0	707.8	3.04	2.16
Furniture	73.9	95.3	165.0	167.9	2.23	1.76
Telecomm. Equip.	n.a.	229.8	n.a.	475.6	n.a.	2.07
Mean	147.8	311.1	719.2	633.9	3.06	2.28

\*Comparisons of the average sales/employee (generally) for 3 publicly-traded companies in China and the U.S. Information for the individual firms was drawn from the internet and/or annual reports.

## Still Lagging Behind

Value of chips used in China, in billions, and percentage supplied by domestic companies



\*Estimate

Source: International Business Strategies  
The Wall Street Journal

Figure A.1

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**OPENING STATEMENT OF DR. XIAOLAN FU**  
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DR. FU: Good morning, Chairman. It is a great pleasure to give the testimony before the committee. Thank you for inviting me.

My testimony will focus on four areas:

First is China's innovation policy, the role of the five-year plans in promoting the indigenous innovation in China, the differences between the state-owned and the private firms.

Second is about China's go-out strategy and its impact on China and the U.S. economy.

The third is about the impact of China's innovation and the industrial policy on the world markets and the American competitiveness.

And finally come up with some recommendations.

First is about China's innovation policy. Developing an innovation-oriented economy has become China's main development strategy. The main guideline policy for China in this aspect is the Outline of Medium and Long Term Plan for Science and Technology Development, and this guideline is supplemented by a set of supplementing policies for implementation.

And according to the recent key documents issued by the State Council, or issued even by the CPC Central Committee, China now is developing a firm-centered, market-oriented national innovation system while recognizing there is a role of the state to play in some parts of the innovation chain.

A set of details and the concrete action plans have been introduced recently, such as Manufacturing 2025, Internet Plus, popular entrepreneurship and innovation, together with the traditional plans on infrastructure, developing key research labs, key programs or key projects.

Normally the five-year plans are plans for comprehensive economic development in China. So they do not have detailed policy regarding supporting the development of a specific industry or area. However, the five-year plan identifies the priority industries or sectors the country will focus to develop in the next five years.

And following this five-year plan, the relevant ministries of the government will issue their own policies for the implementation afterwards, or at the same time. So the five-year plan will play a very important pivotal role in coordinating the various government departments and the resources and the strategies of the country to support the strategic goals identified in the five-year plan.

The 12th and the forthcoming 13th Five-Year Plan is likely to have particular important impact on the development of indigenous innovation in China, which is different from the previous five-years plans.

This is because innovation has been-- innovation-oriented development strategy has been regarded as the main strategy for the country. And therefore, the 12th Five-Year Plan has a specific document on innovation policy, which is different from previous five-year plans. And the forthcoming 13th Five-Year Plan is likely also to focus on innovation and market-oriented reforms, and this is likely to lead China's innovation to develop in a more healthy and a market-oriented way, oriented trajectory. Of course, the largest beneficiary will be the sectors identified in the five-year plan as the priority or of strategic importance for the country.

In terms of the state and the non-state sectors in China's innovation system, the non-state owned firms, actually they are the main players in the national innovation system in terms of



investment, in terms of how much R&D personnel they have, in terms of outputs like patents applied and the new product sales.

The non-state sector exceeds the state sector significantly in recent years. Of course, this is also because of the reforms of the state-owned sector and the privatization of many of the state-owned firms into privately-owned firms.

So what my research finds out is that in China, the state-owned, the private-owned, the foreign-invested firms all played a leading role but in different sectors of the economy. The state-owned sector plays a leading role in the high-medium technology sector, which is very capital intensive. The foreign-invested firms play a leading role in the high-tech sector, and the privately-owned firms play a leading role in the labor-intensive sector.

And therefore instead of a pure market driven model, or the so-called state-led innovation system, I think China's real innovation system follows a market-driver model, which is led by a mix of players. But the SOEs and the private firms behave differently. The SOEs face much less resource constraint, and the private firms face much more resource constraint and other constraints. The private firms and the foreign-invested firms are much more responsive and flexible in the face of the constraints, and they find ways to overcome it, while the SOEs are much more rigid and less responsive to the various constraints they face. Their absorptive capacities to external knowledge are also different. The SOEs are weaker than the privately-owned firms.

As Professor Jefferson has found, innovation has a positive effect on firms' productivity and competitiveness in China although this evidence is less strong. Previously price competitiveness is the main factor, and now innovation is becoming more important although less important than that in the Western countries.

So far the impact of China's innovation on the U.S., I think so far is limited. Moreover, China plays an important part in the global production network as the final low-value-added part for assembly, using China's cheap labor. Of course, this actually helps the other partners in the global production chain like Apple, like other high-value-added players, to form a very competitive production chain so that they can produce more affordable accessible products to the world.

So like one of the earlier panelists said, it's always an opportunity for the U.S. companies to collaborate with the Chinese firms because each has its advantage, and actually Apple earns much more value added than the Foxconn in China like in the production of iPhone for Apple.

But with China moving up the ladder of the value chain, the competition with the U.S. will be more direct.

Second is about China's go-out strategy. Technology acquisition was one of the main objectives in China's outward foreign direct investment in the 1990s. However, since the launch of the go-out strategy in the year 2000, it is less evident. This is less explicitly spelled out that acquisition of foreign technology is one of the main objectives in government policy.

Also, again, I endorse the words the earlier panelists said. Chinese firms' going-out strategy and activity appears to be more market-driven, and it seems much more has been a firm's own strategic choices to move up the value chain, to move up to the two ends of the value chain. One end is for resources. Another end is for strategic assets, for knowledge, for technology. So they look for money, they look for market, and they look for profits at the firm level.

So the objective to acquire advanced technology is one of the main objectives for Chinese firms invested in developed countries. My own survey in Guangdong found out that nearly 76,

three-quarters of the firms, saying that acquiring advanced technology is one of their main objectives to go to advanced markets, Europe and the U.S.

But the SOEs and the PVEs and the private firms also behave somewhat differently. The private firms consider cost factor as an important factor, but the SOEs, state-owned firms, are less sensitive to cost factors. Other factors, like learning, the scope for learning, potential for learning, is more important for them.

And they also treat U.S. and Europe markets differently. For Europe, they go to Europe mainly for learning, learning for advanced technology and the management skills. They go to U.S. for both, for both market and for learning. So, yeah, they also think U.S. is a large market.

The impact on China's go-out strategy on Chinese firms in terms of innovation is still too early to assess. Also, European Commission has commissioned a study on this, and they also found the impact is quite diverse and it's too early to assess.

They even found positive impact on the local subsidiaries while my own research found Chinese firms' innovation capacity has increased after go-out strategy, especially if their orientation is strategic asset-seeking, and if they go to the advanced countries' market.

My case study about some Chinese telecommunication companies, such as Huawei and ZTE, found that these firms did develop their capabilities following their go-out strategy, not that significant in technological capability, but much more in their overall capability in developing a new product and serving the new market, its overall capability.

For the host country, what's the impact? Normally any inward FDI to a host country, regardless where it comes, it's a welcomed phenomenon for the host country. However, there are cases where Chinese overseas investments are rejected or restricted in both the U.S. and the EU.

There are concerns about security, about environmental impact. However, compared to the Indian multinationals, they face much less restrictions than the Chinese multinationals. I think more research is needed to find out why there is such a difference.

HEARING CO-CHAIR WESSEL: Professor, we're going to have to stop you.

DR. FU: The final--

HEARING CO-CHAIR WESSEL: Your full testimony is going to be made part of the record, and we've all seen it.

DR. FU: Yeah.

HEARING CO-CHAIR WESSEL: So it will be open for questioning.

**PREPARED STATEMENT OF DR. XIAOLAN FU  
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April 22, 2015

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

**China's Policy and Strategy for Technology and Innovation**

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**I. China's innovation policy and the role of the Five-Year Plans in promoting indigenous innovation. How have the Five-Year Plans integrated China's innovation, upgrading, and trade promotion strategies in key economic sectors such as clean energy and telecommunications? How successful have these efforts been?**

Building an innovation-driven economy has been highlighted by the Chinese government as one of its major tasks at the current stage of development of the country. Transforming from an imitator to an innovator is the cornerstone of China's innovation policy. China has moved faster than most of its peers in the developing world in establishing the foundations of a world-class innovation system.

The main guiding policy for China's innovation policy is the Outline of Medium and Long Term Plan for S&T Development (2006-2020), whose goals are further detailed in five year plans, such as the current Twelfth Five-Year Plan for Science and Technology Development. In addition, supportive policies for implementing the Outline play a key role in setting up a firm-centered national innovation system in general, and in innovation capacity-building of firms. These policies show an increasing focus on innovation as a means to address societal challenges as well as a focus on building up indigenous innovation by improving university-industry linkages, attracting overseas talents, enhancing intellectual property rights protection, and strengthening international innovation cooperation.

A supplement document of the 12<sup>th</sup> Five-Year Plan (FYP) issued by the State Council on developing national indigenous innovation capacity (State Council 2013, no. 4) has identified the main objectives and strategies of the 12<sup>th</sup> FYP in terms of infrastructure (key labs, key projects, key centres, etc), key sectors (agriculture, manufacturing, strategic emerging industries, energy and transportation), the main drivers of innovation, regional distribution, and improvement of the innovation environment.

According to the document entitled ‘Deepening systems reforms to accelerate the implementation of innovation-driven development strategy’, issued by the CPC Central Committee and the State Council on March 13, 2015, innovation in China should be demand-oriented, prioritizing talents, following the natural development of scientific research and the market, and adhere to overall innovation which includes technological, institutional as well as management, organisation and business model innovation. It aims to build up a favourable institutional and legal environment for innovation by 2020. This document will be an important guide which is likely to be incorporated into the 13<sup>th</sup> FYP.

Normally the FYPs do not give very specific policies regarding the promotion strategies of a particular sector, even it is a key economic sector such as clean energy. However, the FYP does identify the key sectors which the country will prioritise in its development. Different ministries which are responsible for the various policies or strategies, eg. innovation, upgrading and trade promotion, should reflect the national strategy in their sectoral development plan in line with the guidance of the Five-Year Plans. Empirical research of government policies finds that many of the innovation policies in China are issued by ministries other than the MOST, for example, NDRC (National Development and Reforms Commission), MOC (Ministry of Commerce), MOF (Ministry of Finance), Customs, central bank, State Intellectual Property Office (SIPO) or even the State Council and CPC Central Committee. Hence the Five-Year Plans have played a pivotal role in pushing forward and coordinating policies, resources and efforts of the various government departments for a national innovation strategy.

The Chinese government has correctly recognised that innovation is a system engineering process, which involves many actors in the economy instead of a simple task for the Ministry of Science and Technology (MOST). There was some lack of coordination in the policies issued by the various departments. In recent years, there were efforts to overcome this problem. The State Council, especially some high level leadership groups, eg. the Central Economic and Finance Leadership Group, and the Central Deepening Reforms Leadership Group, have coordinated these policies (and should be delegated this responsibility more explicitly).

With regard to the development of clean technology, in China, there is a state-led innovation system for clean energy development. China has taken a more “home-based” outside-in technology transfer and indigenous innovation model; while India has taken a more “go-global” active technology acquisition model using overseas R&D lab and cross border M&A (Fu and Zhang, 2011). Although there is strong government support for green technology, the lack of core indigenous technological capability still lingers. In this sector, the solar photo voltaic industry for example, we can be more confident to say that China has developed a strong production capacity instead of technology or innovation capacity. In the telecommunications sector, China’s international competitiveness is driven mainly by the private sector (eg. Huawei, Lenovo) and multinational companies except for only a few state owned enterprises (eg. ZTE) (Fu, 2011; Fu, 2015). Similar evidence is also found in a study of the semi-conductor sector in China where there are dual segments in the industry; an export-oriented segment which mainly consists of the foreign-invested firms and a low productive segment which is dominated by domestic, especially state owned firms (Teece and Chesbrough, 2005). Therefore, it is too early to assess how successful the FYPs have been in promoting China’s indigenous innovation capacity. What is clear is that China has been successful in mobilising the resourcing to develop

a world class production base in these sectors.

**II. Describe China's state-owned and private firms' efforts to innovate and upgrade. Is there a difference between the strategies of private and state-owned Chinese firms? How have these efforts affected Chinese firms' domestic and international competitiveness? What impact, if at all, have these efforts had on the U.S. economy and American competitiveness?**

**The state-owned and private firms' innovation efforts**

Although the state-owned enterprises (SOEs) have been a major force of the Chinese economy, especially before and at the early stage of the reforms from the 1980s, in respect to innovation, the foreign invested enterprises (FIEs) and domestic privately owned firms (POEs) have not only been investing more in R&D than the SOEs, they are also more efficient in innovation and producing more innovative outputs (Chapter 2, Fu, 2015). Moreover, instead of having the SOEs taking a lead in pushing forward the technology frontier among Chinese firms, FIEs and POEs are the leading players in the high-technology, low technology and low-medium technology industries, respectively. That said, SOEs remain a leader in the high-medium technology industries (Chapter 5, Fu, 2015). So the SOEs, POEs and FIEs all have played their roles in China's technology upgrading and innovation. Therefore, instead of a pure market-driven model of innovation or the often assumed 'state-led model of innovation', China's path to innovation follows a multi-driver model led by a mix of players – the state, the private sector and the MNEs, with each of them playing a leading role in different segments of the economy and the innovation system (Chapter 15, Fu, 2015).

In China, state-owned firms (also state universities and research institutes) are currently the major beneficiary of the Five-Year Plans (as they are the main recipients of the government funding under the FYPs). These firms also have much better access to bank loans than the private and foreign-owned firms, especially private small and medium enterprises (SMEs). Reforms of the financial sector started recently in China, including a liberalisation of interest rates. However, reforming the financial sector is a complex task that will take time to accomplish. Moreover, the constraint in access to financial resources by SMEs is a widely recognised problem even in developed economies. Therefore, even with a more liberalised financial sector in China, the government needs to set up targeted SME innovation funds and information support systems to promote the innovation activity of SMEs.

Empirical research finds that Chinese firms that suffer from greater market/institution-related, capability/skills-related or finance/risks-related constraints are more likely to engage with open innovation (eg., collaborate or tap in external resources) in greater depth and breadth to overcome these impediments. The strength of such responses however varies across firms of different ownership types, firm size and technology intensity. Foreign-invested firms appear to respond the most by widening and deepening their openness in innovation. Privately-owned firms have made significant responses to market/institution- and finance/risk-related impediments but not to knowledge/skills-related impediments. However, state-owned firms appear to be least responsive in terms of using open innovation to overcome the constraints and risks they face. They make no significant adjustments in terms of depth of openness although

they increase their width, eg., by adding more partners, to respond to resource and skills constraints (Fu, Xiong and Li, 2013; Fu, 2015).

The state-owned and private firms also appear to have different capacities in regards to absorbing foreign technology. A study of the Chinese semiconductor industry showed that Chinese firms with significant exports (most of which are foreign-invested firms) had higher absorption rates of foreign technology. In contrast, the state-owned enterprises were less capable of absorbing new technologies, relative to other private Chinese firms (Chesbrough and Liang, 2008). This is similar to the findings by Girma et al (2006) on the impact of FDI on the innovation capacity of SOEs. However, the data used in these two studies are somewhat dated in relation to my testimony. With the reforms in SOEs, the situation might have improved to a certain extent.

### **Impact of innovation on Chinese firms' competitiveness**

With regard to the impact of innovation on Chinese firms' domestic and international competitiveness, the majority of empirical research finds a positive association between innovation and Chinese firms' productivity (Liu and Li, 2005; Yang and Yuan, 2014) and their export performance (Guan and Ma, 2003; Lin, 2008). Of course, further empirical evidence is needed using larger and more representative sample and controls for the reverse causality from higher performance to more innovation. Nevertheless, using product level trade data, Wang and Wei (2008) find that improvement in human capital and government policies in the form of tax-favored high-tech zones appear to be the key to the country's evolving export structure. On the other hand, processing trade, foreign invested firms, and government-sponsored high-tech zones all have contributed significantly to raising the unit values of Chinese exports within a given product category.

### **Impact on the US economy and American competitiveness**

As regard to the impact on the US economy, the innovation efforts of Chinese firms, which are significant in cost cutting, have provided US consumers with products that are not just affordable but also of improving quality over time.

So far, the impact of China's innovation efforts on American competitiveness is limited. Direct competition with US firms has been mainly in the labour intensive, low technology sector, which had become relatively small under pressure from imports from other developing countries even before China became a substantial exporter. China has been successful in serving as the final assembler of many high-technology products such as computers, laptops and mobile phones. From the outside, simply looking at the trade data, China is overtaking the US, Japan and South Korea in high-tech product exports. Given the labour division in the global value chain of these products, China's improving capability is now complementary to that of the US and other advanced economies. Because this division of labour and collaboration in the global value chain has enabled those high cost, high technology consumer products to be accessible and affordable to the wider middle-class and even grassroots consumer markets. As a result, American technology giants like Apple are able to reap huge value added.

However, with China moving up the technology ladder and transforming from an imitator to an

innovator, there will be competition between China and the US in some industries in the medium and long term (Schott, 2006; Fu, Kaplinsky and Zhang, 2012), the same as the relationship today between the US and Europe and that between the US and Japan.

**III. How do Chinese government development plans promote "go-out" strategies related to innovation acquisition? What are the motivations underlying Chinese firms "going out" strategy? Is there a difference between state-owned and private firms strategy? What impact have these policies had on the U.S. economy and American competitiveness?**

**The 'go-out' strategy and Chinese firms' motivation to 'go out'**

Since 2000, Chinese firms have been encouraged to "go global". While government policies in the early 1990s indicated acquiring advanced technology as one of the objectives of Chinese firms' outward direct investment, policies issued since 2000 after the launch of the "go global" strategy focus more on supporting SMEs and non-state-owned firms to go global. Some specific funding from the fiscal budget has been set up to support the SMEs' go-global activity. Chinese banks are internationalising themselves too to support Chinese MNEs' go global activity, although the loans have to go through the normal commercial loan approval process. Innovation acquisition is not observed to have been promoted using specific policy in the recent wave of the 'go global' phenomenon. Rather, it appears to be driven more by the firms' own strategic choices and location decisions.

Acquiring advanced technology has been a widely recognised objective of those Chinese MNEs investing in advanced economies regardless of ownership (Fu, et al., 2013; Fu, 2015). This type of behaviour of emerging market MNEs in advanced economies is regarded as a natural decision of these firms so as to move up the value chain, from the middle of the Smile Curve to the two ends of it in the Global Factory (Buckley, 2012, Mudumbi, 2012). The significant OFDI projects of Chinese MNEs are a mix of both private firms (eg. Huawei, Lenovo, Sany, Geely, Wangxiang, Haier) and SOEs (eg. ZTE, Zoomlion, and some state-owned automobile companies).

According to a survey carried out in Guangdong Province in 2010, the top two objectives for firms that invested in developed countries are 'to explore international markets' and 'to acquire advanced technology and management knowledge'. Over 75 percent of the surveyed firms regarded each of these two as their objectives in developed countries. Of course, SOEs are often argued to be the agents carrying out the state's strategic tasks. The Guangdong survey finds a slight difference in the factors that firms take into account in decision making. While private firms take cost factors into serious consideration in OFDI decision making, SOEs are much less sensitive to this factor and focus more on the learning opportunity (Fu, et al., 2013). Moreover, Chinese MNEs investing in the US appear to have a somewhat different perspective than those investing in Europe. They are going to Europe mainly for knowledge, while they consider the US as a location with opportunities in both knowledge sourcing and market expansion. (Fu, et al., 2013).

The Chinese MNEs 'go global' in a variety of modes. For Chinese firms that aim to acquire innovation abroad, the entry modes include 1) setting up a subsidiary abroad and through the subsidiary's learning and research activities reverse transfer knowledge back to the headquarter, 2) setting up an R&D lab abroad, 3) acquiring firms or a division of a firm abroad which has the technology that the MNE is interested in, and 4) collaborating with foreign firms or universities or research institutions for innovation activities. All these modes are observed among Chinese MNEs, although the actual scale is likely to be smaller than what people normally imagine. For example, the proportion of Chinese firms collaborating with foreign partners is much smaller than that of the OECD countries (OECD, 2013; Fu, 2015).

### **Impact of China's 'go global strategy'**

Overall, it might be too early to assess the impact of China's go global strategy on its innovation capacity. A study of technology-driven MNEs from emerging markets finds that firms with high levels of intangible assets, high profitability and open innovation models are more likely to conduct this type of OFDI. There is high diversity in the impact of go-global OFDI and in several cases the investment has a positive impact on the European subsidiaries. The positive impact in terms of increasing technological capabilities may take several years to realise (Chaminade, 2015). My own research on Guangdong MNEs finds that Chinese firms' OFDI in developed countries positively affects the investing firm's innovation performance. Such a positive impact is enhanced by the focal firm's international experience and the knowledge-seeking motive of overseas direct investment (Fu, Hou and Liu, 2015). Moreover, my case research on Huawei and ZTE's internationalisation shows that they did not only upgrade their technology capabilities, but also their overall capabilities as well. Both of the two new entrants have competed with incumbents by developing resources and capabilities that are especially adapted to the local market. Huawei has accumulated customer knowledge and created a strong customer-priority solution department that is nearly impossible for their western competitors to replicate due to the organisational inertia and bureaucracy in large traditional MNEs (Fu, 2015). Finally, Chinese firms collaborating with foreign universities are more likely to produce innovation of high novelty than when collaborating with domestic universities or than those firms who do not collaborate with universities at all (Fu, 2015).

As regard to the impact of Chinese firms' go global strategy on the US economy, normally inward FDI, regardless of source country, is regarded as a welcomed phenomenon for the host country. It should be the same for Chinese OFDI. However, there are cases in both the US and Europe where OFDI projects by Chinese MNEs are restricted or rejected by host country governments due to concerns over security. It is difficult to make a general conclusion on these cases and it may need to be looked case by case. However, it appears that the objections received by the Chinese MNEs number more than objections to MNEs from other major emerging economies. Lack of trust and communication and some discrimination might exist against Chinese MNEs, especially Chinese SOE MNEs and Chinese MNEs in the high-technology sector. Hence the suspicion on these Chinese MNEs is not well justified (at least for some of them) and they were treated unfairly in respect to their market entry into the US and some other host country markets.

Assuming that Chinese firms can effectively absorb and integrate the knowledge acquired



through the ‘go global’ strategy and develop their innovation capacity, as I discussed earlier, together with China’s continued heavy investment into R&D, China will upgrade to be an innovator, or further ahead, one of the global innovation leaders. How would this affect the US economy? On the one hand, there will be direct competition between the firms in these two countries. On the other hand, the US will have more global knowledge that it can source and a partner of similar capacity with which it can collaborate.

This also depends on whether the US can turn the Chinese technology-driven FDI into an active and dynamic innovator, a normal participant in the US economy which can contribute significantly to the US economy.

To note, these are the likely effects of Chinese firms’ OFDI activity. It will be difficult to disentangle these effects between those due to government policy and firms’ own decisions.

#### **IV. How, if at all, are China’s indigenous innovation and industrial policies impacting global markets and American competitiveness?**

The impact of China’s indigenous innovation and industrial policies on global markets are exerted through China’s increasing competitiveness and hence China’s increasing exports in manufacturing products.

For the consumers globally, export growth from a country with reservoirs of surplus unskilled- (and increasingly also semi-skilled and skilled) labour, coupled with sustained productivity growth (Lai, 2004; Fu and Gong, 2011), have provided the world with low-cost products.

For the competitors, some research shows that that Chinese exports crowd out the exports of other Asian countries (high income Asian exporters in particular) mainly in markets for consumer goods (eg., Eichengreen *et al.* (2004), Greenaway *et al.* (2008), Lall and Albaladejo (2004)). However, Haltmaier *et al.* (2009) find that China’s increasing presence in export markets has had a negative effect on exports of some products for some other Asian economies, but not for other products, including those of the electronics industry. Moreover, Ahearne *et al.* (2006) find a ‘flying geese’ pattern in which China moves into the product space vacated by the Asian Newly Industrialised Economies (NIEs) and a potential for exports of all Asian economies to grow in harmony. With regard to China’s impact on the high income countries, Bernard *et al.* (2006) find that firms adjust their product mix in response to trade pressures from low-wage country imports. They also find within-industry resource reallocation towards capital-intensive plants and that firms are more likely to switch to capital- or skill-intensive industries when exposure to low-wage countries is high.

The research on unit prices of manufacturing products in general finds that Chinese exports tended to lower the prices of competitors (eg., Kaplinsky and Santos-Paulino, 2006; Amiti and Freund, 2008). Using the most disaggregated trade data feasible – 8 digits for the EU and the US, and 6 digits for Japan, all for the 1989-2006 period, Fu, Kaplinsky and Zhang (2012) find that imports from middle income countries are in close price competition with those from China and that there has been price competition between China and high-income countries in low-technology products. By contrast, the impact of China’s exports on low-income countries is not

through price competition but through market expansion. China's WTO entry had a once-for-all shock on the export prices of high-income countries. The price competition effect of China's exports weakened over the time period from 1989 to 2006, suggesting a gradual change in competition from price to non-price factors such as quality and variety. If sustained, this trajectory will intensify competition with high-income economies in the future.

On the other hand, however, China will change with fast economic and export growth. How might the price effects change in the future? In addition to technology upgrading which was discussed earlier, real wages in China are highly likely to continue to rise as the labour surplus is absorbed. This will result in an increase in the price of China's exports if there is no significant technological innovation to cut the total costs of production. A second possible development is one which, in the context of China's historic trade surplus, sees a growing appreciation in China's exchange rate and hence an increase in China's export price (although in processing trade, higher export prices are to some extent offset by lower import prices). Given the consistent and significant positive association of export prices between Chinese and middle-income countries, this may result in an appreciation in the price of exports of other countries. If the increase in export prices leads to a smaller market share of China's export price, our results suggest that this change also will lead to an appreciation in export prices of medium- and high-technology exports from low-income countries and in resource-based and low-technology exports from high-income countries.

**V. How should the United States respond to the challenges and opportunities of China's innovation policy? What are your recommendations for Congressional action related to the topic of your testimony?**

First, the US authorities and US businesses should be confident about the dynamism and competitiveness of the US innovation system and the US economy. The US has a world class innovation system, a well developed market system, a world class education system, and well developed institutions that are more transparent and effective than in many of the countries in the world (despite some inefficiency in some parts of decision making and in the economy). The gap in technology and innovation capacities between the US and China remains significant and it will not be easy for China to catch up, especially rapidly because of shortcomings in its education system and economic and institutional systems which need some time to correct. The US should continue to develop its own innovation and S&T leadership. Of course, it also requires a mindset change. In other words, the US need to develop a long term innovation and industry development strategy in the context of global division of labour in a dual- or multi-polar world.

Second, transparency, openness, communications and dialogue matter. In many cases, fears and worries arise from lack of communication, transparency and openness. The worries in the US about China's threat or Chinese firms' threat to the US may not be well founded because what the Chinese government prioritises is developing its own country's prosperity through innovation and industrial upgrading, not competing with other countries. The worries in China that the US will always curb China may likewise not be well founded because the US will welcome sharing the responsibilities of global development with others including China. All this should be communicated to the wider economy and society in both countries using multi-channels. Through this trust will be build up and greater economic and wider engagement between the two

countries will be possible. It is the responsibility of the US and Chinese governments to build up the platforms and channels for a mutual exchange, dialogue, communication and trust in the wider economy and society.

Third, the US should collaborate more with China on innovation. Given the fact that innovation is increasingly a collaborative task and that international collaboration is adopted by more and more firms in today's era of globalisation, United States firms need to have more and more innovation collaboration with their Chinese peers, necessitating less regulation on these kinds of cooperation. Recent research by a joint team of EU and Chinese scholars finds that in 2005, in terms of the total collaborative research with China, the EU was at a slightly higher level than the US in chemistry, and at a similar level in other fields. However, regarding "high quality collaboration", defined as publications in high impact journals, the EU/US ratio increased in almost all fields from 2005 to 2011. In other words, the US needs to have more high quality collaborative research with China (SPI, et al., 2014).

Fourthly, the US should be more active in assisting China in capabilities building especially in areas that the US has concerns. For example, intellectual property rights (IPR) protection has been an area of concern for many years. This is one of the key area that gives rise of disputes and hinders greater collaboration and engagement between firms and research institutes in these two countries. While it is recognized that IPR protection has been improved substantially in China, it is still not enough. The problem is less with the Chinese government's willingness in doing so, but more with knowledge and skills to implement throughout this large country. Therefore, actively providing training and other means of assistance in IPR protection will accelerate the process of problem solving and hence more trade, investment and collaboration with China. Such collaboration and assistance also in including supporting China's greater openness and deeper integration into the global trade, investment and innovation system.

Fifthly, the collaboration between the US and China on innovation policy need not be limited to collaborative research; the collaboration can expand to wider areas along the innovation chain and in the innovation system. For example, in addition to the collaboration in Intellectual Property Rights protection which has already been under discussion for some years, the role of financing, new financial institutions for innovation, especially for entrepreneurial technology start-ups, is likely to be of growing importance in the future. Both United States and China might consider more collaboration in support for private SMEs' innovations in China and the US although there may be different emphasis for firms in each country, eg., more financial support for Chinese SMEs and more market entry for American SMEs.

Finally, global competition for highly skilled talents will be intensified as China is increasingly open up to international talent flows. Migration policy reforms will be an area for close monitoring.

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**OPENING STATEMENT OF DR. ERNEST PREEG  
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DR. PREEG: Do I hit the green button; is that it?

DR. FU: This one.

DR. PREEG: Oh, "talk." Well, that makes a lot of sense. I'm delighted to be back here at an important time, and I'd like to comment on the Chinese export-oriented technology strategy and its impact on U.S. trade.

The extraordinary rise of China as an advanced technology superstate--and I wrote a book about it with that title in 2005--dates from the turn of the century and is now in full bloom, driven by rapid export growth and an unprecedented trade surplus in the technology-intensive manufacturing sector, and a principal impact of this soaring Chinese trade surplus has been an offsetting rapid rise in U.S. trade deficit.

In 2000, U.S. global exports of manufactures were \$650 billion, three times larger than Chinese exports of \$220 billion. By last year, 2014, however, Chinese exports had soared to double U.S. exports and manufactures to 2.1 trillion versus 1.1 trillion.

Even more detrimental to U.S. export competitiveness has been the rapid rise of the Chinese trade surplus for manufactures and the U.S. deficit since 2009. In just five years, Chinese surplus has doubled to an astounding \$1 trillion last year--that's half of their total production--while the U.S. deficit was up by 242 billion, with a resulting loss of about 1.7 American manufacturing jobs.

And two-thirds of the U.S. global deficit is with China. These basic facts about the dramatic changing of places between the United States and China as number one exporter of manufactures are generally known. What is less well understood is the increasing concentration of Chinese exports in high-technology industries, as shown in Tables 1 and 2 of my written presentation for the ten largest high-technology export industries.

From 2009 to 2014, Chinese exports for the ten industries rose by 82 percent, or 510 billion, while U.S. exports were up by only 46 percent, or 244 billion. As a result, the large Chinese export lead increased in 2014 to 1.1 trillion versus 769 billion by the United States. By sector, the Chinese lead centers on the three IT industries listed, where Chinese exports grew six times faster than U.S. exports to be 3.6 times larger than U.S. exports in 2014.

For the three machinery sectors listed, Chinese exports grew by 93 billion compared with 50 billion growth by U.S. exports. And, again, the rising Chinese surplus and the rising U.S. deficit in these high-technology industries are even more detrimental to the United States, as shown in Table 2. For all ten industries, the United States had a deficit already of 131 billion in 2009, which more than doubled to 289 billion in 2014, while the Chinese surplus of 156 billion surged by another 144 billion to 308 billion.

Beyond this severe adverse impact on U.S. global export competitiveness, the Chinese export-oriented growth strategy is having game changing consequences for the international trade and financial systems, which I have analyzed in a full study which has been distributed to members of the Commission.

And it includes proposals to restore a more balanced rules-based system, which has much to do with Chinese trade and exchange rate policies. For example, the dollarized financial system of the past seven decades is in transition to a multi-key currency relationship centered on the dollar, the euro, and the Chinese currency, with a declining share of payment, already less

than half, made in dollars.

I would just conclude by citing the most important policy issue influencing the rising trade imbalances in price sensitive manufactures, namely, the IMF obligation not to manipulate currencies to gain an unfair competitive advantage in trade. I'm quoting Article IV. And in it, manipulation is defined as protracted large-scale official purchases of foreign exchange which have a direct and immediate effect of holding the currency below its market-based level.

Over the past dozen years, China has made \$4 trillion of such official purchases in dollars and other currencies, which is protracted and large scale by any conceivable definition of the term. And yet the U.S. Secretary of the Treasury as required has been reporting to the Senate Banking Committee every six months that no IMF member, including China, has been manipulating its currency to gain an unfair advantage, competitive advantage in trade. Commissioners, I personally disagree with this policy of denial.

Thank you.

**PREPARED STATEMENT OF DR. ERNEST PREEG  
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FOR PRODUCTIVITY AND INNOVATION**

Presentation to the U.S.-China Economic and Security Review Commission  
For the Hearing on China Ahead of the 13<sup>th</sup> Five Year Plan: Competitiveness and Market Reform  
April 22, 2015

The Chinese Export-Oriented Technology Strategy and Its Impact on U.S. Trade

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The extraordinary rise of China as an advanced technology superstate dates from the turn of the century and is now in full bloom, driven by rapid export growth and an unprecedented trade surplus in the technology-intensive manufacturing sector.<sup>17</sup> And the impact of this soaring Chinese trade surplus on U.S. trade has been an off-setting rapid rise in the U.S. trade deficit.

In 2000, U.S. exports of manufactures were \$650 billion, almost three times larger than the \$220 billion of Chinese exports. From 2000 to 2013, however, Chinese manufactured exports grew 844%, to \$2,077 billion, or 85% larger than the \$1,124 billion of U.S. exports, which were up by only 73%, and by late 2014 Chinese exports were more than double U.S. exports.

The rapidly rising Chinese surplus and U.S. deficit for manufactures is even more disturbing, since a rising U.S. deficit has net adverse impact on U.S. production and jobs. From 2009 to 2014, the Chinese surplus more than doubled, from \$450 billion to \$998 billion, which rounds to an amazing \$1 trillion, while the U.S. deficit soared from \$321 billion in 2009 to \$563 billion in 2014, which equated to a net loss of 1.7 million American manufacturing jobs. Moreover, \$372 billion, or 66%, of the global U.S. deficit in 2014 was with China.

These are the basic facts about the dramatic changing of places between the United States and China as the number one exporter of manufactures. What is less well known, but critical for assessing the Chinese technology-centered national economic strategy, is the increasing concentration of Chinese exports in high-technology industries, as shown in Tables 1 and 2 for the ten largest high-technology export industries, which in 2014 accounted for 67% of total U.S. manufactured exports and 51% of Chinese exports. Table 1 presents U.S. and Chinese exports for the 10 industries in 2009 and 2014. Over just five years, Chinese exports rose 82%, or by \$510 billion, to \$1,135 billion, while U.S. exports were up only 46%, or by \$244 billion, to \$769 billion. Thus the changing of places, with China now the number one exporter, strongly carries over to high-technology industries.

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<sup>17</sup> For the origins, see Ernest H. Preeg, *The Emerging Chinese Advanced Technology Superstate* (MAPI and the Hudson Institute, 2005).



**Table 1**  
**U.S. and Chinese Exports of High-Technology Industries**  
(\$ billions)

	<b>2009</b>		<b>2014</b>		<b>09-14</b>	
	<b>U.S.</b>	<b>China</b>	<b>U.S.</b>	<b>China</b>	<b>U.S.</b>	<b>China</b>
Medicines and pharmaceutical products	44	9	49	13	+5	+4
Power generating machinery and equipment	30	19	44	37	+14	+18
Machinery specialized for particular Industries	40	17	54	40	+14	+23
General industrial machinery and equipment	49	50	79	102	+30	+52
Office and data processing equipment	39	147	50	222	+11	+75
Telecommunications and sound recording	36	159	53	280	+17	+121
Electrical machinery and appliances	85	134	114	279	+29	+145
Road vehicles	70	29	132	71	+62	+42
Other transport equipment	87	30	132	32	+45	+2
Professional and scientific instruments	45	31	62	59	+17	+28
<b>Ten industry total*</b>	<b>525</b>	<b>625</b>	<b>769</b>	<b>1,135</b>	<b>+244</b>	<b>+510</b>

\*SITC 54, 71-72, 74-79, 87

Source(s): U.S Census Bureau, FT-900, and China's Customs Statistics (Monthly Exports and Imports)

The full story of the export competitiveness rise for Chinese high-technology industries, however, is revealed by the performance of the individual industries. The only two industries where the United States maintains a large lead are road vehicles, centered on the deeply trade-integrated North American automotive industry within NAFTA dating back to the U.S.-Canada free trade Auto Pact of 1965, and other transport equipment, thanks largely to Boeing. The United States also has a lead in medicines and pharmaceutical products, although the trade is relatively smaller.

The Chinese lead centers on the IT industries –office and data processing equipment, telecommunications and sound recording, and electrical machinery and appliances. Chinese exports for the three industries grew by \$341 billion, six times the \$57 billion U.S. growth, while Chinese exports in 2014 of \$781 billion were 3.6 times larger than the \$217 billion of U.S. exports. In the three machinery industries, listed 2 through 4, Chinese exports grew by \$93 billion, versus \$58 billion for the United States, shifting from a large \$33 billion U.S. lead in 2009 to a \$2 billion Chinese lead in 2014. And for professional and scientific instruments,

Chinese export growth converted the \$14 billion U.S. lead in 2009 to a much smaller \$3 billion lead in 2014, with five year growth of \$28 billion by China compared to \$17 billion by the United States.

These are the striking figures for the rapidly growing Chinese lead over the United States for exports of high-technology industries. Unfortunately, the corresponding figures for trade balances in these ten industries, presented in Table 2, are even more detrimental for U.S. export competitiveness. For all ten industries, the United States had a deficit of \$131 billion in 2009, which more than doubled to \$289 billion in 2014, while the Chinese surplus of \$156 billion in 2009 also more than doubled to \$322 billion in 2014.

**Table 2**  
**U.S. and Chinese Trade Balances in High-Technology Industries**  
**(\$ billions)**

	<b>2009</b>		<b>2014</b>		<b>09-14</b>	
	<b>U.S.</b>	<b>China</b>	<b>U.S.</b>	<b>China</b>	<b>U.S.</b>	<b>China</b>
Medicines and pharmaceutical products	-16	+2	-28	-6	-12	-8
Power generating machinery and equipment	-9	+1	-22	+13	-13	+12
Machinery specialized for particular Industries	+16	-8	+7	+1	-9	+9
General industrial machinery and equipment	-1	+4	-14	+50	-13	+46
Office and data processing equipment	-52	+105	-68	+164	-16	+59
Telecommunications and sound recording	-83	+124	-99	+211	-16	+87
Electrical machinery and appliances	-7	-65	-45	-67	-38	-2
Road vehicles	-58	+1	-126	-18	-68	-19
Other transport equipment	+66	+16	+95	+1	+29	-15
Professional and scientific instruments	+13	-24	+11	-27	-2	-3
<b>Ten industry total*</b>	<b>-131</b>	<b>+156</b>	<b>-289</b>	<b>+322</b>	<b>-158</b>	<b>+166</b>

\*SITC 54, 71-72, 74-79, 87

Source(s): U.S Census Bureau, FT-900, and China's Customs Statistics (Monthly Exports and Imports)

And again looking at the individual industries, the only large increase in the U.S. surplus was for other transport equipment, up by \$29 billion, while for the three IT industries the U.S. deficit rose by \$70 billion, to \$212 billion, while the Chinese surplus surged by \$144 billion, to \$308 billion, and for the three machinery industries the U.S. deficit was up by \$35 billion while the Chinese surplus rose by \$67 billion.

This is the dramatic story of the Chinese export-oriented growth strategy, centered on the technology-intensive manufacturing sector that provides the large majority of civilian R&D and new patents, and with the \$1 trillion trade surplus in 2014 now accounting for half or more of Chinese manufacturing production.

One other technology-oriented sector integrated with manufacturing deserves mention, particularly because it has been subject to misleading commentary, and that is trade in business services. Some observers, including Chinese officials, have stated that a rising U.S. trade surplus in business services could go a long way to offset the growing U.S. deficit in manufactures, but such optimism is no longer justified, if it ever was. The U.S. surplus in business services has leveled off since 2010, up only \$4 billion to \$43 billion in 2013, while the EU surplus (in trade with non-members) rose by \$47 billion, the Indian surplus rose by \$27 billion, and the Chinese surplus rose by \$9 billion, to \$42 billion, and is now comparable to the U.S. surplus.

Especially troubling for the United States is recent trade in the computer and information services sector shown in Table 3. The United States has a rising trade deficit in the sector, up from \$4 billion in 2009 to \$8 billion in 2013, while the Chinese surplus rose from \$4 billion to \$10 billion, the Indian surplus rose from \$31 billion to \$47 billion, and the EU surplus rose from \$24 billion to \$36 billion. A most unpromising outlook for U.S. export competitiveness, which together with the surging Chinese surplus and U.S. deficit for IT manufactures presented in Table 2, raises questions about the impact on U.S. trade from the U.S.-China agreement at the November 2014 economic summit in Beijing to negotiate a plurilateral Information Technology Agreement.

**Table 3**  
**Trade in Computer and Information Services**  
**(\$ billions)**

	2009	2010	2011	2012	2013	09-13
<b>Exports</b>						
EU	42	49	57	56	62	+20
United States	13	14	16	17	18	+5
India	34	41	44	47	50	+16
China	7	9	12	14	15	+8
<b>Trade Balance</b>						
EU	+24	+30	+37	+36	+36	+12
United States	-4	-5	-9	-8	-8	-4
India	+31	+38	+42	+45	+47	+16
China	+4	+6	+8	+11	+10	+6

Source: WTO, International Trade Statistics.

Beyond the impact on U.S. trade, the Chinese export-oriented growth strategy is having game-changing consequences for the international trade and financial systems, which are deeply linked, particularly for price-sensitive manufactures and business services. I have addressed these issues, including proposals to restore a fair and balanced, rules-based economic system in a just completed study, *The Decline of U.S. Export Competitiveness for Manufactures and Its*

*Consequences for the World Economic Order*, available by request to [epreeg@mapi.net](mailto:epreeg@mapi.net).

I conclude here only by emphasizing that the most important international policy issue influencing the rising trade imbalances for manufactures is the IMF obligation not to manipulate currencies to gain an unfair competitive advantage in trade, with manipulation defined as protracted, large-scale official purchases of foreign exchange, which have the direct and immediate effect of holding the currency below its market-based level. China has made \$4 trillion of official purchases over the past dozen years, while in the process accumulating \$4 trillion of reserve holdings.

Such Chinese purchases have been protracted and large scale by any conceivable definition, and yet the U.S. government is in a state of total denial. The Secretary of the Treasury, as required, has been reporting to the Senate Banking Committee every six months that no IMF member, including China, has been manipulating its currency to gain an unfair competitive advantage in trade. I disagree.

## PANEL II QUESTION AND ANSWER

HEARING CO-CHAIR WESSEL: Thank you. Thank you to all our witnesses, and Mr. Jefferson and Professor Fu, I want to thank you tremendously for traveling here today, not that, Mr. Preeg, you didn't have to drive in, but the two of them traveled a great distance. So thank you.

Let me ask the first set of questions, if I can, and Mr. Jefferson, I want to--for all the witnesses, but, Mr. Jefferson, I want to understand something better, and Commissioner Bartholomew pointed out the question of the capacity additions.

And despite decreased capacity utilization, there are capacity additions, according to your chart, as I read it, year after year.

DR. JEFFERSON: Right.

HEARING CO-CHAIR WESSEL: The Wall Street Journal and the Financial Times last year reported, which is evident, Dr. Preeg, I'm sure, to many of the people you work with, that there are overcapacity situations in a broad range of Chinese industries--cement, glass, aluminum, the metals broadly, solar, et cetera.

That capacity overhang is not just overhang--capacity is reaching western markets and having severe dislocative effect, shall we say, and, as we know, there are trade case after trade case being filed to deal with their impact.

What do you see happening, if anything, as a result of the remainder of this five-year plan and moving forward to the 13th Five-Year Plan, as well as the Third Plenum comments, that may actually result in capacity utilization--capacity additions or capacity matching, capacity utilization, meaning taking capacity offline, which is having, again, a very dislocative effect? Should we expect any progress?

You also talked about productivity, et cetera. It appears to me there are no market forces at play here, but rather planning forces as well as political forces, which is having a big impact on other markets. For all the witnesses because this is a major economic issue we're facing.

Mr. Jefferson, would you like to start?

DR. JEFFERSON: I'll do my best. I guess, first of all, I would push back a little with regard to the absence of market forces. It's the market forces which are reflected in the declining capacity utilization rate.

HEARING CO-CHAIR WESSEL: But in a profit-driven market--

DR. JEFFERSON: They'd be out of business.

HEARING CO-CHAIR WESSEL: --they'd be out of business.

DR. JEFFERSON: Right.

HEARING CO-CHAIR WESSEL: And you wouldn't have capacity additions year after year.

DR. JEFFERSON: Right, right.

HEARING CO-CHAIR WESSEL: Okay.

DR. JEFFERSON: But the market conditions are causing us to be able to look at what we see here. They've created overcapacity, too much production. Now, the question, as you said, is how should these firms and their supervisors, whether it's local governments or the central government, respond in order to address this problem, which goes beyond just having a stimulus?

HEARING CO-CHAIR WESSEL: Also going to, as with the first panel--

DR. JEFFERSON: Right.

HEARING CO-CHAIR WESSEL: --again, a transparent five-year plan, they want to move towards greater consumption.

DR. JEFFERSON: Right.

HEARING CO-CHAIR WESSEL: This is an aberration it seems in terms of five-year planning?

DR. JEFFERSON: Right. It's a key input to construction. Right. And heavy industry. So I cannot tell you what is specifically in or likely to be in the new five-year plan that would bear upon this. I suspect that since the problem, as we've seen in iron and steel and probably the other industries that you mentioned with regard to excess capacity, has only become sort of more acute, that the language that had existed in the 12 Year Plan with regard to a consolidation, mergers and acquisitions, alliances will probably be repeated or perhaps amplified in the next five-year plan, and then the question is how indeed to proceed with that?

We do see that the government has taken very strong steps with regard to smaller production units, like in cement and coal mining, to be able to close those down, in part due to environmental concerns, as well as due to overcapacity. I cannot give you any more detail with regard to how in this industry they're going to be able to curtail this.

I think one thing is that they realize, that is the central leadership realizes that local governments need additional sources of revenue. They're building the national fiscal system so that the local governments don't depend so much on manipulating land in terms of sales and leases as a source of local municipal or provincial income, so they don't depend so much on investing in order to try to create job creation, and that requires a more robust social welfare system.

So there are substitutes for building excess capacity that don't, that may not appear to be directly controlled but do create the kind of cushion that may be needed in order to alleviate the impulse and incentive on the part of local governments to create this kind of situation you see.

HEARING CO-CHAIR WESSEL: Professor.

DR. FU: Yeah, maybe I can add a bit more to Professor Jefferson's discussion. In addition to what Professor Jefferson has explained, I think after the new five-year plan, this type of pattern will stop, will change, because China for long has been undergoing investment-driven growth, and now the so-called structural change is going to change the growth pattern from investment-driven to knowledge innovation driven growth.

And also the government has already announced before the new five-year plan, that the economy is coming to a new normal. The slower growth is the new normal. Growing at this new normal, they don't need to push for investment-driven GDP growth although as long as they can overcome the employment pressure.

And at the same time, they're going to absorb this surplus production capacity by outward investment. Of course also by promoting exports, eg. the One Belt One Road strategy is also one of the ways to absorb this surplus production capacity.

So I think the new five-year plan will try to adjust this by structural change, by using new outward investment strategy. Yeah.

HEARING CO-CHAIR WESSEL: But what you're saying, and Mr. Preeg, I'll turn to you in a moment, and I apologize for going over, but that to me says that this overcapacity is going to be redirected. Some of it has been redirected here. The rest will be redirected now to the One, the Silk Road, et cetera, but it won't be taken out of production because of the employment concerns. So the problem continues.

Mr. Preeg, do you agree and what are your thoughts?

DR. FU: Yeah, I think the production capacity doesn't really directly relate to employment because the physical equipment is there. It has the capacity. That's how they calculate this capacity, especially in the heavy industry.

HEARING CO-CHAIR WESSEL: Understand. Understand. But if you are taking-- capacity requires certain man-hours per ton or whatever the output ratio is. I understand.

Mr. Preeg.

DR. PREEG: Well, there's no question as growth slows down, there's going to be a squeeze, but if the broad strategy is to develop new technologies, it's in the manufacturing sector, which is highly trade-oriented. If they have two plus trillion manufacturing output and one plus trillion trade surplus, I mean that's where it is.

And it's also in related, deeply related business services where there are three tables in my big study, one in the other, that they're coming on strong, and we're feeling the impact there, too. In the computer and information business services, China has a modest and growing surplus. We have a modest and growing deficit.

So it's in all these, and it's also part of the regional Asian strategy with the Asia Infrastructure Investment Bank, the New Silk Road, which was just announced in the last couple days, to try to become dominant for the whole Asian region, which they are already doing.

So how this actually plays out, we can talk about in abstract terms and specific things here and there, but the bottom line are the trade accounts for the manufacture--technology-intensive manufacture, and just as I said, as you may well know, I do quarterly reports on U.S. and Chinese trade in manufactures in which I break out the ten high-technology industries.

And my first quarter report will be out in two or three weeks when we get March figures for the U.S. since U.S. figures are two or three weeks behind Chinese. But all the prospect is that this, if anything, and it's not just China, it's history time and again, when there's a squeeze in the internal economy, there is a strong tendency to pursue the mercantilist route, increase your trade deficit, and for manufactures, high-end business services, highly price sensitive, the overriding policy instrument--this goes back to the 1930s and what happened at Bretton Woods--is to keep your exchange rate below the market-based level.

And nobody knows exactly how far China is below. I happen to think it's really quite a lot. In 1971, I was in the middle of it when we talked on the European and Japanese currency manipulation. People said ten or 20 percent. They went up by over 100 percent. Japanese yen, 200 percent. So there's a huge misalignment, and it could even get worse. Thank you.

HEARING CO-CHAIR WESSEL: Thank you.

Commissioner Slane.

COMMISSIONER SLANE: Professor Jefferson, and Ernie, I'd like you to comment on this, too, I think the most disturbing thing about your slides was the dramatic reduction in federal R&D, almost cut in half in 38 years.

It seems to me we're shooting ourselves in the foot in that we heard in the first panel how critical it is for us to be competitive to compete with China. And what are your thoughts on this trend, and, then, Ernie, I'd like to get your view on it as well.

DR. JEFFERSON: So if we had gotten to my recommendations, clearly the central recommendation would be for the United States to continue to build upon and as long as possible preserve its comparative advantage in basic research and innovation, and, as you said, that diagram is somewhat unsettling in that it shows substantial fall-off in recent decades, but I think it's important because it's clear that that is a comparative advantage that we've established, that we should not neglect, and that it really is a critical differentiator between the United States and

China and is likely to be hopefully for some decades.

Also, I think it's critical--this may be a little more controversial--as we all know, we have many Chinese students coming to the States, many studying science, engineering and math, and it's my impression that if we can maintain and expand the robustness of higher education in the United States as the driving global center of basic research, scientific and engineering research, I think we'll continue to be sort of the beacon of the place to be for that kind of training and that kind of exercise of R&D and creation of R&D capabilities.

Some of those Chinese will go back to China, but I think many of them, to the extent that there are opportunities here, and this goes back to the previous testimony also, many come here because not only for the education but they are hopeful and expect that they'll be more challenged after they complete their graduate study here. But I think much of that depends upon our ability to sustain a robust level of spending on basic research.

COMMISSIONER SLANE: Ernie, you just put out a report I think last week on the competitiveness or lack thereof here in the United States.

DR. PREEG: Yes, that's the big one.

COMMISSIONER SLANE: Right.

DR. PREEG: It's getting some notice. Look, I've been around a long time, longer than anybody else, and most of my life I've been a cockeyed optimist because we did a lot of things right, and we're ahead of the game. It's hard to be optimistic today. And as you know, I'm increasingly pessimistic.

When it comes to R&D, just a few specifics. When the Chinese approve an investment by a high-tech company, they say, okay, but bring your R&D with you. That's a condition. And companies are happy to do that because there are all of these U.S. trained engineers and scientists. They can bring their lead R&D people over, and then hire them in China, and it's not a comparison of wages for factory floor workers. It's what does an engineer from a U.S. university cost--wages, health care, and retirement in the U.S. Silicon Valley--versus in China? And I haven't seen the figures on that. It would be interesting to know, but it's at least several times different.

And then you say a lot of them want to stay here. We help them out. There's tens of thousands of engineers from U.S. universities back in China and India. They come here, they get their degrees, and they can work a couple of years in Silicon Valley. Good work experience. And then they can't get a green card so they're sent home by the tens of thousands, and then the high-tech industries in India and China are happy to hire them.

And my last point is simply when you've got all these big, as Professor Fu said, largely American and European companies with their big R&D operations and doing it all in China, of those tens of thousands of Chinese engineers, most, many or most trained in the U.S., Silicon Valley, they're going to start their startups. They can be innovators, too. I mean that's where it gets started by a few of them get together and say we've got an idea, we don't want this to be Apple. We want to do it here.

It's beginning to happen from what I read, but I think it's bound to happen when you've got such huge numbers of these companies, these people interacting. So this is a really serious challenge for the U.S. to remain at the forefront in technological innovation.

Thank you.

COMMISSIONER SLANE: Dr. Fu, do you have anything?

DR. FU: Yeah. I'm less pessimistic about this because looking at this chart, although the drop is striking, however, when we look at total R&D to GDP ratio, the U.S. is keeping stable



with a slight increase. While this chart shows a deep drop in federal R&D expenditure, this means the investment in R&D by the business sector, by the private sector, is increasing.

In a way, this is an indicator of favorable business environment in the economy that the businessmen would like to invest in R&D. So that's the other side.

Of course, they invest in different part of R&D. The public expenditure in R&D normally goes to the basic research. As Professor Jefferson said, this is very important for a country to keep at the frontier. So I think, yeah, this gives some alert, but also it shows the business sector is doing well. The non-defense expenditure seems to be stable so the main drop is in the defense part. Yeah.

COMMISSIONER SLANE: Thank you.

HEARING CO-CHAIR WESSEL: Commissioner Tobin.

COMMISSIONER TOBIN: Thank you. Thank you, all.

My question follows on yours, Commissioner Slane. It's related to the defense industry, and I'd like to direct it to Dr. Fu. You spoke about how the five-year plan's role is to coordinate across the ministries, and what I'm curious about is, has your research looked at the defense industry, how that's coordinated, and how it's funded, what percentage of their monies are reinvested in R&D? Can you tell us briefly, brief us on what you have learned about their defense industry, how much they invest, and what you do know and I guess what you don't know?

So thank you.

DR. FU: Thank you. To be honest, I don't know much. I haven't looked at the defense industry in my research.

COMMISSIONER TOBIN: Okay.

DR. FU: The budget comes differently from the defense system although some of the domestic research institutes may carry out some of the sub- projects for the defense projects, too. However, I do not know the exact figure. What I know, the recent reforms is talking about making the defense technologies much more oriented to the economic sector, to the business sector, rather than keeping them separate. So this is a recent trend in making more defense technology for the production use.

I'm sorry I cannot give you a satisfactory answer on this.

COMMISSIONER TOBIN: It will be interesting to look at over time, going forward, I think, because I know for our defense industries, there are usually a number of investment decisions being made, and in the private firms too. You may be able to get that over time.

Thank you.

Mr. Preeg.

DR. PREEG: Just a quick comment. My first career was from age 16 and 25 was going to sea from ordinary seaman and chief mate when we had a merchant marine, and I've been a Navy man most of my life. I'm deeply concerned with what the Chinese have been doing in producing top level silent submarines that we can't track and new destroyers with missiles. It seems that they're building their first aircraft carrier, too. But mainly submarines and destroyers, they're getting way ahead of us, and that's very disturbing to me.

COMMISSIONER TOBIN: We're following that, and I think I can speak for many of us, we're in agreement.

DR. PREEG: Right.

COMMISSIONER TOBIN: Yes.

DR. JEFFERSON: One possible slice of useful information is that if you look at the total

high-tech industries and look at R&D spending and the share of government R&D spending in those industries, the government share typically comes in say in medicine and telecommunications equipment and so forth in the range of 7-1/2 to 8-1/2 percent of total R&D spending in most of those high-tech industries.

For space, aircraft and spacecraft, however, two years ago, the government share was 42 percent--substantially higher. My sense is that at least those of us at the table, perhaps some of us aren't able to get a lot more closer to the defense industry than say aircraft and spacecraft, but that is certainly one industry in which there is a clear commitment of government funds for R&D.

COMMISSIONER TOBIN: Thank you for that, and that comparison is key.

Dr. Fu.

DR. FU: One thing I think it's indicative is that the modernization and the digitalization of the army has become one of the main development strategies. The overall expenditure on defense is increasing, and most should also go into the modernization part. Yeah.

COMMISSIONER TOBIN: Thank you. Thank you, all.

HEARING CO-CHAIR WESSEL: Commissioner Cleveland. Oh, Commissioner Shea.

VICE CHAIRMAN SHEA: Hello. Thank you for your testimony.

My question is for Ambassador Preeg on two areas: currency and the trade deficit in advanced technology products. People on the other side of where you are, I believe, will say, look, the currency, the Chinese currency has appreciated about over 35 percent between 2005 and 2013 so it's becoming less of a problem today.

And then we do quantitative easing so that's, you know, it's the pot calling the kettle black. So that's one argument on--I'd like you to respond to that argument.

And then on the trade deficit and advanced technology products, people say, well, that figure is overstated. If you took a value-added approach, it would be much lower. You know China is getting the full value of the product for purposes of trade statistics when, in fact, it's the final assembly point, and there's a lot of inputs from Japan and Korea and other places.

So I just--those are two opposite arguments from where you are. I'd like you to rebut, rebut both of them. I believe they are opposite from where you are.

DR. PREEG: I'll try to be brief.

VICE CHAIRMAN SHEA: Okay.

DR. PREEG: Now when it comes to exchange rates, when you talk about eight years, and they're going up 15, 20, 30 percent, it's really what cost levels are doing, and their productivity has been greater than ours, and the only way we'll know is if rates are market-based rates, as the IMF obligations state they should be.

As I already stated, compared with August 1971, when people who didn't like that, because at that time we were beating up on our NATO allies, it was the Nixon shock. But then the Chinese--the Japanese currency went from 360 to 100. That's over 200 percent. And the European currency is over triple digits.

So the only way, it's not to guess at it, they've gone up so much; it's what's happened to the trade balance? There's never been anything close to the trillion dollar trade surplus that they've had doubled in the last five years. So it's greatly undervalued, and they're pegging it that way, and if they let it up a percent here and there, that's not going to make that much difference.

And we have to understand that. And the real thing, let's just see what happens quarter by quarter this year and next year, and if it keeps going up, their surplus and our deficit, and most of our deficit is with them, there's going to be a reaction in this country. So I think one should be

serious.

Now, on the question of inputs, imported inputs and exported components coming back, certainly for exports, it's difficult. I mean you're going to have some imported components. One thing is there's been a drastic reduction over the last ten or 15 years in the imported content of Chinese exports.

It's gone down from like 60 or 70 percent to 30 or 35 percent, continues to go down because their policy is companies can make the final product, but they also have to source the components in China. Then the other part of that is when you're talking about trade balances, most of it just nets out because imported components and exports show up as imports on the trade balance and vice versa.

So the value-added is much more important for exports and the trade balance, but even on exports, the figures are out there, which is based on very strongly oriented Chinese policy to make their components in China and to import them less.

Thank you.

VICE CHAIRMAN SHEA: What makes you think there will be an outcry if the trade deficit continues? It's astounding at this point, and the accumulated deficits are--what--\$4 trillion over time. So what makes you think people are going to get outraged when the numbers are already so astounding?

DR. PREEG: Well, there are a lot of outraged people around. See, I'm for the trade negotiating authority for the President to do these trade deals, and it's ridiculous to say you should put currency manipulation in the TPP when you've got the Secretary of Treasury every six months saying the issue doesn't exist.

But there's a lot of other focuses. When you say by this year if we have it, we're going to have another big increase in the deficit, that we've lost two million American manufacturing jobs in six years, or whatever it is--1.6 million--varying to 1.4. There's a lot of people going to say, hey, that doesn't seem to be fair. Shouldn't we have fair and balanced trade? And shouldn't we have market-based exchange rates for price-sensitive manufactures, which is what IMF Article IV states? And there's going to be a lot of people, not just me, but maybe even the majority of people. So I think it's getting worse and worse.

VICE CHAIRMAN SHEA: Thank you. Did you? Yes?

DR. JEFFERSON: I just wanted to say, in response to your question of why not more outcry, it may in part result from the fact that many American corporations are effectively on the other side of the fence.

VICE CHAIRMAN SHEA: Uh-huh.

DR. JEFFERSON: They're manufacturing in China and exporting to the United States and probably capturing most of the revenue that's generated from export sales in the so-called high-tech sector. So they have divided interest it would seem on these issues.

DR. PREEG: Can I just add to that?

DR. JEFFERSON: Yes.

DR. PREEG: Where is the NAM and the American Chamber on the currency manipulation issue? Silent. And the head of the American Chamber said, well, our members have different views so we don't say anything about it. But I was a member about ten years ago--Bill Reinsch might recall. The NAM had a Coalition for a Sound Dollar. Remember that, Bill?

I was ex officio since my company I worked for--not a lobbyist--but I did number crunching taking on the currency manipulation issue, and then from one week to the next, this coalition, which was getting a lot of interest around town, was shut down, and there hasn't been a

word spoken since by the organizations that represent--the big lobbyists with multi-multi-millions of dollars that represent U.S. corporate interests.

And the problem is that the corporate interests in some cases, which is to maximize returns to stockholders, may be in conflict with the U.S. national interests.

VICE CHAIRMAN SHEA: Thank you.

DR. FU: Can I?

HEARING CO-CHAIR WESSEL: Please.

DR. FU: Yeah, can I add something because I have some different views here.

VICE CHAIRMAN SHEA: Sure.

DR. FU: First, I think, actually I agree with the view that deficits and the surplus is overestimated because the true value-added is not captured, not revealed in the trade data. One example is the iPhone. The iPhone, the first generation was sold in the market for 600 U.S. dollars, and the cost is 300 U.S. dollars. It was final assembled in China, so was counted as China's final exports from China.

The value added is only \$6 in China. So the rest of 290 U.S. dollars' cost are really expensive high-tech components from U.S., from South Korea, from Japan, from Germany. And there are another 300 US dollars of profits goes to Apple.

So if we use the basic data, as we're using now, it's quite misleading. So that's why I think, firstly, we need to communicate the truth to the public. So, you know, there are people frustrated, but they should be frustrated based on right reason, based on the right picture. I think the communication is important.

VICE CHAIRMAN SHEA: Yes, personally, I think there needs to be more analysis and some better understanding of this value-added approach. We have as a Commission had people look at it. But the testimony we have received is that if you do the value-added approach, it might reduce the deficit U.S. by 30 to 40 percent is sort of the number figure that may be. But even if you reduce it by that much, it's still very large. It's still incredibly large.

DR. FU: Yeah.

VICE CHAIRMAN SHEA: And going in the wrong direction. So you wonder. Anyway. But we've never taken a position on that approach as a Commission.

HEARING CO-CHAIR WESSEL: We've done a great deal of analysis--

VICE CHAIRMAN SHEA: Right.

HEARING CO-CHAIR WESSEL: --and debate, but I can't say there's one truth on all of this.

Commissioner Cleveland.

HEARING CO-CHAIR CLEVELAND: Ms. Fu, I'm interested in your written testimony in which you talk about FIEs and POEs are investing more in research and development than SOEs, and that they're leading players in high, low and low-medium technology, whereas SOEs are leaders in high and medium technology. So you characterize the path to innovation as not state-led so much as a multi-driver model.

Yet, I think the bulk of research shows, and I think you acknowledge, that SOEs have better access to bank loans and benefit from the five-year plans more clearly.

So you then go on to say, and this is the part I'm interested in, that empirical research finds a positive association between innovation and Chinese firms' productivities--sorry--Chinese firms' productivity and their export performance, and this was a study done by Liu and Li and Yang and Yuan.

I'm interested in which firms were the subject of this analysis and what were the control

variables? How were they benefiting from bank loans and government support, tax benefits, human capital, how were they incorporated into the analysis of asserting that there was a positive association between innovation and productivity?

And I'm also interested in whether or not you think the Chinese government recognizes that positive association? I don't see it as causality, but I'm interested in the government's view of that.

DR. FU: Yeah, actually, I'm not fully confident about this result because regarding the research on the impact of innovation on the productivity growth in China, actually the evidence is not as much as we have expected, and for many of the data that they have used, as you correctly pointed out, their samples are relatively small. Also they could be biased--some is a sample of the new firms or some a sample of the high-tech firms.

So in this sector, we see an association. And also empirically in terms of the estimation methodology, they have not controlled for the reverse causality, ie. when you're more productive then you invest more in innovation.

So that's why I said there is an association observed, and also I think the government and the businesses take this for granted; assume there is a positive causal relationship --yeah.

HEARING CO-CHAIR CLEVELAND: That's very helpful. So can you tell me a little bit more about the sample size that drove this and what the control variables were or that information isn't available?

DR. FU: The sample size, most of the research is published in Chinese, comes between 200 and 500, some at regional or industrial level rather than firm level. There is some research based on large-firm level data. It's somewhat outdated, like from year 2000 to 2006--

HEARING CO-CHAIR CLEVELAND: Yeah.

DR. FU: --Professor Jefferson has some real large data-based research. And they found some positive association, too.

HEARING CO-CHAIR CLEVELAND: Is the research that's available, how is it--how are the sample size--I mean I don't think in China there's a lot of random sampling. Are there snowballs? I mean how do you go about identifying the firms, and is the analysis based on the revenue, the stated revenue of the companies? Stated--or the sectors that they represent? I mean how? I just think it's a perplexing issue to get at these assumptions that seem logical, but I'm not convinced that the data is there to corroborate.

Dr. Jefferson, you're smiling so--

DR. JEFFERSON: I'm sorry.

HEARING CO-CHAIR CLEVELAND: No, please.

[Laughter.]

DR. JEFFERSON: No, I've worked for decades with the National Bureau of Statistics--

HEARING CO-CHAIR CLEVELAND: Ah.

DR. JEFFERSON: --and Ministry of Science and Technology on trying to acquire and use their firm-level data in the case of the NBS and Research Institutes from the Ministry of Science and Technology.

The Ministry of Science and Technology has actually been very cooperative. So we have a research assistant who's able to work on site and use all of their data with regard to about 3,000 or 3,500 Research Institutes in China.

NBS has been somewhat different, but they do annually compile a remarkable survey of science and technology in all of China's large and medium-size enterprises, which are required by law to fill out a survey form asking about information about 90 different science and

technology variables involving different kinds of expenditure, personnel, the education level, the experience level of the various personnel, and then innovation outputs in terms of different kinds of patents and publications and so forth. It's really quite remarkable and impressive.

HEARING CO-CHAIR CLEVELAND: Sounds it.

DR. JEFFERSON: And I've used some of that data, and I think, as Professor Fu has said, one kind of consistent result you see is a much weaker statistical relationship between R&D and various measures of innovation output in China than you see say in the U.S. or in EU countries.

However, there are a lot of other things in China that are contributing say to patent production, and those include proximity to concentrations of foreign direct investment. The size of the firm matters a lot, seemingly having to do with learning by doing. If it's a big production operation, they're more likely to have learning by doing and learning by using, getting feedback from their customer base, and so when you add up all those things, they are clearly driving-- they're very important in driving the surge in patent production. But R&D alone doesn't stand out as nearly as important as it does in the OECD countries.

HEARING CO-CHAIR CLEVELAND: I think you're on to something that I'm really curious about as China modernizes, which is the data that is available that would suggest that the statistical significance in the I hate to say capitalist model, but the traditional kind of feedback loop of consumer demand, consumer feedback on this is a low quality product, and I'm not going to buy it--

DR. JEFFERSON: Yeah.

HEARING CO-CHAIR CLEVELAND: --versus a reach for innovation, and I'm curious about where the pressures are in terms of Chinese--

DR. JEFFERSON: Well, I think the smartphone industry is quite remarkable in that respect, and I believe that it's one industry in which the Chinese consumer base is remarkably sophisticated and aware of what the various global opportunities are with regard to iPhones and what's produced locally. I guess it was about two weeks ago in Beijing, I was talking with some friends who had just bought new iPhones, and they said that a year ago, 70 percent of the market--this was their off-the-cuff estimate--was dominated by Apple iPhones.

HEARING CO-CHAIR CLEVELAND: Uh-huh.

DR. JEFFERSON: And now 70 percent was dominated by local brands because the local brands had caught up and in some ways with regard to sort of Chinese credit preferences exceeded what Apple had to offer at considerably less expense.

HEARING CO-CHAIR CLEVELAND: Well, I was going to say was it a price point issue?

DR. JEFFERSON: It was a price point issue and the quality was not incomparable. It was more--

HEARING CO-CHAIR CLEVELAND: What was the differential in price point? Do you happen to know in terms of--

DR. JEFFERSON: Oh, it was more than two to one.

HEARING CO-CHAIR CLEVELAND: Yeah. Interesting.

DR. JEFFERSON: Yeah.

HEARING CO-CHAIR CLEVELAND: Okay.

HEARING CO-CHAIR WESSEL: Senator Talent.

COMMISSIONER TALENT: They were selling their own iPhones, their own versions of the Apple phones? Were they using Apple's technology?

DR. JEFFERSON: Surely part of it. I don't know. I mean--

COMMISSIONER TALENT: They didn't have to pay their share of the costs to develop the technology.

DR. JEFFERSON: Of course. It goes back to Motorola 20 years ago; right?

COMMISSIONER TALENT: Yeah.

DR. JEFFERSON: And they were using Motorola's original technology, too, and then every subsequent generation.

COMMISSIONER TALENT: I don't know anything about iPhones, but if I could steal somebody else's patent, I bet I can sell it for less than they could. I didn't want to ask a smart-aleck question.

DR. JEFFERSON: Yeah.

COMMISSIONER TALENT: I had for Professor Fu, but anybody else who wants to comment, you mentioned that you think one of the things that they'll do with this overcapacity in cement and steel like that is they'll use that for the Silk Road and the Asian Development Bank. Could you go into a little more detail on that because I found that very intriguing? And either of the other one of you want to comment, that's fine.

And to the extent that's true, how do you think that will affect the way that they, their policy behind the Silk Road and the Asian Development Bank? How will that affect where they choose to invest, how they deal with local countries and partners, et cetera? Because it's a very intriguing point. It seems plausible to me and nobody had raised it yet as far as I know with regard to the Asian Development Bank or the Silk Road?

DR. FU: First, I would separate the Asian Infrastructure Investment Bank and the Silk Road One Belt strategy because the AIIB, I think although it will be led by China, but there are so many international members, and the rules are yet to be decided.

However this One Belt strategy I think is innovative in a way. Normally when we talk about free trade zone, it's more about geopolitical neighbors, the regions, and this One Belt strategy is based on some historical background. And for some of the countries along this Belt, such as countries in central-Asia and the Middle East, their economic structures are quite complementary to China's industrial structure, and they need industrialization and the manufacturing capacity, and China needs market and resources. I think it's a more reciprocal kind of two-way agreement for Chinese outward investment in the manufacturing sector to be set up in those countries, and as a return, China gets markets and also some resources.

All the resources are produced and processed there. So I think depends on each country's factor endowment and structure. Some of the Chinese manufacturing firms will be relocated or investments will be made there although I don't know how AIIB will be linked to that. The rules are yet to be decided, I think.

DR. JEFFERSON: I think this matter of capacity utilization is really one of the most major challenges facing China. And there's been a lot of talk about the new normal, and I confess I don't know all about it. I was picked up at the Beijing airport a couple of weeks by a graduate student who said in his course with Hu Angang, the Associate Dean of the Public Policy School at Tsinghua, the course was all about the "new normal."

But in the past when something like this had happened, excess capacity in industries, over the last decades, the Chinese solution was to grow out of the plan. Whenever there are problems, structural problems, excess capacity problems, imbalances, there are ways of growing out of the plan.

But I think that one element of the new normal, I would say, is that capacity is henceforth strongly diminished, that they can't just grow out of this, or in order to grow out of it, they're

going to have to freeze production or do the mergers and acquisitions or something in a far more effective way than they have before.

So this stands out to me as a real challenge because they've lost that instrument of just growing out of the plan. Maybe they can dump it through the AIIB or other export channels, but domestically I don't think they have that option any longer.

COMMISSIONER TALENT: One of the reasons I asked about it is because it struck me the same way, that they're trying to do the same thing except that they're doing it in other countries or through other countries, which suggests to me that they're going to have control how that money is invested, including for the Asian Development Bank, in order to serve these goals that they have. So that's what I was explaining. I'm sorry.

DR. JEFFERSON: All the more reason to get the U.S. around the table.

COMMISSIONER TALENT: Yeah, I'm not saying what our response ought to be. I'm just--

DR. JEFFERSON: Yeah.

COMMISSIONER TALENT: It was intriguing to me. Yes, Ernest.

DR. PREEG: Well, there is no doubt that Chinese economic strategy is to dominate the Asian continent, and one clear direction has been for Chinese labor-intensive industries to shift down to Southeast Asia--textiles, footwear, et cetera. That's been happening very rapidly, and the AIIB/Silk Road is creating infrastructure to do this, including for even cement because there's a lot of cement that goes into these infrastructure projects.

And I just want to relate that to U.S. trade, which isn't always realized. I wrote a report--I don't know if any of you saw it--about a year-and-a-half ago--which was "U.S. Manufactured Exports Pivot Away from Asia." That was the play on U.S. policy, as you may imagine. Our exports because of these exchange rates and trade imbalances have been shifting progressively to North America--Canada and Mexico.

Now 35 percent of global U.S. exports of manufactures go to Canada and Mexico. Only 25 percent to all of Asia, where China, two, three--if I update my study it will probably be higher--two or three times larger. Only 20 percent to West Europe. So now add to that, NAFTA has taken some knocks. We have a trade surplus in manufactures with NAFTA. We have a moderate surplus with Canada, which is a little larger than a moderate deficit with Mexico, roughly in balance.

But what's happening is China is just totally dominating Asia, two or three times larger already. We're withdrawing and regrouping in North America, and that's a fundamental geographic restructuring of trade in manufactures, technology in the international economy.

COMMISSIONER BARTHOLOMEW: I just would like to, particularly, Dr. Jefferson, revisit this. I kind of feel like we might be beating a dead horse here, but this whole issue of capacity utilization. So you talk about grow out of the plan, but what they have been doing is they have been dumping product on our market and other markets, which is, it's a strategy, you know.

I mean I go back to something that Commissioner Wessel started with, which is it's not a capitalist system. These heavy industries, like iron and steel, are state-owned enterprises. If this were a capitalist system that China was, these companies would have had to adjust their production, but for labor force and other reasons, they don't--they haven't done it.

So I think what I'm struggling with is I kind of feel like when you're talking about capacity utilization, it's in a box that already doesn't exist because of things like dumping product with the excessive production.



I'm not quite sure what I'm asking here, but I'm struggling a little bit with the interpretation or the analysis of capacity utilization if it's not factoring in where the product is going as production continues.

DR. JEFFERSON: Well, they have been trying to export steel, and they have been trying to create the channels we've been talking about, like the Asian Infrastructure Investment Bank, that could be outlets for the extra production capability.

But when there's excess capacity, what generally happens is that they're not producing as much. They're shutting down a production line, and typically not laying off workers, but they're not producing.

COMMISSIONER BARTHOLOMEW: If they're not laying off workers, what are those workers doing?

DR. JEFFERSON: Well, they may be working part-time. They may be laid off for some period of time and going to school, or I'm not sure exactly what they're doing.

But my sense is that, yes, these are registered as state-owned enterprises, but in my experience, there's really a continuum of ownership. The National Bureau of Statistics is required under law to designate every firm as a particular type of ownership type, but I've seen individual firm-level data, and there are many so-called state-owned enterprises that are majority non-state-owned. That is a majority of the assets are non-state.

I've seen equal proportion, about 15 years ago when I looked at this, of so-called non-state enterprises that had more than a majority of their assets owned by the state. So a lot of those assets which had been in state-owned enterprises over the last two decades have migrated out of the traditional state sector into other firms in other sectors.

So you're getting much more of a mix, and, yes, if you use sort of a dummy variable so you can see what the difference is in productivity or something between a state-owned enterprise and all the others, yeah, it will have the sign you expect. Probably be negative. Less so. It may or may not be statistically robust, but within those state-owned enterprises, there's a huge amount of variation in terms of the actual ownership structure and the actual behavior of those enterprises.

So I raise this because what you see here if you look at this diagram showing that there's something like 30 percent excess capacity, this is not sustainable under the existing system. They're going to figure out a way to fix it.

COMMISSIONER BARTHOLOMEW: So going to this issue of state-owned enterprises and what are state-owned enterprises--

DR. JEFFERSON: Yeah.

COMMISSIONER BARTHOLOMEW: --which we have looked at a lot over the years.

DR. JEFFERSON: Yeah.

COMMISSIONER BARTHOLOMEW: To my mind, some of the conversation that we are having now is not about ownership of assets, but it is about management and production decisions.

DR. JEFFERSON: Right.

COMMISSIONER BARTHOLOMEW: And that the state can control those. So who owns the asset in this case is not as significant, which ties us back into the whole reason for this hearing, which is these five-year plans.

DR. JEFFERSON: Yeah.

COMMISSIONER BARTHOLOMEW: That there is a national strategy about what to do with the economy.

DR. JEFFERSON: Right. So I guess the only thing I have to say is that many of the provinces have at least one iron and steel factory. Now in some cases it makes sense. If you have a population of 100 million, you can achieve scale economies perhaps, but there are clearly too many that are too large and there are privately owned iron and steel facilities also. Something has to be done.

But the reference to the diversity of ownership and governance has to do with the fact that some of them are going to be easier to shut down and control than others. And they'll figure out what the soft spots are. You know that the big ones, you know, Angang, Shougang, Wugang and Wuhan, and so forth, are probably not going to be the ones that make the big adjustments, although I may be wrong about that. Yeah.

COMMISSIONER BARTHOLOMEW: Dr. Fu.

DR. FU: Yeah. Can I add something? I think, first, this is quite special industry. It's very capital-intensive industry, and in this industry there is a mix of ownership. There are state-owned firms.

DR. JEFFERSON: Yes.

DR. FU: But also there are a lot of non-state-owned firms, small firms, which are very inefficient and sometimes quite dirty and polluting. And the problems in China, I think like this kind of surplus production capacity, for Chinese government, it is a problem for them too. It is a headache for them too. And how to solve this, and how to get rid of this, I think is still a question.

On the one side, the Chinese government try to marketize, try structural change, create new jobs and new growth poles, and gradually migrate some of the workers to that sector, and also through the outward investment to relocate some of the extra capacity. And gradually also some inefficient firms have to exit the market in the long-run when they can create new jobs, new growth points in other sectors.

And when we talk about the dumping, also I think in China, there is an internal problem about lack of order. Such dumping sometimes is because of the internal price competition among the Chinese firms themselves, one part due to the surplus production capacity and one part due to the lack of order. And this is also a problem they are trying to solve, the same as the rare earths or other problems: the lack of order in the industry.

A lot of small firms all engaged in the market, but without kind of order and rule for market exit or a well-established market system. So I think that's another problem for the Chinese government to reform, to let the market, the price to relocate the resources and to decide entry and exit. The five-year plan probably needs to address this further.

HEARING CO-CHAIR WESSEL: I'm going to have to cut it off here. We've gone over. It shows the interest in this panel and all your work. Thank you.

I'd also simply say that we continue to try and apply free market methodologies and thinking to a non-market economy. So what is sustainable or not is probably more of a political than an economic question. But that's a debate we'll have as well internally.

Thank you. We will adjourn until 1:30, or thereabouts, and restart the next panel. So thank you.

COMMISSIONER TOBIN: Thank you.

DR. JEFFERSON: Thank you.

[Whereupon, at 12:40 p.m., the hearing recessed, to reconvene at 1:36 p.m., this same day.]

### **PANEL III INTRODUCTION BY COMMISSIONER ROBIN CLEVELAND**

HEARING CO-CHAIR CLEVELAND: Welcome back. The final panel today will examine the impact of China's Five-Year Plans on urbanization, welfare, labor and financial reform, and will consider the opportunities and challenges a more consumption-oriented economy could create for U.S. companies.

Our first witness is Dr. Dali--am I saying that right--Yang--thank you--a professor at the Department of Political Science at the University of Chicago and founding Faculty Director at the Chicago Center in Beijing, a university-wide initiative to promote collaboration and exchange between University of Chicago scholars and students and their Chinese counterparts.

Professor Yang has previously served in a number of other academic roles at the University of Chicago, to include the Chairman of the Political Science Department, Director of the Center for East Asian studies, Director of the Committee on International Relations, and Director of the Confucius Institute.

Our next witness is--I am assume it's Dr. Eswar Prasad--we left that out here--the Tolani Senior Professor of Trade Policy at Cornell. He's also Senior Fellow at Brookings Institution, where he holds the New Century Chair in International Economics, and a Research Associate at the National Bureau of Economic Research. He previously served as Chief of the Financial Studies Division at the IMF's Research Department, where he was quite distinguished in his judgment and analysis, and before that was the head of the IMF's China Division, where I didn't know him so well.

He's testified at the Commission in 2009, '10, '11 and '13.

And our final witness is David Frey, partner of market strategy and head of U.S.-China Strategic Corridor for KPMG China. Mr. Frey has spent nearly 20 years in industry and consulting roles, leading strategy projects and business transformation programs for clients in China and across Asia.

In the Asia-Pacific, he's worked extensively in China, Japan, Thailand, Singapore, Malaysia and Vietnam. No Burma yet?

MR. FREY: Not yet.

HEARING CO-CHAIR CLEVELAND: Opportunity. Mr. Frey focuses on assisting multinational companies in developing strategies for establishment and expansion in China. He leads a team in China responsible for developing insight and capabilities that are relevant to the boardroom agenda.

And on his CV, it says that you worked for a senator. Who was that?

MR. FREY: That was Jack Danforth 22 years ago.

HEARING CO-CHAIR CLEVELAND: We were all speculating, and I knew I knew you from someplace because I am that old.

CHAIRMAN REINSCH: You're not the only one.

HEARING CO-CHAIR WESSEL: I worked closely with Danforth from Gephardt's--I worked for Gephardt for 21 years.

HEARING CO-CHAIR CLEVELAND: I think we often used to refer to him as "Saint Danforth."

HEARING CO-CHAIR WESSEL: We still do.

HEARING CO-CHAIR CLEVELAND: Anyway so I'd like to remind you to try to keep your remarks to seven minutes because we're all chatterboxes and have lots of questions. So if you could do that, I would appreciate it, and we are starting--let's go right to left because I'm

conservative.

Mr. Frey.

HEARING CO-CHAIR WESSEL: Your right or their right?

HEARING CO-CHAIR CLEVELAND: My right.

**OPENING STATEMENT OF MR. DAVID FREY  
PARTNER, MARKETS STRATEGY, NATIONAL HEAD OF U.S.-CHINA STRATEGIC  
CORRIDOR, KPMG CHINA**

MR. FREY: Good afternoon, Commissioner Cleveland, Commissioner Wessel, Commissioners, and thank you very much for the opportunity to be here today at this important hearing on "China Ahead of the 13th Five-Year Plan."

I'm very pleased to have the opportunity to share my perspective on China's five-year plans based on experience gained working with KPMG in China where we advised clients on many issues and challenges related to China's development as called for in the country's five-year plans.

Our clients include U.S. companies, European companies, Asian companies, advising them on their operations in China, as well as, of course, working for Chinese companies. We also advise the public sector around the world on matters related to China's development and aspects of five-year plans and the five-year planning process.

I appreciate the opportunity to share perspective and opinions gained through this professional experience with you this afternoon. I'll focus these summary comments on just a couple of areas. First, China's five-year-planning process has served the country very well over the course of the last decades of impressive economic transformation. During this period, the SOEs' share of total employment has fallen from greater than 60 percent in 1992 to now less than 15 percent, according to World Bank estimates.

Given this tremendous increase in the role of the private sector, one might be tempted to ask whether the five-year plan is still an important policy tool in China, and, in fact, in preparation remarks, you all did ask that question.

Overall, despite the increase in the role of the private sector in generating economic activity, the role of the government remains predominant in China in setting objectives for continued economic and social development.

Private entrepreneurs, in fact, succeed in China today by recognizing and leveraging business opportunities in areas that are prioritized by the government but that are not, in fact, currently well-served by the state-owned sector. Examples of this include health care, e-commerce, logistics services, which are all rapid niche areas of private sector growth.

The five-year-planning process is very well ingrained in government cultures, provides reasonably clear guidelines for the prioritization of future investments. For example, the naming of strategic emerging industries allows for the identification of regional growth and investment priorities and, as such, allows both state-owned and privately-owned businesses to develop strategies that direct investment toward complementary objectives.

For these reasons, the development of five-year plans in China is, in my opinion, likely to remain a prominent fixture of government activity in the coming years.

In terms of the track record on China's achievements in the 12th Five-Year Plan, in general, China has quite a good track record of achieving goals that have been set up in their more recent five-year plans and specifically in the 12th Five-Year Plan governing the 2011 to 2015 period.

We cited some statistics or a study that was conducted by the U.S.-China Business Council showing that China will likely achieve the majority of social and economic goals set out in the plan, including increasing the services sector contribution to GDP by four percent, raising urban and rural income levels seven percent per year, and increasing the national urbanization

rate from 47 percent to 51 percent.

We expect an official assessment report, if past experience is a good guide, we expect an official assessment report toward the end of 2015 that will actually be the China government's official grading of itself, if you will.

Domestic companies are clearly heavily influenced by the goals and objectives of the five-year plan. Similarly, in my experience, the most effective foreign companies operating in China analyze national strategies that are outlined in five-year plan strategies, objectives, and adapt their own corporate business strategies to specifically meet China's stated needs.

What are some of the areas we expect to see in the 13th Five-Year Plan? We expect to see, of course, expansion of the services sector. I think there was a very good commentary on that early today. In the area of New-Type Urbanization, we expect this to be a big focus.

I think there was a big marked shift in the 12th Five-Year Plan, under the leadership of Premier Wen Jiabao and President Hu Jintao, where it was very notable that they introduced the principles of "higher-quality growth" and "inclusive growth" as a big shift as China sought to extend the benefits of its rapid economic transformation toward a much larger proportion of the population.

These ideals have been carried forward quite prominently, principally by Premier Li Keqiang, a very personally-branded initiative to implement the New-Type Urbanization Plan as was released in the National Plan on New Urbanization 2014 to 2020, published earlier--or I'm sorry--last year in March of 2014.

We expect this softer side of urbanization with a focus on not only increasing the urbanization rate but also increasing access to health care, education, improving quality of life, and things like that, to be quite prominent in the 13th Five-Year Plan.

We also expect that financing China's urbanization will be a prominent aspect of the plan. At KPMG, we've worked closely with various aspects, various entities of the Chinese government, on different strategies for diversifying the financing of cities, as they fund more sustainable urbanization, including development of municipal bond markets, looking at alternative investment frameworks, such as public-private partnerships. We expect these areas to be featured in the 13th Five-Year Plan.

A new area that has emerged recently with the Government Work Report last month, as presented by Premier Li Keqiang, an area that he focused on heavily was "Mass Entrepreneurship and Innovation," and reforms in financing of small and medium-sized enterprises, and how those can plug in as well to public sector reforms and generate new jobs, particularly for highly-educated university students who are in today's China graduating with few jobs.

The last area I'd mention in terms of the 13th Five-Year Plan focus would be on the One Belt One Road. I know you've held a prior hearing on that, and we talked about it, or the panelists talked about that a little bit earlier today.

Finally, I would say in terms of what to do to operate effectively as an American company, and what U.S. government action can support American companies in their ability, in their efforts to expand and operate more profitably in China, say that American companies that really do their homework to understand the broad goals of five-year plan guidelines, spend time with provincial and local governments to understand how they will interpret the national level guidelines that are issued, how they will implement those, companies that do that well will have significant opportunity to differentiate the positioning of their goods and services in the China market.

Government-to-government initiatives, exchanges and agreements can assist significantly in enhancing the position of American companies in this respect. The trade delegation of leading American greentech companies that recently traveled to China under the guidance of the Department of Energy and Commerce and that joint delegation is a recent and prominent example.

I would also mention the successful negotiation of a bilateral investment treaty, as long as it's the right treaty, would be a big advantage for American companies.

And with that, I'll wrap up my initial comments and thank you for your time this afternoon.

**PREPARED STATEMENT OF MR. DAVID FREY  
PARTNER, MARKETS STRATEGY, NATIONAL HEAD OF U.S.-CHINA STRATEGIC  
CORRIDOR, KPMG CHINA**

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

April 22, 2015

**Hearing on:** China Ahead of the 13th Five-Year Plan:  
Competitiveness and Market Reform

**Panel III:** The Broader Implications of China's Five Year Plans

David Frey, Partner and Head of U.S.-China Strategic Corridor, KPMG in China

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## **Summary:**

- China's five-year planning cycles have been a fixture of economic policy development in China since the early 1950s. The Five Year Plans (5YPs)<sup>18</sup> have been important, recognized tools in setting national economic and social direction since that time. As such, 5YPs will almost certainly remain important planning mechanisms for the foreseeable future.
- The five-year planning process cascades from the central government outward regionally to provinces and cities, as well as through the ministries and state-owned enterprise (SOE) management.
- It is most appropriate to think of "the Five Year Plans" as a process rather than as a set of reports. The development of the main Five Year Plan by the central government in China is accompanied by the development of a whole series of related reports that are specific to sectors, regions, and themes of particular importance.<sup>19</sup>
- The process is sufficiently ingrained in Chinese government ministries and agencies at all levels – as well as in SOEs at central, provincial and local levels – for the process to stake a claim as the core strategic planning development tool for economic, industrial and social policy implementation.
- 5YPs seek to comprehensively integrate policies established through other government planning and public announcement processes, such as Party Plenums, and the annual *Government Work Report*. The five-year planning process serves as a mechanism for translating policy direction into practical guidelines, objectives, and targets.
- Although the private sector now accounts for a significantly greater share of total economic activity<sup>20</sup> – a trend we expect to continue – private sector activity will be encouraged in directions favored by the government and discouraged in areas not favored by the government. As such, private sector expansion will unfold in large measure in areas consistent with 5YP guidance.
- We expect the 13<sup>th</sup> Five Year Plan – currently under drafting – to be highly consistent with the broad economic goals made public by President Xi Jinping and Premier Li Keqiang in major announcements.<sup>21</sup> Based on reports issued by the China government to date, we expect the broad government goals of enhancing rule of law, transforming the economy to higher value-added manufacturing, increasing services sector components of the economy, boosting innovation within key industries, continuing the expansion of consumption, improving environmental protections, stimulating regional development in priority areas (e.g. "One Belt One Road"), supporting strategic emerging industries, and streamlining administrative procedures will be reflected as key themes of the 5YPs issued by government ministries, agencies, and SOEs.
- American companies continue to have an opportunity to leverage the five-year planning process to their advantage, and would be significantly disadvantaged to ignore it.

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<sup>18</sup> The official name of the 12th Five Year Plan is: "12th Five-Year Plan for National Economic and Social Development of the People's Republic of China"

<sup>19</sup> For example, the "12th Five Year Plan 2011-2015" was released in draft in October 2010 for comment, followed shortly by the "12th Five-Year Plan for the Large-Scale Development of the Western Regions".

<sup>20</sup> *Xinhua*, China's Private sector now accounts for more than 60 percent of GDP contribution, [http://www.china.org.cn/china/Off\\_the\\_Wire/2014-06/12/content\\_32649060.htm](http://www.china.org.cn/china/Off_the_Wire/2014-06/12/content_32649060.htm)

<sup>21</sup> *Brookings*, Xi Jinping's Ambitious Agenda for Economic Reform in China, <http://www.brookings.edu/research/opinions/2013/11/17-xi-jinping-economic-agenda-kroeber> and *Xinhua*: Full Text Report on the Work of the Government, [http://news.xinhuanet.com/english/china/2015-03/16/c\\_134071473.htm](http://news.xinhuanet.com/english/china/2015-03/16/c_134071473.htm)

Understanding China's economic development priorities and how they are translated into action at regional/local and sector levels, is critical to creating and maintaining a strategic value proposition to manage successful operations in China.

- The rapidity and complexity of China's ongoing economic transformation highlights China's sustained need for American innovation, technical achievement, and know-how. However, if government bodies in China are not made aware of a company's potential contribution to national and/or local development goals, the process of establishing and expanding a business profitably in China is made significantly more challenging.
- Government-to-government initiatives, exchanges and agreements can assist significantly in enhancing the positioning of American companies in this respect. The trade delegation of leading American greentech companies that recently visited China under the guidance of the U.S. Departments of Energy and Commerce – triggered by the climate change agreement signed by Presidents Obama and Xi in 2014 – is a recent and prominent example.

## **Background**

China's practice of setting economic and social policy in five-year increments was initially borrowed from the Soviet central planning model, but has since been adapted as an effective way by which the Central Government can disseminate policy agendas and priorities. Development of the 5YPs is an extensive and lengthy process administered by the National Development and Reform Commission (NDRC) over a nearly year-long period and involves many avenues of input and contribution from a broad array of government bureaus, provinces, cities, and enterprises, as well as commentary that is invited from foreign institutions such as the OECD and the World Bank.

The 13<sup>th</sup> Five-Year Plan (2016-2020) (5YP) will be released in March of 2016 in an atmosphere of slowing economic growth<sup>22</sup> and shifting social and commercial priorities.<sup>23</sup> It will articulate how the government plans to achieve the challenging balancing act of transitioning the drivers of economic growth in the country from export-oriented manufacturing and infrastructure investment to higher-value manufacturing, domestic consumption, and services. Subordinate plans at the local and State-Owned Enterprise (SOE) level will translate these broad concepts and policy guidelines into regional implementation plans.

## **1. Relevance of the 5YPs China today**

China's five-year planning process has served the country well over the course of the last three decades of impressive economic transformation. During this period, the SOE share of total employment has fallen from greater than 60 percent in 1992 to now less than 15 percent according to World Bank estimates.<sup>24</sup> Given this tremendous increase in the role of the private sector in China, one might be tempted to ask whether the 5YP is still an important policy tool in China. Despite the increase in the role of the private sector in generating economic activity, the role of the government remains predominate in China in setting objectives for the future direction of economic and social development. Private entrepreneurs succeed in today's China

<sup>22</sup> *Wall Street Journal*, <http://www.wsj.com/articles/china-confronts-new-normal-of-slower-growth-1421767359>

<sup>23</sup> Initial formal drafting of the central government 5YP document began in April 2015, and will continue until the first draft is released in October of 2015 for comments

<sup>24</sup> The World Bank and Development Research Center of the State Council, "China 2030", 2012.

in part by capturing business opportunities in areas prioritized by the government and which are not well-served by the state-owned sector. Enhancing the quality of health care services, facilitating e-commerce, and improving regional logistics services are prime examples of rapidly expanding niche areas of private sector growth. The five-year planning process is well ingrained in government cultures, provides reasonably clear guidelines for the prioritization of future investments (e.g., the naming of “strategic emerging industries”), allows for the identification of regional growth and investment priorities (e.g., the 12<sup>th</sup> Five-Year Plan for the Development of the Western Regions<sup>25</sup>) and, as such, allows both state-owned and privately-owned businesses to develop strategies that direct investment toward complimentary objectives. For these reasons, the development of 5YPs in China is likely to remain a fixture of government activity for the foreseeable future. In China today, Leading Small Groups are increasingly called upon to oversee important initiatives; it remains to be seen what the role of these groups will be in development and oversight of the 13th 5YP.

### **Impact of the 5YP on the business environment in China**

The central 5YP is drafted under a process overseen by the NDRC and sets the tone for economic development at a national level for areas such as GDP targets, sector development and transition priorities, social agenda priorities, and the identification of strategic industries. This direction is then implemented through 5YPs drafted by other divisions of the central government, provincial, municipal, and county-level governments, as well as agencies and SOEs.

Historically, 5YPs have served as the central aligning mechanism for cascading national guidelines into local level planning and action. Domestic companies are clearly heavily influenced by the tone and direction of initiatives set out in the 5YPs. An example of this is the inclusion of Outbound Direct Investment in the 12<sup>th</sup> 5YP in 2011/12 and the government’s encouragement for Chinese companies to “go out” through overseas mergers and acquisitions.<sup>26,27</sup> Since then, China’s outbound investment has grown at a compounded annual rate greater than 20 percent.<sup>28</sup> It is noteworthy that an increasing share of outbound merger & acquisition activity from China is being undertaken by privately-owned companies. Similarly, the most effective foreign companies operating in China analyze national strategies outlined in 5YPs and adapt business strategies to meet China’s stated needs.

In general, China has a good track record of achieving goals set out in 5YPs. According to a mid-term review of the 12<sup>th</sup> 5YP (2011 – 2015) conducted by the US–China Business Council, China will likely achieve most social and economic goals set out in the plan. These include growing the economy at a rate of at least 7 percent, increasing the services sector contribution to GDP by 4 percent, raising urban and rural income levels 7 percent per year, and increasing the

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<sup>25</sup> The State Council Officially Approves the 12th Five-Year Plan for the Large-Scale Development of the Western Regions: February 13, 2012, [http://hk.lexiscn.com/latest\\_message.php?id=62638](http://hk.lexiscn.com/latest_message.php?id=62638)

<sup>26</sup> Chapter 52 of the 12th 5YP, <http://baike.baidu.com/view/4659715.htm>

<sup>27</sup> KPMG, Overview of the 12th Five Year Plan, <https://www.kpmg.com/cn/en/IssuesAndInsights/ArticlesPublications/Documents/China-12th-Five-Year-Plan-Overview-201104.pdf>

<sup>28</sup> World Bank data, KPMG analysis

national urbanization rate from 47 to 51 percent.<sup>29</sup> An official assessment report of the progress achieved towards the goals set out in the 12<sup>th</sup> 5YP is expected toward the end of 2015.<sup>30</sup>

## 2. 5YP propels expansion of the services sector

Investment is now nearly 50 percent of China's economy.<sup>31</sup> To sustain future growth China's economy needs to be less dependent on fixed asset and real estate investment. To rebalance investment contributions to GDP, policy makers have committed to liberalize the services sector and expand domestic consumption to spark new engines of growth.

China's services sector in 2014 reflected a 46.9 percent share of total economic activity, which is below the 55 percent average share for OECD middle-income countries. By this measure, China's economic contribution from the services sector is more similar to that of Vietnam (43.3 percent) and Indonesia (39.0 percent) than traditionally-compared BRIC countries (Brazil 69.3 percent, Russia 59.9, and India 57.0).<sup>32</sup> The 2013 Third Plenary Session of the 18th Communist Party of China Central Committee (Third Plenum) outlined how China will likely expand the services sector which over time could rebalance investment's contribution to GDP. These recommendations focused on removing subsidies on the cost of capital, diversifying ownership of state assets, and encouraging private sector investment in the services sector.<sup>33,34</sup>

### Removing subsidies on the cost of capital

Historically, China's banking sector has largely focused on supporting manufacturing and other industries dominated by State-Owned Enterprises (SOEs) through subsidized deposit rates and artificially low interest rates, which lower the cost of capital for some companies. Capital intensive industries like manufacturing and infrastructure development require longer funding cycles and considerably larger rounds of funding than comparable service companies. As subsidies are reduced, raising the cost of capital for SOEs in capital intensive industries, available capital will likely flow more to private companies and those in less capital-intensive industries such as services. We are already beginning to see effects of this policy shift. Data shows that year-over-year fixed asset investment growth rates in the manufacturing and real estate sectors have decreased by 13.5 percent and 22.4 percent respectively between 2010 and 2014. In contrast, fixed asset investment growth rates in information technology and healthcare have increased by 44.6 percent and 11.7 percent during the same timeframe.<sup>35</sup>

<sup>29</sup> *China Business Review*, Understanding China's 13th Five-Year Plan,

<http://www.chinabusinessreview.com/understanding-chinas-13th-five-year-plan/>

<sup>30</sup> China's 12th Five Year Plan, <http://wenku.baidu.com/view/129137ec0975f46527d3e100.html>

<sup>31</sup> World Bank data, Investment is measured here as gross capital formation as a percent of GDP

<sup>32</sup> Service Sector Reform in China, Peterson Institute for International Economics, <http://www.piie.com/publications/pb/pb15-2.pdf>

<sup>33</sup> Service Sector Reform in China, Peterson Institute for International Economics, <http://www.piie.com/publications/pb/pb15-2.pdf>

<sup>34</sup> *Brookings*, Cheng Li: 18th Party Congress' Third Plenum another Turning Point in China's Economic Development <http://www.brookings.edu/blogs/brookings-now/posts/2013/11/china-communist-party-third-plenum-turning-point-economic-development>

<sup>35</sup> China National Bureau of Statistics

## Diversifying ownership of state assets in the services sector

The ownership diversification of SOEs under a program of overall SOE reform was featured in the 12<sup>th</sup> 5YP, and will likely remain a central component of the forthcoming plan. Policy announcements at the 2013 Third Plenum gave a clear indication how this will be carried forward. “The Decisions” released in November 2013 by the Central Committee called on SOEs to develop more diversified ownership structures that incorporate private, and even foreign, investment.<sup>36,37</sup>

We are seeing the results of this policy action translated into market activity. The first major announcement was the February 2014 initiative by China Petroleum & Chemical Corporation (Sinopec) to sell 30 percent of its downstream oil services business to private investors. This landmark event was followed later that year with the announcement that six more central SOEs will experiment with what the government calls “mixed ownership” models. China National Building Materials Group and China National Pharmaceutical Group Corporation (Sinopharm) are reported to be among the first of the six.<sup>38</sup>

## Urbanization and the Five Year Plan

China’s 12<sup>th</sup> 5YP – issued under the leadership of President Hu Jintao and Premier Wen Jiabao – was notable for introduction of the principles of “higher quality growth” and “inclusive growth” as China began a series of significant initiatives designed to extend the benefits of China’s economic growth accomplishments toward a larger proportion of the population. Over time, and under the subsequent stewardship of Premier Li Keqiang, these principles were integrated with additional goals included in the 12<sup>th</sup> 5YP and re-emphasized with the release of the *National Plan on New Urbanization (2014-2020)*, released in March of 2014. Goals present in the 12<sup>th</sup> 5YP that were brought under what eventually became known in China as “New-Type Urbanization” included increasing the urbanization rate, developing affordable housing, improving access to and affordability of quality health care, increasing access to education, and improving sustainability measures in China’s cities and surrounding land and waterways.

In this context, China’s municipal managers face a raft of rapid growth-induced challenges, including dangerous air, water and soil pollution levels, inadequate urban health care facilities, and over-loaded educational institutions. To draw on some of the most commonly cited statistics, air pollution levels in the capital routinely reach levels in excess of 20 times those considered safe by the World Health Organization (WHO),<sup>39,40</sup> while 60 percent of China’s renewable

<sup>36</sup> Brunswick Group, China & the Third Plenum, <http://www.brunswickgroup.com/media/229639/Brunswick-China-Analysis-Third-Plenary-Session-Part-2-November-2013.pdf>

<sup>37</sup> The Decision on Major Issues Concerning Comprehensively Deepening Reforms in brief, [http://www.china.org.cn/china/third\\_plenary\\_session/2013-11/16/content\\_30620736.htm](http://www.china.org.cn/china/third_plenary_session/2013-11/16/content_30620736.htm)

<sup>38</sup> *Financial Times*, <http://www.ft.com/intl/cms/s/0/07928638-0c24-11e4-a096-00144feabdc0.html?siteedition=intl#axzz3X67cdorW>

<sup>39</sup> WHO Public Health, Environmental and Social Determinants of Health (PHE) [http://www.who.int/phe/health\\_topics/outdoorair/en/](http://www.who.int/phe/health_topics/outdoorair/en/)

<sup>40</sup> Beijing air quality monitor <http://beijing.usembassy-china.org.cn/070109air.html>

ground water is polluted beyond safe drinking levels.<sup>41</sup> A recent study conducted by a consortium of leading foreign and Chinese educational institutions<sup>42</sup> calculated that air pollution is, when controlling for other variables, reducing the lives of those living in the northern half of China by an average of 5.5 years.<sup>43</sup>

While urbanization was highlighted in the 12<sup>th</sup> 5YP, it became a more prominent policy tool guiding growth when Li Keqiang assumed the position of Premier in China in 2013. One can argue that a unique aspect of urbanization in China is that policies guiding urbanization are utilized as distinct growth policy tools, as opposed to urbanization being the byproduct of related growth- and efficiency-targeted policies (which naturally result in higher concentrations of people living in cities). As such, urbanization in China is routinely viewed as the “cause” of growth, not the “effect” of growth and is diligently managed as a policy tool.

### China’s “New Type Urbanization”

The *National Plan on New Urbanization* (2014-2020) specifically calls for directing population movements based on city population size, stating that “growth in population will be “fully encouraged” in small towns, “moderately encouraged” in small cities (population 500k-1m), “reasonably encouraged” in medium size cities (1m-3m), “carefully analyzed” in large cities (3m-5m), and “strictly controlled” in mega cities (>5m).<sup>44</sup> Urbanization related policy initiatives, such as Hukou<sup>45</sup> reform, have aligned to this concept. Local residence permits, known as “Hukous” were initially liberalized to incent population movement into smaller towns within the pilot reform locations of Chongqing, Henan, Guizhou, Shanxi, Qinghai, Jiangxi and Anhui.<sup>46</sup>

Despite the challenges of undertaking such large-scale reform, the period governed by the 12<sup>th</sup> 5YP (2011-2015) saw significant progress in the quality of life measures associated with “new urbanization”. China is on track to meet or exceeded its stated 12<sup>th</sup> 5YP goals by raising the national urbanization rate from 47.4 percent to 53.1 percent, expanding access to healthcare, extending average life expectancy by one year, and increasing the high school enrollment ratio from 82.5 percent to 88.9 percent<sup>47,48</sup>. Perhaps the most significant change relating to the goals of “higher quality growth” and “inclusive growth” arise in the area of governance and performance monitoring. Notably, the Key Performance Indicators (KPIs) applied to monitor a government official’s job performance were amended in several provinces and cities to move away from the previous, long-standing single-measure KPI of GDP growth. Those KPIs now

<sup>41</sup> Wall Street Journal, Apr 23, 2014 <http://blogs.wsj.com/chinarealtime/2014/04/23/chinas-water-glass-more-than-half-polluted-report-says/>

<sup>42</sup> Contributors were the Massachusetts Institute of Technology, Tsinghua University, Peking University and the Hebrew University of Jerusalem

<sup>43</sup> *Financial Times*, China smog cuts 5.5 years from average life expectancy, <http://www.ft.com/intl/cms/s/0/eed7c0be-e7ca-11e2-9aad-00144feabdc0.html#axzz3Wylpbj8C>

<sup>44</sup> *National Plan on New Urbanization* (2014-2020), Chapter 6, Section 2, March 16, 2014

<sup>45</sup> China’s national system of local residence permits

<sup>46</sup> *The Diplomat*, China Announces Limited Hukou Reform, <http://thediplomat.com/2014/07/china-announces-limited-hukou-reform/>

<sup>47</sup> *Xinhua*, Key targets of China's 12th five-year plan, [http://news.xinhuanet.com/english2010/china/2011-03/05/c\\_13762230.htm](http://news.xinhuanet.com/english2010/china/2011-03/05/c_13762230.htm)

<sup>48</sup> World Bank Data, KPMG Analysis

include broader quality of life factors such as poverty reduction and environmental improvement measures.<sup>49</sup> We expect more of these measures in the 13<sup>th</sup> FYP, with particular emphasis paid to environmental and sustainability initiatives – and the associated economic transformation – targeted for the Beijing-Tianjin-Hebei region.

### **Financing China’s urbanization**

Creating more environmentally sustainable cities will be costly, and comprehensive funding mechanisms are yet unclear. Local governments currently are allocated approximately half of collected taxes in China but are responsible for a large majority of expenditures. Since local governments lack significant means by which they can raise capital, budgetary shortfalls have historically been made up through land sales, bank loans, and loans from non-bank entities (“shadow banks”). As a result, local government debt-to-GDP ratios rose quickly over the past 5 years from 10 percent in 2008 to 30 percent in 2013.<sup>50</sup> The forthcoming 13<sup>th</sup> FYP will likely incorporate a number of important reforms to provide a more sustainable mechanism by which cities are able to fund future urbanization initiatives.<sup>51</sup> Reforms will likely include the development of a more robust municipal bond market, alternative local government revenue channels such as personal property taxes, licensing fees, and vehicle taxes, and additional funding frameworks that include Public Private Partnerships (PPP).

### **Public Private Partnerships (PPP)**

The central government has recently shown increased interest in promoting PPPs, especially in the areas of public infrastructure construction and urban public services. Infrastructure projects may include rail development, public hospitals, vocational schools and universities, as well as urban infrastructure and public services anchored around smart cities. Market-driven practices such as franchising, competitive pricing, financial subsidies and other such transparent methods will be utilized to attract private capital to urban infrastructure development.<sup>52</sup>

The central government has identified PPPs as a useful source of funding to meet China’s urbanization goals. Following China’s *National New-Type Urbanization Plan (2014-2020)*, the government is taking steps to align the performance evaluations of city mayors to the long-term success of such projects. In addition, legal frameworks may be introduced to include regulatory oversight and dispute resolution at the national level, which would better protect the interest of the private investor, and ensure a more transparent legal landscape. We expect central government support for PPP to feature prominently in the 13<sup>th</sup> Five Year Plan.

### **3. “One Belt One Road”**

The “One Belt One Road” strategy is composed of two main initiatives: the Silk Road Economic Belt (“One Belt”) and the 21st Century Maritime Silk Road (“One Road”). These initiatives were

<sup>49</sup> *Financial Times*, <http://www.ft.com/cms/s/0/2c822efc-a51d-11e4-bf11-00144feab7de.html>

<sup>50</sup> China’s viewpoint: China’s debt, risk of debt crisis, and deleveraging. Bank of America Merrill Lynch, 08 October 2013

<sup>51</sup> *China Daily*, 62 sites in country to pilot new urban plan, [http://www.china.org.cn/china/2014-09/17/content\\_33531429.htm](http://www.china.org.cn/china/2014-09/17/content_33531429.htm)

<sup>52</sup> China’s Ministry of Finance. China’s National 2014-2020 Urbanization Plan

proposed by President Xi Jinping during state visits to Kazakhstan and Indonesia in September and October of 2013, respectively.<sup>53</sup> Further details on the “One Belt One Road” plan were released in late March 2015. China hopes that through these two strategies, it can better integrate its economy with that of Europe, increase its soft power influence in the developing world, and transfer domestic manufacturing output to neighboring nations to meet rising demand in sectors where China is burdened with over-capacity. Similarly, Beijing hopes to address the domestic east-west development gap by building infrastructure in under-developed regions such as Xinjiang. China’s announcement of the Asian Infrastructure Investment Bank puts Chinese capital – and that of other participating countries – behind this strategic initiative. To further fund this initiative, China has announced a USD 40 billion Silk Road Fund. Measures that integrate the policies supporting inland regional development, infrastructure investment, and regional economic trade with China’s western neighbors under the label of the “One Belt One Road” initiative are expected to be featured prominently in the 13<sup>th</sup> Five Year Plan.

#### **4. “Mass Entrepreneurship and Innovation”**

Premier Li Keqiang announced a new campaign referred to as “Mass Entrepreneurship and Innovation” as part of the Government Work Report he presented at this year’s “Lianghui” (Two Sessions) annual government meeting. This campaign is designed to encourage entrepreneurship and innovation to spur economic growth in China’s “New Normal” economic phase of slower growth and less reliance on investment. Intended outcomes of the initiative appear to include a more “level playing field” for entrepreneurs and better access to government-controlled business services such as bank loans. As a result, we may see more focus intellectual property rights protections for entrepreneurs, and more clarity in regulations around flexible financing mechanisms targeted toward small- and medium-sized enterprises. The intent of the government appears to be to increase availability of capital for more innovative sectors that will create more employment opportunities, especially for higher skilled workers and college graduates.

#### **5. Opportunities within the 13<sup>th</sup> 5YP for American companies**

Although actual drafting of the 13<sup>th</sup> 5YP has only recently begun, senior government officials, including Premier Li Keqiang, are commenting on its potential contents and messaging. The Premier noted that the 13<sup>th</sup> 5YP should “not only focus on the five years and reflect diversified goals for building a moderately prosperous society by 2020, but also consider development prospects in the longer term”.<sup>54</sup> To meet that goal, we will likely see a transition in emphasis from hard economic or demographic targets to a set of more balanced targets that seek to “improve government efficiency and credibility”.<sup>55</sup> American companies that have the technology, know-how, and innovation to help China achieve its next set of goals can contribute to China’s further development in ways consistent with the goals encapsulated in the 13<sup>th</sup> 5YP.

China faces a dauntingly complex array of challenges as it undertakes implementation of the 13<sup>th</sup>

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<sup>53</sup> Chronology of China's Belt and Road Initiative, Xinhua News Agency, 28 March 2015, [http://news.xinhuanet.com/english/2015-03/28/c\\_134105435.htm](http://news.xinhuanet.com/english/2015-03/28/c_134105435.htm)

<sup>54</sup> *China Daily*, 2014-09-05, [http://www.chinadaily.com.cn/china/2014-09/05/content\\_18550923.htm](http://www.chinadaily.com.cn/china/2014-09/05/content_18550923.htm)

<sup>55</sup> <http://www.chinanews.com/gn/2012/03-06/3722104.shtml>



5YP. Enhancing access to health care services, improving air quality, increasing the efficiency of energy production, raising the quality of environmental standards, improving agricultural efficiency, enhancing education quality, improving the quality of national logistics networks, encouraging innovation and facilitating start-up platforms, enhancing infrastructure in targeted regions, building “smarter cities”, expanding advanced manufacturing capabilities, and spurring e-commerce and information technology capabilities are several of the most critical objectives likely to emerge in the 13<sup>th</sup> 5YP. China’s domestic enterprises – whether public or private – cannot address these needs entirely on their own. American companies have significant opportunity to fill this void, and can be aided in that process from American initiatives that seek to study 5YP guidelines in depth, and align policy toward mutually beneficial commercial objectives.

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DR. PRASAD: Good afternoon and thank you for giving me the opportunity to share with you my views on China's path to sustainable growth.

So I will talk about the short-term, the long-term, and where things stand with reforms and how the five-year plans fit into it.

The short-term does not look good. Any indicator of Chinese economic activity that one looks at these days, whether it be growth, industrial production, electricity consumption, imports, all suggest a very bleak picture of an economy that is slowing down very rapidly and that seems to be essentially running out of momentum.

Now the question is whether this is going to have implications in terms of the reform process because it squeezes both the political and economic space for reforms and what implications this will have for the longer term.

My sense, in fact, is that over the next two years, China will be able to generate growth in the range of about six-and-a-half to seven percent, which the government seems to want. But what is going to be crucial is how they accomplish that, and how they accomplish that is going to matter very significantly for the long-term both for China's growth itself and for the world economy at large because it will have serious implications for the structure of the Chinese economy.

What has been accomplished since the 12th Five-Year Plan? A great deal of promise was made about economic reforms and, indeed, in 2012, there was some progress on very specific reforms, but then the new leadership came in with some initial political turmoil surrounding the transition that quieted down quickly, but it seemed like reform was going to be slowed down.

The new government has made it an important priority to generate economic reform, and I should be very clear that they've made it abundantly and equally clear that broader institutional and political reforms are off the table. So they've essentially pinned all of their hopes in terms of legitimacy in terms of generating good economic growth, and they recognize that reforms are going to be crucial to that.

Now over the last two or three years, despite all the risks that have been building up in the Chinese economy, there has been progress. For instance, China's consumption-to-GDP ratio has been falling for about a decade-and-a-half. It's still the lowest in the world, but at least it's stopped falling. It's flattened out at about one-third of GDP, which is far lower than any other major advanced or emerging market economy, but at least it's not dropping further.

The share of investment in overall growth is still very high, but over the period 2011 to '14, consumption growth, both private and government consumption, added as much to growth as did investment growth.

If one looks at household saving as a share of disposable income, that was rising steady over the last decade-and-a-half. In the last two years, it's stopped rising. It fell very slightly. Now can one make too much of this progress? Maybe things not getting worse is a sign of progress, but I think it's beginning to show that the reforms are having an effect.

Now what are these reforms that have generated this? The old notion about Chinese reforms used to be that there were lots of external imbalances, the large current account surplus, the large trade surplus, and there was a sense that these surpluses were being driven by internal imbalances.

So the Chinese used to say let us fix our internal problems; the external problems will get taken care of. Well, the external problems have gotten taken care of. The current account surplus, which was about ten-and-a-half percent of GDP before the financial crisis hit, is now down in the two percent of GDP. The trade surplus is under three percent of GDP. But on internal rebalancing, as I pointed out, progress has been very limited.

So there is a question about whether these two pictures hang together? Now it turns out on the internal front, in fact, some progress has been made, especially on financial market reform. And the government seems very committed to financial market reform, and this I believe is the right priority because ultimately in China, the crucial issue is not just bringing down the level of investment but making sure that the investment that the economy does engage in is financed through a mechanism that allocates capital in an efficient way.

In addition, if you want to shift away from investment-led growth to consumption-led growth, if you want to shift away from a manufacturing-led economy to a service sector-led economy, from a state-dominated to a market-oriented system, a better allocation of domestic savings and international capital is going to be crucial.

So the government has made this a priority. Now the problem in China is that even if the government is committed to these economic reforms, and especially financial market reforms, is that it's a system that's very clogged. So I have little doubt about the commitment to reforms. Indeed, when one thinks about the reform, like deposit rate liberalization, which the government has been committed to for a long time, it's partly the political constraints but also the economic constraints that are holding them back.

If you free up the deposit rate system, you get a lot more competition among banks, but they're not well regulated because there isn't enough political will or capacity to regulate them so that could lead to even more problems.

So I think the Chinese government has its heart in the right place in terms of reforms. What I think we will see in the next five-year plan is a continuation of these reforms, and there is going to be a building in terms of progress.

So let's think about what needs to be done for China to have better growth in the future. I think, again, that the key issue for China is whether over the next two years in order to support short-term growth, they end up going back to the playbook of 2008-2009, when there was some massive credit-financed investment bubble, or if they will use the sort of new playbook they're trying to turn to.

So what will the new playbook involve? They are committed to moving towards more market-oriented system of enterprises. This does not mean privatization. This does not mean that stakes in the state enterprises are going to be sold off, but they are subjecting the state enterprises to harder budget constraints.

Financial market reform is going to be a very important component of this, getting not just the banks to work better but broadening and creating other channels for domestic savings to flow into domestic investment. Capital account liberalization and currency reform are areas that they've already made significant progress in, and they're committed to opening the capital account, both in terms of freeing up restrictions on inflows and restrictions on outflows, partly because this gives Chinese banks and financial institutions more competition, but it gets them the domestic objective they're after, which is a better domestic financial system.

In addition, on industrial reform, I think we will see progress, but again one has to think about progress in the Chinese context. It's not privatization, but more marketization, but still with state dominance. So I think we are on the right track, but this is a very big ship that's been

going very fast and not necessarily in the right direction. My sense is they're taking the right sort of steps to move it in the right direction, and I'm hopeful that in the 13th Five-Year Plan, we will see more progress in that direction.

Thank you.

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

**HEARING ON “CHINA AHEAD OF THE THIRTEENTH FIVE-YEAR PLAN:  
COMPETITIVENESS AND MARKET REFORM”**

April 22, 2015

**The Path to Sustainable Growth in China**

Eswar S. Prasad<sup>56</sup>

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Chairman Reinsch, Vice Chairman Shea, and honorable members of the Commission, thank you for the opportunity to share with you my views on the status of market-oriented economic reforms in China and the implications for its domestic growth prospects and for the world economy. In this testimony, I will also evaluate progress on some of the reform priorities identified in the twelfth five-year plan (which covers the period 2011-15) and discuss possible priorities for the thirteenth five-year plan (covering the period 2016-20).

Over the past year, China’s GDP growth has slowed significantly, producer prices continue to fall, and various other indicators of economic activity have weakened, including growth in industrial production, investment, and imports (Figures 1-3). In short, the headline data indicate that the economy is losing growth momentum. On the other hand, there has been some progress on growth rebalancing—the consumption to GDP ratio is up slightly, and the services sector’s share in the economy has continued to rise.

What do these developments portend for the future of the Chinese economy? Separating the trend from the cycle, especially in real time, is a challenge in any economy and especially for a developing economy that is still undergoing massive structural change in many dimensions. As the economy matures and becomes richer, both in terms of absolute size and per capita income, traditional convergence effects alone would dictate a slowdown in China’s growth.<sup>57</sup> But China still has considerable growth potential and a long way to go in its transition to even an upper

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<sup>56</sup> I am grateful to Karim Foda for excellent research assistance.

<sup>57</sup> A related argument is that China will soon be subject to a middle-income trap—an empirical regularity that countries face growth slowdowns when their per capita income hits a certain threshold. See Barry Eichengreen, Donghyun Park, and Kwanho Shin, 2013, “Growth Slowdowns Redux: New Evidence on the Middle-Income Trap,” NBER Working Paper No. 18673. Another argument is that episodes of high growth tend to be followed by periods of markedly slower growth, and that persistently high growth of the sort China has experienced over the last three decades is already a statistical anomaly and is unlikely to last. See Lant Pritchett and Lawrence Summers, 2014, “Asiaphoria Meets Regression to the Mean,” NBER Working Paper No. 20573.

middle-income economy. The economy faces many risks emanating from the rapid but in some respects unbalanced growth that has vaulted it to its present status as the world's second largest economy.

The path that China's economy takes will depend to a large extent on the successful implementation of the reforms that were articulated in the twelfth five-year plan and that will need to be carried forward in the next five-year plan, which will be developed during the course of this year.

The stated desire of China's new leaders to promote economic reforms provides grounds for cautious optimism. The broad objective of the twelfth five-year plan is to reorient growth to make it more balanced and sustainable, even if it means settling for slower average growth than in the previous decade. The thirteenth five-year plan is likely to provide further impetus to reforms that improve the country's pattern of economic development. The challenge for the new leadership is to break down the opposition of interest groups that prefer the status quo and to implement reforms needed to attain their stated objectives. There are also economic challenges in the reform process itself as some of the reforms are risky and could generate unexpected outcomes in an economy that is beset by many problems and distortions.

### **Progress on the Twelfth Five-Year Plan**

The twelfth five-year plan that was approved by the National People's Congress in March 2011 appeared to herald a turning point in China's economic development. It represented, at least in rhetoric, a marked shift in emphasis from high growth to the quality, balance, and sustainability of that growth. The longer-term objective of the plan was to reorient growth to make it more balanced and sustainable from different perspectives--economic, social, and environmental.

#### *Small Steps in the Right Direction*

There were promising signs of a push for reforms in the first half of 2012, as a number of modest but significant actions signaled progress towards economic reforms. The central government made some opportunistic moves to kick-start momentum on a few key measures. It increased the flexibility of the exchange rate (in principle) when the renminbi was not under pressure to appreciate, relaxed the cap on interest rates paid on bank deposits, increased foreign investors' access to capital markets, and encouraged certain informal financial firms to become part of the formal banking system. Each of these moves had broader significance.

For instance, giving informal financial firms the opportunity to join the formal banking system served multiple ends. It brought these institutions under the ambit of the banking regulator and was an attempt to reduce the risks they posed to financial stability. Moreover, they now provide more overt competition for established banks.

To overcome resistance to liberalizing deposit rates and abandoning the fixed spread between deposit and loan rates (thereby cutting in to bank profits), the government cleverly took a small step when it cut rates—freeing up banks to offer deposit rates marginally higher than the base rate, arguing that this would make the rate cut more palatable to depositors.

These modest steps towards reforms came to a halt in the latter half of 2012, partly due to some unexpected political turmoil in the lead-up to the leadership transition that got underway in the fall of the year.

### *A Fresh Boost to the Plan Objectives*

The new leadership of President Xi Jinping and Premier Li Keqiang has made financial sector and market-oriented reforms a centerpiece of its economic plan. The communiqué of the Third Plenary Session of the eighteenth CPC Central Committee, released in November 2013, laid out a broad strategy of market-oriented reforms but in a manner consistent with a dominant role for the state. This apparent contradiction indicated that the government does not intend to upend state control of key enterprises but, rather, subject them to greater market discipline. Still, the communiqué set out a time frame of five-six years for a set of substantive market-oriented reforms. The commitment to reforms seems to have generated some positive effects although the reforms themselves are relatively modest so far.

### **Rebalancing the Economy**

A major objective laid out in the twelfth five-year plan was to rebalance domestic growth and increase the share of private consumption in GDP. This is seen as necessary to ensure greater social stability by increasing the benefits that accrue to the average household from China's strong GDP growth. In addition, shifting away from a capital-intensive production structure is important for increasing job growth and ameliorating the destructive environmental consequences of rapid growth. There has been at best incremental progress on these dimensions. However, external imbalances have shifted down sharply, with both the trade and current account surpluses remaining at low levels while the accumulation of foreign exchange reserves has fallen sharply.

### *Internal Rebalancing: Modest Progress*

Investment growth propelled China's growth over the last decade, accounting for more than half of GDP growth.<sup>58</sup> During and right after the financial crisis, investment growth was crucial for sustaining economic momentum. Both real estate investment and infrastructure investment have been important contributors to overall investment growth in recent years.

For an economy with a capital stock per worker ratio that is about 9 percent of the U.S. level (as estimated by the World Bank), additional investment in physical capital seems desirable. However, much of the investment that China has undertaken in recent years has been financed through loans provided by state-owned banks, raising concerns about the emergence of nonperforming assets on the books of the large state-owned banks if these investments turn out not to be commercially viable. Investment-led growth meant that employment growth, which has averaged less than 1 percent a year over the last decade, was relatively muted compared to the

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<sup>58</sup> For more details, see Eswar Prasad, 2009, "Is China's Growth Miracle Built to Last?" *China Economic Review*, Vol. 20, pp. 103–123.

fast pace of output growth.<sup>59</sup> This pattern of growth also has deleterious environmental consequences.

The Chinese government has had to cope with the twin challenges of boosting domestic consumption in order to make growth more welfare enhancing for its citizens and of generating higher employment growth in order to maintain social stability. The growth model fostered by government policies had, until recently, resulted in a rising share of investment and a declining share of private consumption in GDP. Moreover, weak employment growth and high investment growth had resulted in labor income falling as a share of national income and personal disposable income falling as a share of GDP. The government has also been trying to channel more bank credit towards the services sector, which has the potential to provide more employment.

Since 2011, there has been progress in many of these dimensions. Consumption growth (private plus government consumption) overtook investment growth as the main contributor to overall GDP growth in 2011-12, although the relative growth contributions of consumption and investment have been roughly equal over the period 2013-14 (Figure 4). In 2012, the share of private consumption in total GDP stopped declining and rose slightly, although the level of this ratio—at 37 percent in 2014—still remains well below that of virtually every other major advanced or emerging market economy (Figure 5).

Another positive development is that, from 2011 to 2014, the share of the service sector in GDP rose by about 4 percentage points to a level of 48 percent (Figure 6). The share of the industrial sector has fallen by a corresponding amount over this period, and now accounts for 43 percent of GDP. This is a marked change from the situation in 2005, when the share of the service sector in GDP was 41 percent and that of the industrial sector was 47 percent.

Moreover, the Chinese household saving rate, which had trended upward during the previous decade, has finally begun to decline (Figure 7). For urban households, household saving as a share of disposable income declined from a peak of 32 percent in 2012 to 31 percent in 2014. Factors such as rising wages have helped boost consumption demand. Other fundamental reforms, including a stronger social safety net and a better government-funded health care system, will be necessary to further shift consumption patterns of Chinese households by reducing precautionary saving.<sup>60</sup> The twelfth five-year plan had acknowledged these issues and proposed a number of measures that would increase the coverage and extent of government financing of health care, pensions, and the broader social safety net.

There are other aspects of balanced growth where the government has taken measures that seem to have yielded at least modest results. Growth needs to become more balanced in terms of

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<sup>59</sup> The annual growth rate of non-agricultural employment averaged around 2.5 percent during this period, although this in turn has to be set against the growth rate of non-agricultural output, which has been 2-3 percentage points higher than that of overall GDP.

<sup>60</sup> For an analysis of the factors driving the trend increase in saving rates of urban households, see Marcos Chamon and Eswar Prasad, 2010, “Why Are Saving Rates of Urban Households in China Rising?” *American Economic Journal: Macroeconomics*, Vol. 2, No. 1, pp 93–130; and Marcos Chamon, Kai Liu, and Eswar Prasad, 2013, “Income Uncertainty and Household Savings in China,” *Journal of Development Economics*, Vol. 105, pp. 164-177.



reducing regional disparities in economic development, especially when one compares the coastal versus the interior provinces. To respond to this issue, the government has directed large amounts of infrastructure funds towards interior provinces through the Develop the West campaign. The rise in food prices in recent years has reduced rural-urban income disparities although both official data and estimates by academics suggest that overall inequality, as measured by the Gini coefficient, remain very high by international standards.

In short, the picture that one can paint with macroeconomic data is one of small but notable improvements in the balance of domestic growth in most dimensions, although there are many underlying risks that are being masked by high growth. Maintaining high and stable growth, even if somewhat below the levels of the past decade, is therefore an important objective of policy reforms.

### *Significant Progress on External Rebalancing*

China's current account and trade surpluses have shrunk markedly relative to their peaks in 2007, when they hit 10.1 percent of GDP and 7.6 percent of GDP, respectively. In 2014, the current account surplus was 2.1 percent of GDP, up slightly from 1.9 percent of GDP in 2013 (Figure 8). The trade surplus rose to 3.7 percent of GDP in 2014, up from 2.8 percent of GDP in 2013. In the early months of 2015, both export and import growth have fallen sharply, reflecting weak external and domestic demand conditions.

In March 2014, the daily fluctuation band of the renminbi-dollar exchange rate was widened to 2 percent on either side of a reference rate set by the People's Bank of China (PBOC). In practice, China has maintained a policy of tightly managing the value of the renminbi relative to the U.S. dollar. The renminbi is one of the only major currencies that has not depreciated significantly relative to the U.S. dollar. Over the past twelve months, the renminbi's value has fallen by only 0.2 percent relative to the U.S. dollar. As a consequence, over this period, the renminbi has appreciated by 21 percent relative to the euro and by 15 percent relative to the Japanese yen (Figure 9). On a trade-weighted basis (either nominal or inflation-adjusted), the renminbi has appreciated by 8 percent since March 2014 (Figure 10).

China's foreign exchange reserves, which rose by \$509 billion in 2013, increased by only \$22 billion in 2014 (Figure 11). In the last half of 2014, China's reserves in fact fell by \$150 billion. This was partly accounted for by valuation effects as the dollar value of China's holdings of euro and yen-denominated assets declined due to the depreciation of those currencies relative to the U.S. dollar. The remainder signals intervention by the PBOC to keep the renminbi's value relative to the dollar stable in the face of large shifts in its balance of payments.

These shifts are attributable to two factors—the lower level of China's trade surplus in recent years and the deficit on the capital account, implying that more capital (other than accumulation of reserves) flowed out of the country relative to the amount that came in. This represents an important change in the nature of China's overall capital exports (which is roughly equivalent to the current account surplus). Balance of payments data show that, in 2014, China's current account surplus was \$214 billion while the increase in international reserves, which effectively amounts to official capital outflows, was \$22 billion. This implies that private net capital

outflows amounted to about \$192 billion.

The capital account deficits have sparked concerns about capital flight, with the connotation being that domestic residents and corporations that see trouble brewing on the domestic macroeconomic front are sending capital out of the country. A more benign interpretation, one which I favor, is that rising capital outflows are a natural consequence of steps that China is taking to open up its capital account and remove restrictions on outflows. As the economy matures and financial markets develop, domestic retail and institutional investors will look to foreign investments as a way of diversifying their portfolios. Moreover, Chinese corporations and financial institutions are in quest of investments abroad to diversify their operations and as a conduit for acquiring technical and managerial expertise.

### **Tension between Growth and Reforms?**

One of the central questions now facing Chinese policymakers is the following--can China maintain high growth without a further massive expansion of credit and while undertaking economic reforms? A number of analysts have argued that these two sets of goals cannot be achieved simultaneously and that a substantial shift away from an investment-led growth model would necessarily require a sharp slowdown in growth to the 3-4 percent range.<sup>61</sup> My view is that reforms and rebalancing are compatible with growth in the range of 6-7 percent over the next couple of years. Of course, there is general agreement that high growth built on a shaky foundation of rapid credit expansion without reforms and rebalancing would be undesirable and risky. In considering the delicate balancing act that the Chinese government faces, it is useful to first consider the risks.

#### *Risks*

Even the relatively benign picture of growth rebalancing depicted earlier is not without risks. The level of investment remains high, at nearly 47 percent of GDP. This investment boom is to some extent feeding on itself—so long as financing is available for construction and infrastructure projects, investment in ancillary industries pays off. But the slowdown in the investment machine is already exposing excess capacity in industries such as cement, steel, aluminum, and hard glass. This will dampen employment and household income growth. Banks fear a resurgence of bad loans on their books if consumption demand doesn't grow fast enough to soak up output from the new factories. In turn, a weakening of domestic consumption growth could eventually increase the dependence on export-led growth, exactly the reverse of the balanced private consumption-led economy that Chinese leaders want.

The drop in housing market prices is another potential source of risk to both the real economy and the financial sector. Residential investment growth has been an important component of overall investment growth, so its sharp decline could presage a significant reduction in GDP

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<sup>61</sup> This view has been articulated forcefully by Michael Pettis. See, for instance, the Pettis-Prasad Bloomberg Debate: [http://www.bloombergbriefs.com/content/uploads/sites/2/2015/03/SC\\_031615-Pettis-Prasad-Debate.pdf](http://www.bloombergbriefs.com/content/uploads/sites/2/2015/03/SC_031615-Pettis-Prasad-Debate.pdf) For a more nuanced view, see Martin Wolf "China Will Struggle to Keep its Momentum," *Financial Times*, April 7, 2015.

growth. The direct financial system risks are likely to be limited since residential mortgages are still not widespread, large down payments provide a buffer against modest declines in house prices, and it is believed that only a few large developers are exposed through high leverage. But the knock-on effects could be large as many of the industries that feed into residential construction would end up with high levels of spare capacity.

The high level of debt in the economy is emblematic of the tensions inherent in China's unbalanced and unsustainable growth model. A recent report by McKinsey estimates that China's total debt level reached 282 percent of GDP in 2014.<sup>62</sup> While the level of gross debt in China is certainly high, the fact that much of this debt accumulation is financed by China's domestic savings suggests not so much a source of financial risk as of major inefficiencies and waste because of a broken system of allocating capital. Since the state owns most of the key creditors and debtors, it is less likely that a financial shock could set off a cascade that results in a financial crisis or a collapse in growth. Nevertheless, resolving some of this debt will impose a large burden on the economy in the future.

### *Striking a Balance on Reforms*

On the positive side, there is clearly commitment to deal with these problems including the rapid accumulation of debt. Whether policy makers can do so without severely crimping growth, given the significant economic and political constraints to reforms, is the key question. The actions of the PBOC over the last year highlight the difficult tension the government faces.

The PBOC has mainly relied on a variety of indirect measures to support economic activity rather than unleashing a rapid expansion of credit that could add to the existing problems. Some of these measures have involved expanded government funding for development banks, cuts in reserve requirements for smaller banks, and incentives to banks for lending to specific sectors of the economy. The irony of course is that such measures vitiate the objective of financial market reforms as they involve a state-determined allocation of resources. But at least they signal that the PBOC is trying to limit the damage rather than rolling back reforms. Concerns about slow growth have, however, led to two of cuts in policy interest rates and one reduction in the required reserve ratio in recent months. This has resulted in a slight uptick in the rates of growth of credit and M2 (Figure 12). Given the slowing growth momentum, more of these broad monetary easing measures are in prospect and could pose a challenge to the objectives of pushing forward banking reforms and rebalancing the economy by reining in investment growth.

The government has not fully unleashed one weapon that could support growth in the short term and facilitate longer-term rebalancing—fiscal policy. China's government budget deficit and explicit public debt levels remain low by international standards. Rather than accumulating more implicit debt through an increase in nonperforming assets in the banking system, it would be more efficient for the government to use fiscal policy directly to support growth and also promote longer-term growth rebalancing by strengthening the social safety net.

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<sup>62</sup> The estimated breakdown is as follows--Government: 55 percent of GDP; Financial institutions: 65 percent of GDP; Nonfinancial corporations: 125 percent of GDP; Households: 38 percent of GDP. See McKinsey Global Institute "Debt and (Not Much) Deleveraging" February 2015.

For instance, funding a more comprehensive catastrophic health insurance program could help restrain the savings of elderly households. A better safety net would reduce precautionary savings. And of course financial market reforms that generate higher returns on savings and allow for portfolio diversification, both domestically and abroad, could also reduce savings.

While the Chinese leadership might know what to do, slowing momentum on domestic growth and a weak external environment have eroded political support and tightened economic space for reforms. Yet, the government seems to remain committed to its agenda, although the pace and scope are certainly at very modest levels.

### *Are Reforms Compatible with High Growth?*

There is substantial misallocation of resources in China so economic and financial sector reforms that result in improved resource allocation can help China maintain growth in the government's target range of around 7 percent even in the short run while promoting growth rebalancing. How is this possible? There are a number of inter-related strands underlying the argument, with the proviso that each of these represents a difficult but not insurmountable challenge.

First, labor reallocation. A large pool of unutilized or underutilized labor, especially in rural areas, remains to be tapped and drawn into productive employment. This is one objective of the government's urbanization program, although there may be better ways-- that involve less disruption and fewer congestion costs--of moving labor from unproductive sectors of the economy to more productive ones. This reallocation effect by itself can give a short-term boost to both aggregate productivity growth and GDP growth.

Second, an increase in private consumption growth can become a more important driver of GDP growth. This will require changes in the economy that generate more employment and diminish the precautionary savings motives of households. In some recent research (see footnote 5), I have found that a weak financial system (lack of diversification opportunities, inability to borrow against future income) and precautionary savings driven by an inadequate safety net have contributed to rising household saving rates. The ownership structures of many firms and their financing sources also create incentives for higher corporate savings (retained earnings) that are then plowed back into investment, some of which has marginal value at best.

Third, directing more financial resources to parts of the economy that are better at generating employment, especially the services sector and small and medium enterprises, could add to employment growth. This would have the added benefit of reducing the capital intensity of growth.

Fourth, in the short run, fiscal policy can play a more effective role at supporting growth, creating fewer risks to the financial sector and promoting growth rebalancing (for instance, by strengthening the social safety net). In a nod to this, last month the government set a modestly higher deficit target for the coming fiscal year, although it would have been better to see that accompanied by more substantive changes in the composition of expenditures and the tax structure.

Fifth, the rate of investment growth can be maintained at a high level even if the expansion of bank credit slows if some of it is financed through alternative channels such as corporate bond markets. Moreover, even if investment growth declines by 1-2 percentage points, other components can make up for this.

Concerns about China's high rates of investment in physical capital are warranted. But China still has a much lower capital-output ratio than advanced economies such as the U.S. and still has vast needs for infrastructure in its interior provinces. The question is whether the allocation of domestic savings into domestic investment is being intermediated in an efficient manner that allocates capital to its most productive uses.

Of course, a cross-country comparison of capital-output ratios by itself is overly simplistic. Improvements in corporate governance, the financial regulatory framework, and legal reforms that underpin a market-oriented system are all essential for productive investment. President Xi has indicated that his government will push forward with reforms in these dimensions, but only to the extent that they are necessary for a market-oriented system to work better. Of course, one should have no illusion that they presage sweeping institutional, legal, or political reforms--President Xi has made it abundantly clear that those are not on the cards.

What will it take to generate the shifts in the economy I have outlined? A broader, more efficient, and better-regulated financial system is crucial to accomplish the different aspects of rebalancing laid out above. A more flexible monetary policy framework that is not hampered by a tightly managed exchange rate regime and a more supportive fiscal framework have to be part of the package. Institutional reforms and the freer play of market forces in the enterprise sector are necessary as well.

These are all major transitions, time is short, political opposition is strong, and the risks of stumbling are great. But so long as the government keeps moving in the right direction at a reasonable pace, the reforms and rebalancing can take place without the economy necessarily facing a sharp slowdown as a necessary concomitant to reforms.

## **The Reform Agenda**

The main challenge for China, especially since it faces a rapidly aging population and a labor force that is likely to start shrinking soon, is to maintain rapid productivity growth. This will require a shift towards higher value-added production, a more efficient allocation of resources through a better financial system, and more balanced growth.

The twelfth five-year plan (the Plan) remains the blueprint for China's reform agenda. It lists a large number of reform priorities but has limited detail on specific courses of action for achieving the long-term objectives. In the remainder of this section, I selectively summarize a few key reform priorities. There are many more--including reforms to the tax and expenditure systems, pension reforms, reforms to corporate governance in state-owned enterprises--that I do not examine in detail.

For instance, the government has taken important steps to reform local government finances by capping their debt levels, modifying revenue-sharing and the federal-local sharing of responsibility of social expenditures, and allowing the direct sale of bonds rather than having local governments resort to special financing vehicles. The government also intends to reform of the "hukou" system of household registration that restricts the movement of rural residents to urban areas. China's leaders have stressed the importance of urbanization as an engine of growth and reform of the hukou system is seen as an important element of that process, which should also improve labor mobility more generally.

### *Financial sector development*

Financial sector reform and development remain key priorities. The Chinese government recognizes that a more efficient financial system can play an important role in increasing productivity by reducing inefficiencies in the allocation of capital. A reformed banking system may also respond to incentives to lend more to small- and medium-sized enterprises, especially in the services sector, that tend to be better than large enterprises at generating employment.

China's banking system appears well capitalized and the ratio of nonperforming loans relative to assets for the overall banking system is low. These figures mask a number of well-known problems, including persistent incentives to lend to state-owned enterprises rather than private sector enterprises, weak risk management capacity that results in rationing of credit to small and medium-sized enterprises, and asset portfolios that include a large amount of subpar assets that may turn into nonperforming loans if GDP growth were to slow further.

The government has committed to full interest rate liberalization. Lending rates have already been liberalized and the PBOC has signaled that it will move towards full liberalization of deposit rates by the end of 2014. An explicit deposit insurance system covering deposits up to a certain threshold will also be instituted this year, in place of the implicit full deposit insurance that now exists. These reforms will give banks more leeway and the right incentives to price their deposit and loan products according to market conditions, improve competition, and impose some degree of market discipline on banks. These developments will also improve the interest rate transmission channel for monetary policy. However, legacy problems that permeate the

state-owned banking system—in particular, the large stock of outstanding loans to state-owned enterprises—will make it difficult to change distorted incentives in the banking system.

China's financial system remains bank-dominated, with limited corporate bond market development and limited scope of securities markets. The Plan recognizes the need to broaden and deepen financial markets in order to improve their overall functioning and enhance their contribution to balanced growth. But this remains an aspiration rather than an objective backed up by a well-defined strategy.

### *Capital account opening*

China is eager to make the renminbi an international currency and has already taken a number of steps in that direction.<sup>63</sup> While the Plan did not lay out a timeline for opening up the capital account and making the currency fully convertible, there are clear indications that this is seen as a policy objective over the next 5-10 years as it would set the stage for China's ascendancy in global financial markets and make the renminbi an international currency. Specific initiatives to open the capital account in a calibrated manner, such as the Qualified Foreign Institutional Investor (QFII) and Qualified Domestic Institutional Investor (QDII) schemes, have been expanded significantly. Other avenues to open the capital account, including the Shanghai-Hong Kong Stock Connect, and the Shanghai Free Trade Zone, have been undertaken and are apparently seen as providing templates for other cities in China to participate in such selective opening.

The Chinese government has recently taken a number of significant steps to increase the use of the renminbi in international transactions, including trade settlement. A number of international financial centers, including Frankfurt and London, have been authorized to conduct renminbi business and settlement. Furthermore, the PBOC has signed local currency swap lines with an increasing number of central banks, with the number of arrangements approaching 30.

### *Exchange rate flexibility*

Appreciation pressures on the currency have given way to short-run pressures in the other direction, suggesting that a more flexible currency would depreciate in the short run. This could cause some tensions with the country's trading partners, even though China would only be responding to calls to make its exchange rate more market determined. In addition to concerns about currency volatility (and the limited availability of hedging instruments to deal with such volatility), this seems to be holding up the government from freeing up the exchange rate further. Still, a more flexible exchange rate regime is desirable and would serve China well in the long run, particularly as the capital account becomes more open and it becomes more difficult to tightly manage the currency's value.

A more flexible currency would give the central bank a much freer hand in changing interest

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<sup>63</sup> See Eswar Prasad and Lei Ye, *The Renminbi's Role in the Global Monetary System*, Brookings Institution Report, February 2012. Also see Chapter 12 in Eswar Prasad, *The Dollar Trap: How the U.S. Dollar Tightened Its Grip on Global Finance*, Princeton University Press, February 2014.

rates to meet the twin objectives of high growth and low inflation. Faster currency appreciation, which is likely to resume (if China's growth stabilizes and reforms continue) since China still has higher productivity growth than its major trading partners, would help rebalance growth by increasing the purchasing power of domestic households. This would happen directly through the fall in the price of imported goods and, at times of high inflation, also by giving the central bank room to raise deposit rates, giving households a better rate of return on their savings.

### *Industrial policy*

The Plan laid out two sets of objectives in this area. The first is to upgrade and restructure a group of traditional industries. Industries such as iron and steel, automobiles, and textiles are identified as needing technical upgrading as well as consolidation to benefit from scale efficiencies. The second objective is to foster and develop strategic emerging industries that are intended to develop into future pillars of the economy. These tend to have a hi-tech or environmental focus and include energy conservation and environmental protection; bio-tech; high-end manufacturing equipment; and new energy (including nuclear and renewable energy). One concern that needs to be tracked carefully as these objectives are transformed into concrete policy measures is whether they will shift industry dynamics in a way that favors state-owned firms. This might have the effect of rolling back some of the gradual shift in the last two decades towards a more private sector-led industrial structure.

## **Summary and Implications for the U.S. and the World Economy**

Since the financial crisis, China has made substantial progress on reducing its external imbalances, with the surpluses on both the current account and the trade balance falling sharply from their peaks in 2007. China has also made limited progress on domestic rebalancing, although physical capital investment intermediated through a weak banking system still remains a major contributor to growth.

There are substantial challenges to putting in place the reforms needed to improve the quality and efficiency of growth, continue the shift away from capital-intensive production, generate more employment, and allow more of the benefits of growth to filter down to the average household.

China's growth and reform process will have direct and indirect implications for the U.S. through a number of channels. Although its overall trade balance fell steadily and sharply from 2007 to 2012, the bilateral trade surplus that China runs with the U.S. has in fact increased and hit a peak of \$343 billion in 2014.<sup>64</sup> If the shift towards private consumption-led growth proves durable and intensifies, China's demand for imports of consumer goods and services would rise, especially if the exchange rate continues to appreciate. This could help boost U.S. exports to China. The ability of U.S. firms to take better advantage of this growing market of course depends on a number of factors, including the level of market access that is provided to them.

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<sup>64</sup> These numbers are based on U.S. trade data. Chinese data show a smaller surplus of \$237 billion in 2014. These numbers are overstated because of the fact that about two-fifths of China's trade is processing trade, with relatively low value added in China.



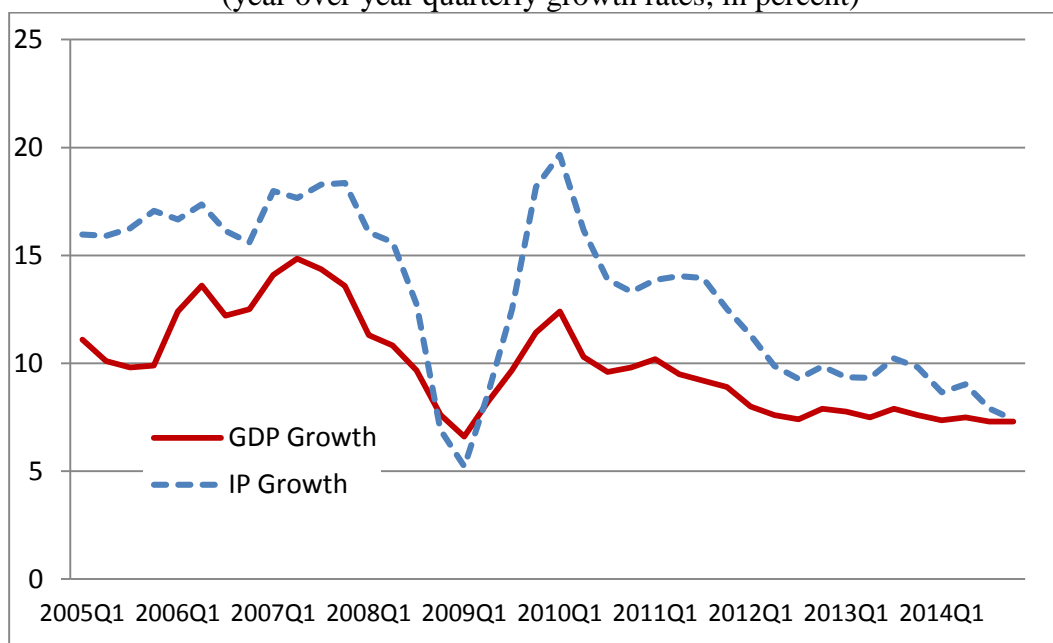
The pace of reserve accumulation is likely to remain low in the future and, as a consequence, China will demand fewer U.S. Treasury securities. Lower levels of official purchases of Treasuries could be offset by financial flows to the U.S. through other channels, including mergers and acquisitions activity, equity investments by state-owned enterprises and banks, as well as investments by private and institutional investors. Many of these investors may also choose to acquire U.S. Treasuries but probably not at the same level as official purchases by the central bank.

China is clearly taking some important steps towards upgrading its industries and moving towards more hi-tech and high value added production. With various incentives and explicit government support, China is likely to make quick progress in clean energy and information technologies. The U.S. and other advanced economies could start losing ground in new technologies if China successfully implements its strategy of technology leap-frogging. But there could also be many opportunities for U.S. companies to use their technological forte to gain a foothold in the Chinese market.

The Chinese economy faces many major risks arising from its pattern of unbalanced development and even the process of reforms has created its own challenges. Nevertheless, there are grounds for optimism that, if the government remains committed to reforms and can implement them at a reasonable pace, China can maintain growth at around 7 percent per year over the next 2-3 years. What happens in the longer term will depend to a great deal on what is done in the next few years to set the economy on the right course.

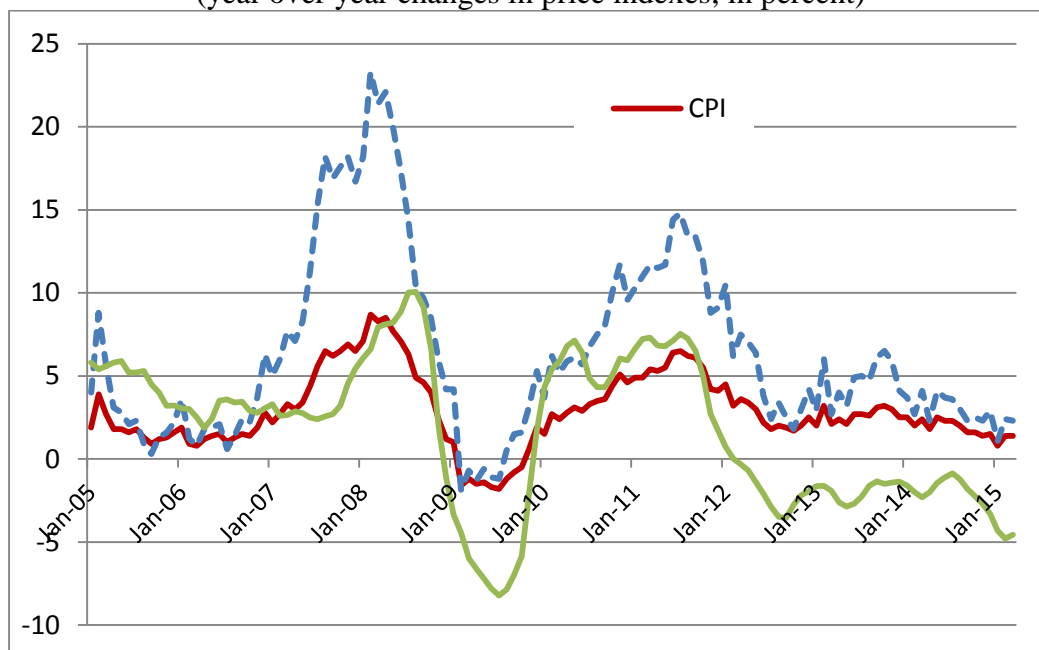
President Xi has strongly signaled in his public statements that there will be continued impetus for reforms, including measures to tackle corruption. The priorities are clear but it remains to be seen if the government has the political will to stay the course on an ambitious reform agenda, battling against the vested interests that want to maintain the status quo and coping with social pressures from the short-term dislocations that the reforms might create. China's leaders may have little choice, however, if they want to maintain their legitimacy and social stability.

**Figure 1. China: GDP and Industrial Production Growth**  
(year over year quarterly growth rates; in percent)



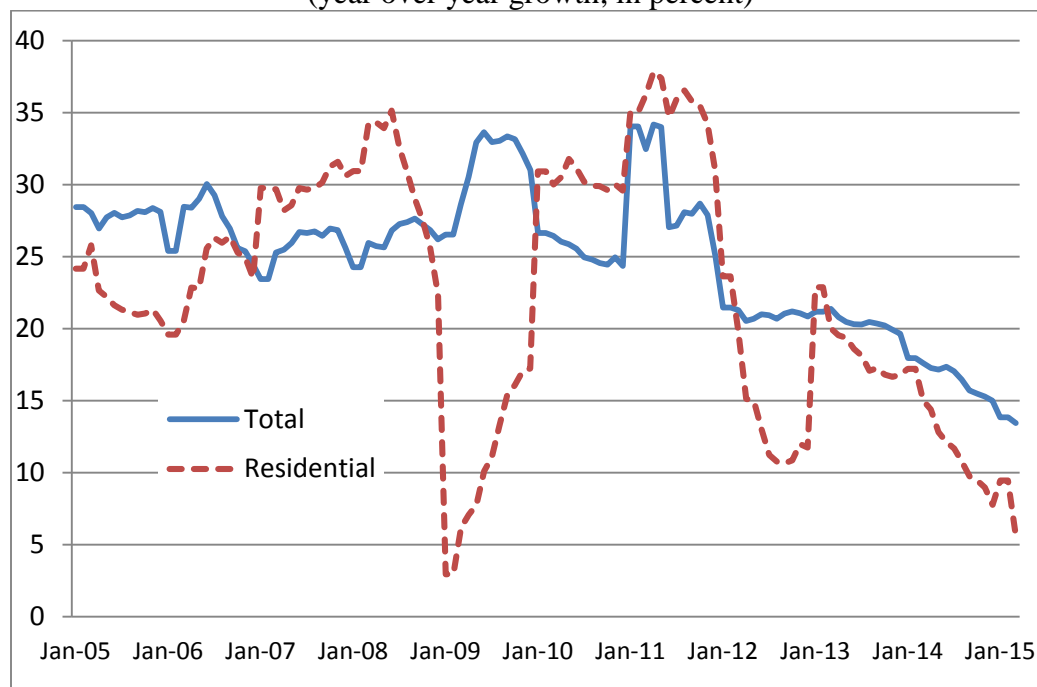
Data sources: National Bureau of Statistics (GDP growth) and World Bank (IP growth)

**Figure 2. China: Inflation**  
(year over year changes in price indexes; in percent)



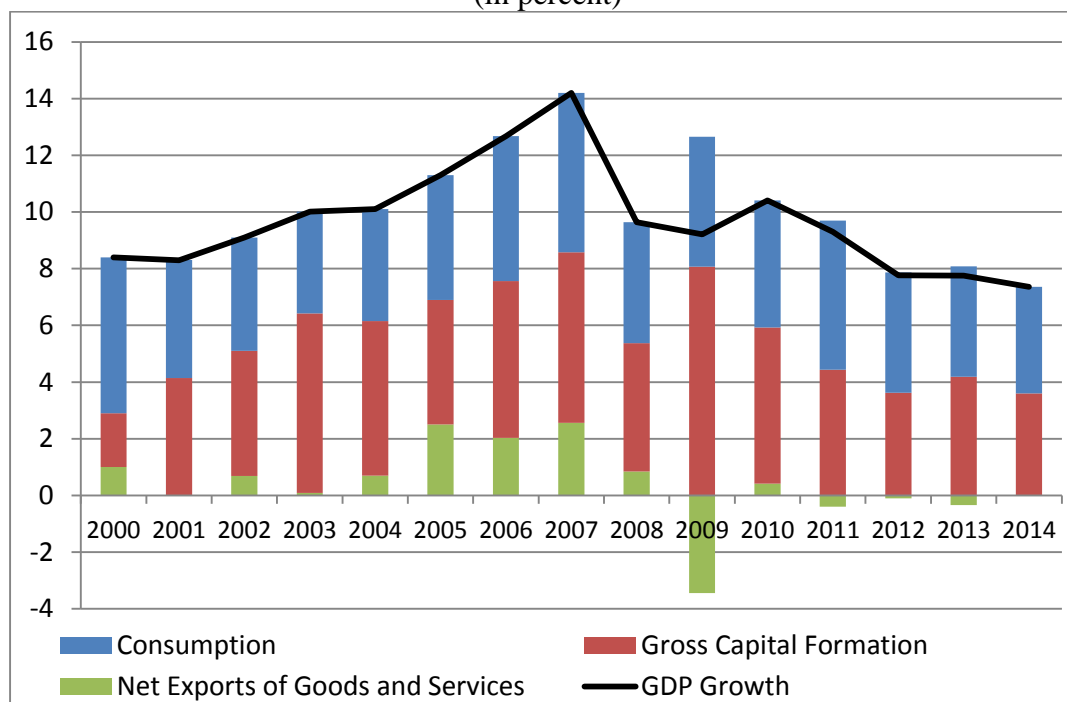
Data source: National Bureau of Statistics.

**Figure 3. China: Fixed investment Growth**  
(year over year growth; in percent)



Data source: National Bureau of Statistics.

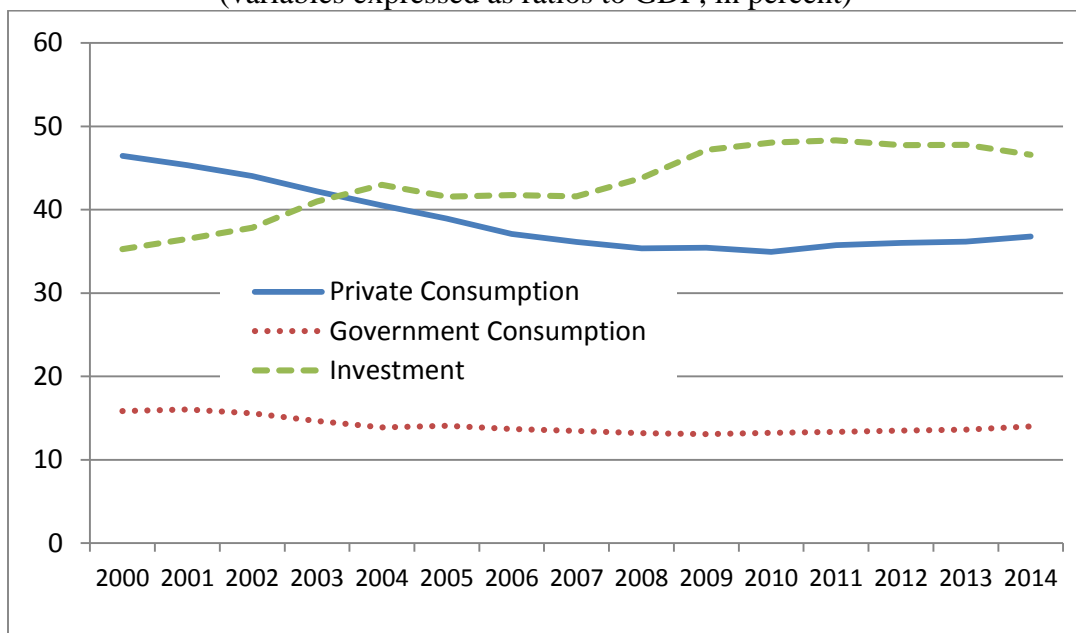
**Figure 4. China: Contributions to GDP Growth**  
(in percent)



Data source: National Bureau of Statistics

Notes: Consumption includes private and government consumption.

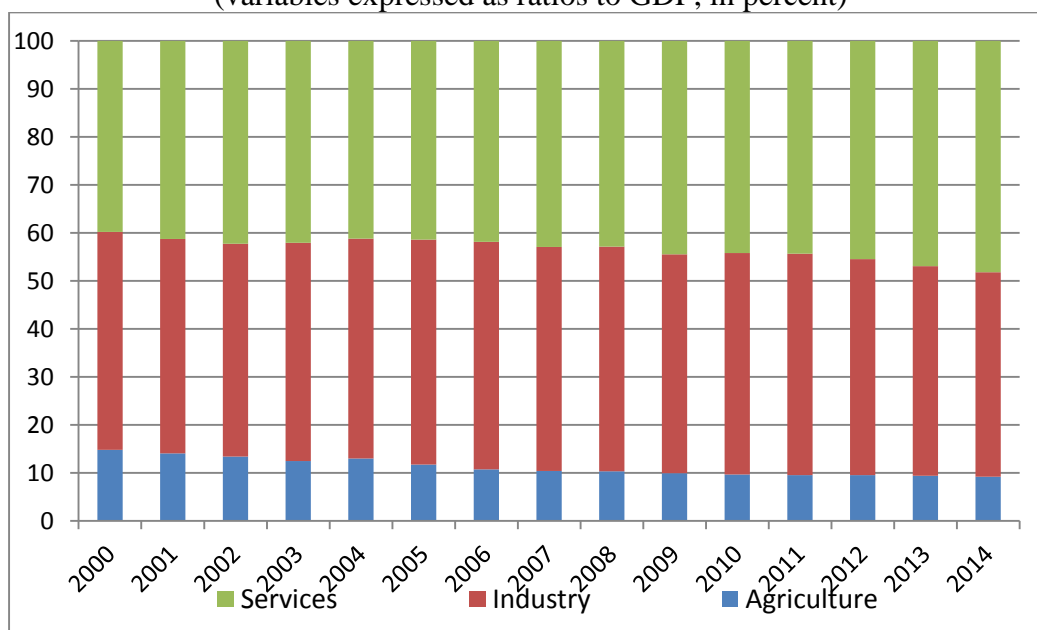
**Figure 5. China: Composition of Domestic Demand**  
(variables expressed as ratios to GDP; in percent)



Data source: EIU CountryData.

Notes: Data for 2014 are estimates. Investment includes gross fixed investment and stockbuilding.

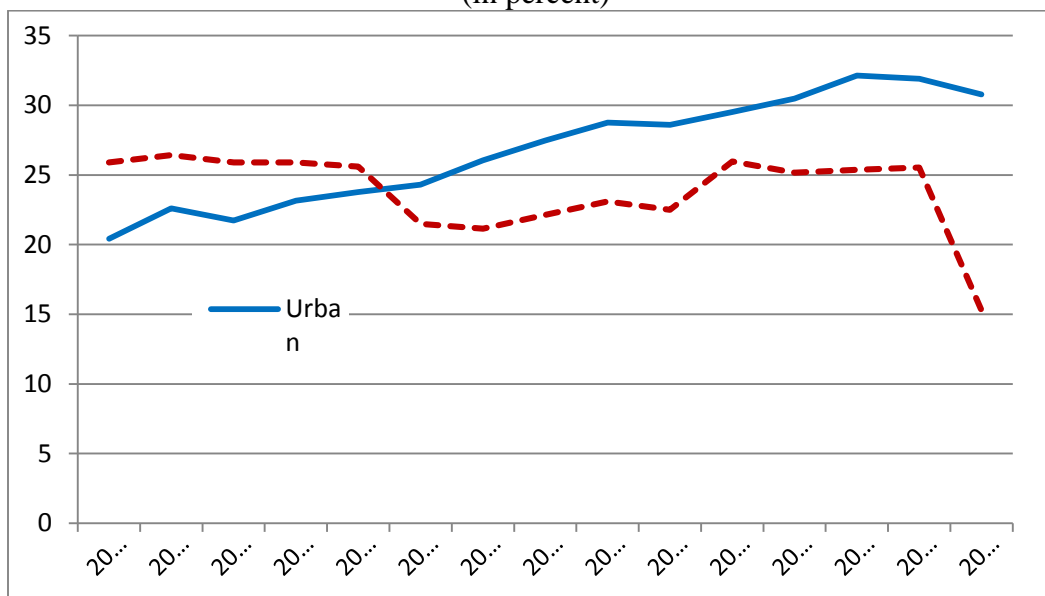
**Figure 6. China: Sectoral Composition of GDP**  
(variables expressed as ratios to GDP; in percent)



Data source: National Bureau of Statistics.

Note: Agriculture refers to primary industry, Industry to secondary, and Services to tertiary.

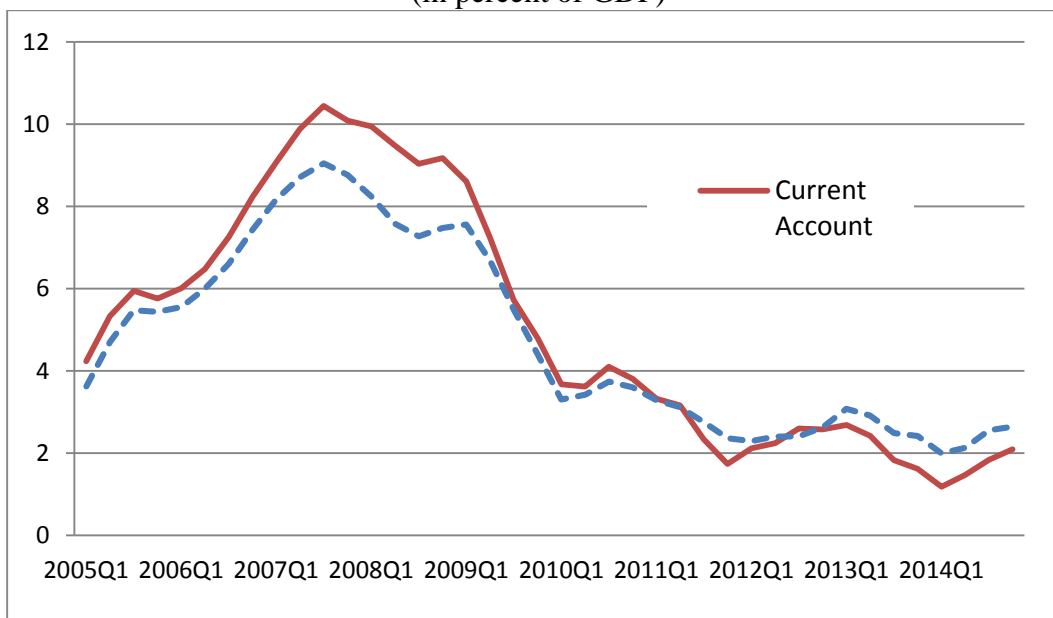
**Figure 7. China: Household Saving Rate**  
(in percent)



Data source: National Bureau of Statistics.

Notes: Saving rates from the Urban and Rural Household Surveys and are expressed as shares of disposable income and net income, respectively.

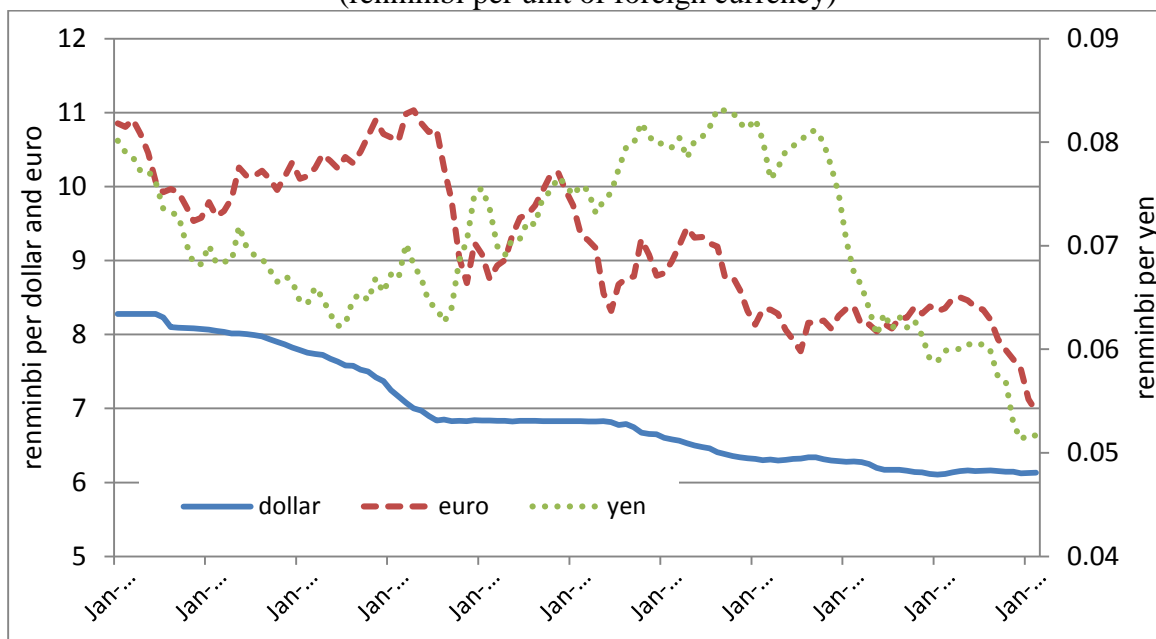
**Figure 8. China: Current Account and Trade Balance**  
(in percent of GDP)



Data sources: State Administration of Foreign Exchange and National Bureau of Statistics.

Notes: Current account balance and trade (goods and services) balance are shown as ratios to nominal GDP. The figure shows four-quarter trailing moving averages for both variables.

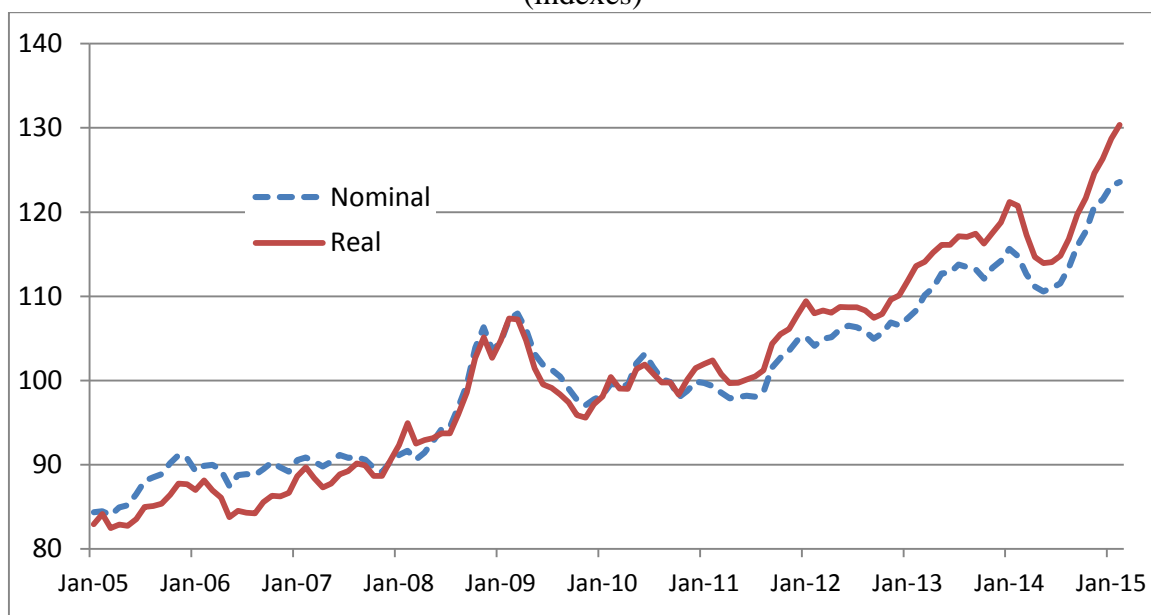
**Figure 9. China: Bilateral Exchange Rates**  
(renminbi per unit of foreign currency)



Data source: State Administration of Foreign Exchange.

Note: A decrease denotes appreciation of the renminbi. An increase denotes depreciation.

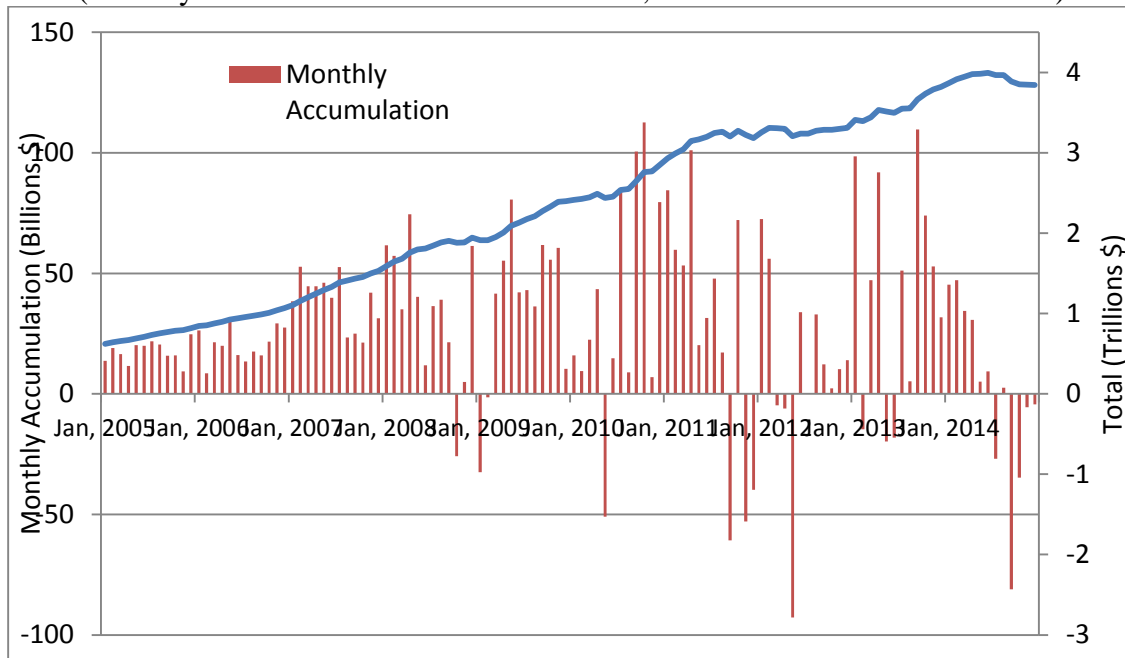
**Figure 10. China: Effective Exchange Rates**  
(indexes)



Data source: Bank for International Settlements.

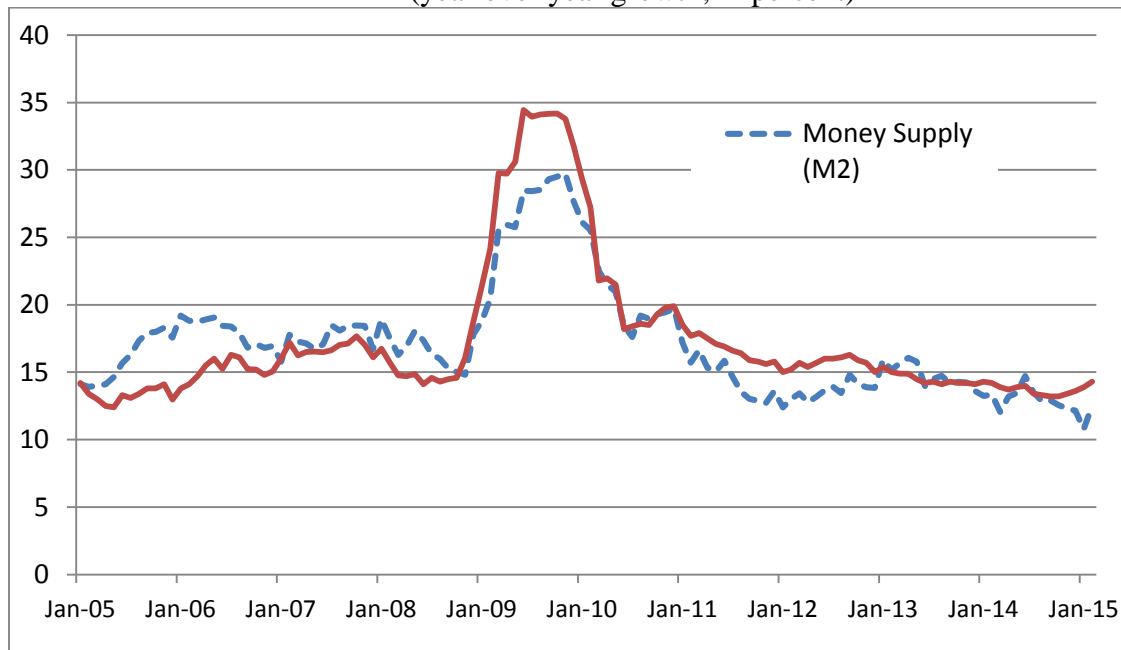
Note: A decrease denotes depreciation of the renminbi. An increase denotes appreciation.

**Figure 11. China: Foreign Exchange Reserves**  
(monthly accumulation in billions of dollars; total level in trillions of dollars)



Data source: People's Bank of China.

**Figure 12. China: Bank Loans and Money Supply**  
(year over year growth; in percent)



Data source: People's Bank of China.

**OPENING STATEMENT OF DR. DALI YANG**  
**PROFESSOR OF POLITICAL SCIENCE, FACULTY DIRECTOR, CENTER IN**  
**BEIJING, UNIVERSITY OF CHICAGO**

DR. YANG: Good afternoon. It's really a great pleasure to be invited and it's an honor.

I do want to begin with a comment on my understanding of the five-year plan system. I have spent a lot of time studying the patterns, the governance system over the years, and essentially today what we have is that the five-year planning is largely a forecasting exercise now with specific targets in certain areas, but overall, though, you look at the numbers over the last decade, very often the numbers overshoot or undershoot depending on the economic situation, but increasingly it's a rolling planning exercise, focused on the year-by-year process today by the leadership.

It's still useful certainly in thinking about long-term strategic issues. For example, the Chinese government is producing a Made in China blueprint focused on that particular area, but, again, though, those are driven by the fact that they have to respond to the changes confronting the Chinese development model, which so far has relied on cheap labor, cheap land, cheap finance, and lax regulation.

But all of those factors are increasingly actually no longer working. So, therefore, they have to respond to those changes. Let me focus especially on the regulatory and government aspect here because that's where I have focused my attention on in my research.

Now, over the years, we've seen increasingly in many areas food safety, drug safety, environment, all of those areas have seen dramatic increases in public concerns with quality of life issues. Those concerns have risen, and the Chinese government has increasingly begun to actually respond to them. In certain cases, for example, the drug safety commissioner [Zheng Xiaoyu] was executed in 2007, they have responded with dramatic gestures.

I think what will happen in the next five-year plan period essentially will be guided by the two decisions made by the Central Committee in 2013 and 2014. The 2013 one emphasized that in carrying out reforms, the Chinese leadership want to let the market play a bigger role, a decisive role, as the document says.

And then the 2104 plan emphasized that they want to operate, introduce or promote governance in accordance with the law. The problem, however, is over the years, increasingly, there have been vested interests built up. How do you get those reforms going; right? So the challenge therefore is how to introduce those kinds of reforms?

Now what has happened, especially at this point, is the crisis, or crisis perceptions that the economy is tanking, as Dr. Prasad has just emphasized, is actually galvanizing the leadership to say we have to do something. For example, in administrative reforms, Premier Li Keqiang over the last couple of years has especially emphasized reducing the number of regulatory approvals. Now this actually is very much in the playbook of the previous administration as well in the early 2000s. Then this reform process stalled as the economy roared and there was no need to do much.

But now that the economy is not growing as rapidly, the government is trying to do a lot. Basically they are cleaning up a long list of regulations. They are taking inventory and trying to do something about it.

Now what is happening in this particular case is also that the specific reforms, for example, introduced in the free trade zones, in discussing the bilateral investment treaty with the U.S., are helping the Chinese to think through this process of reforming. What powers should be



kept? What powers should not be kept, for example?

There is another dimension that is extremely important in this regard, even though it's actually not much talked about in connection with the government reforms, but it's important - the anti-corruption campaign.

Now there was a lot of skepticism in the Chinese media, in the Western media, about how serious the leadership is in fighting corruption. I think by this point no one is doubting the seriousness of this anymore. In fact, we have a long list of Chinese officials who have jumped off buildings, especially in the past year or so, and of course, the "shuanggui", the various detention centers, are full of officials. It's remarkable. It's truly one of the most dramatic campaigns ever in terms of anti-corruption globally.

Now, there is one important effect of the anticorruption drive, namely, increasingly bureaucrats and officials in China are worried about the powers they have. In the past they wanted to keep the powers, and based on my field work interviews with people, increasingly, in fact, they are leading in getting rid of the powers that they have because by giving up some of the powers for approval and so on, you can leave it to the more transparent processes, and that actually gets them out of trouble in terms of potentially being caught for corruption.

And as a result, you can see the anti-corruption campaign is becoming one of the most significant tools in promoting government reforms.

The other aspect related to this is the effort to reform the tax system. Now, it hasn't gotten much play in the media in many ways, but what's interesting is over the last year- and-a-half or so the Chinese government is promoting sector-by-sector conversion of the business tax into the value-added tax for the service sector.

Now it turned out actually this is very significant because the business tax would essentially tax businesses by the gross, the revenue that they generate even though they are not making money. With the value-added tax, therefore, for many businesses, this is a significant relief.

They only have three sectors left to make the conversion to the VAT by now, and as this is progressing, and all of this is beginning to help with new business formation. So you look at first of all the reduction of the government approvals, and then you look at the conversion of the tax system, it makes it much easier for new businesses to be registered in China, and governments are working very hard to do so. As a result, in 2014, in fact, the number of new business registrations in China rose by 46 percent.

This is a very significant number. This is something that we need to pay attention to because in many ways this shows that despite all the media reports which tend to emphasize on the political aspects [of Xi's rule], the Chinese government is working very much in promoting entrepreneurship, and in connection with this, they are also getting the stock markets going, and of course there are doubts and questions about to what extent the government should be lending support to the stock markets.

But the value that's generated is also very helpful certainly in the process. We see a dramatic atmosphere in China at this point in generating new businesses, in creating value by getting into entrepreneurship, and the Premier is traveling across the country, lending his support in terms of reforms across the regions, in targeting different parts of the country, and especially emphasizing that the entire country especially learn from Shenzhen, which has been this hotbed in promoting new businesses, the Tencents, the Huaweis, of the world that have been extraordinarily successful in generating value.

So in that regard, I think overall the Chinese government is making use of the crisis

perceptions in the business sector to say we have to reform, and they are getting a lot of reforms done, and they are working very hard to do more, and, in fact, the Premier is trying to make sure the bureaucrats are working day and night at this point in making the new decisions implemented.

So let me stop there. Thank you.

**PREPARED STATEMENT OF DR. DALI YANG  
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BEIJING, UNIVERSITY OF CHICAGO**

April 22, 2015

Dali L. Yang  
Professor of Political Science  
Faculty Director, Center in Beijing  
The University of Chicago

Testimony before the U.S.-China Economic and Security Review Commission China ahead of  
the 13<sup>th</sup> Five-Year Plan: Competitiveness and Market

I am honored to have this opportunity to join distinguished colleagues and share my thoughts on China's political economy to the U.S.-China Economic and Security Review Commission. Before I get to the key points of my remarks today, I'd like to note that the development and dynamics of China's political economy have been the major preoccupation of my academic research career. I started by examining the mechanisms and forces that shaped China's rural reforms from the 1950s to the 1980s as well as the competitive dynamics for regional diversification and development. In the last decade I've been especially interested in issues of China's institutional reforms, regulation, governance, and state-society relations. It is obvious today that the future direction of Chinese development is among a small number of the most fundamental questions concerning the future of humankind and I commend the Commission's role in helping to better understand China's developments in its variegated dimensions.

I am speaking on Panel III, "The Broader Implications of China's Five-Year Plans" and am especially pleased to do so and to link the discussion of such plans with the extraordinarily fluid context within which preparation for the 13<sup>th</sup> five-year plan occurs.

*Institutional History and the Transformation of China's Planning Apparatuses*

Historically central planning in China never gained the status, complexity and sophistication that were reached in the USSR. Indeed one could argue the PRC genuinely practiced central planning only during three years of the first five year plan period (1953-57). This was then followed by massive national campaigns such as the Great Leap Forward and the Cultural Revolution, which did much to undermine the central planning apparatus.

Following Mao's death, the efforts to promote 'reform and opening' occurred against the background of the Mao-era political turmoil. Indeed the turmoil and destruction of the Mao era furnished much impetus for the post-Mao reforms. In particular, as I discussed in *Calamity and Reform in China*, the major rural reforms in China's provinces in the late 1970s and early 1980s were significantly driven by the severity of famine caused by the Great Leap Forward (1958-1960). Meanwhile, national leaders in China, many of whom had suffered from Mao's brutal political campaigns, recoiled from Mao's emphasis on class struggle and have kept their eyes

steadfastly on economic development through reform and opening up.

The path of reform and opening up has helped the Chinese economy to become increasingly diversified in ownership and resulted in substantial restructuring of the state-owned sector. Economic reform and transformation have in turn helped prepare the ground and indeed demanded changes in the structure and functions of government. Economic reform and government restructuring thus stimulated and interacted with each other, leading to profound changes in the nature of China's economic governance. In *Remaking the Chinese Leviathan*, I offered a comprehensive survey and examination of these changes, including the rationalization of the administrative state, the strengthening of the fiscal sinews for the central state, the development and enhancement of regulatory apparatuses, the introduction of myriad institutional mechanisms to cut down on waste and improve financial supervision, and the evolution of state-business relations. Of particular interest to the task at hand was the restructuring of the Chinese government structure related to economic planning and steering. In the words of then Personnel Minister Song Defu, the contradictions between the government setup and the market economy had become sharper day by day. Lack of further government reforms would "obstruct the development of society's productivity, affect the relations between the Party and the masses, and create a heavy burden on the state and the people."<sup>65</sup>

Between 1998 and 2002, the government rationalization program unleashed by then Premier Zhu Rongji trimmed authorized staff size in all Party, government, and government-sponsored mass organizations by 1.15 million (including 890,000 at the municipal, county and township levels). The heaviest axe of the government restructuring fell on the industrial ministries that had been the bulwarks of the central planning system. Between 1998 and 2001, The Ministries of Chemical Industry, Coal Industry, Electric Power Machine-Building, Metallurgical Industry, Internal Trade, Forestry as well as the national councils of Light Industry and Textile Industry were streamlined and downgraded and eventually merged into the State Economic and Trade Commission (SETC). In 2003, the SETC was further merged with the planning commission to become the National Development and Reform Commission.

As a result of the institutional reforms, the "planning" superstructure for China includes National Development and Reform Commission (NDRC and the affiliated Energy Administration), the Ministry of Industry and Information Technology (MIIT), the Ministry of Commerce, and the State Assets Supervision and Administration Commission (SASAC).

The state-dominated financial system has also undergone significant reforms. The Ministry of Finance remains one of the most powerful central government ministries. The People's Bank of China is not an independent central bank but has nonetheless gained much capacity and prowess. Meanwhile, partly in response to major financial problems that afflicted China's financial sector in the 1990s and early 2000s, the Chinese leadership established specialized regulators for securities, insurance, and banking. With the China Banking Regulatory Commission, China has distinguished itself as one of the major countries to establish a dedicated banking regulator.

The structure as described here makes China's planning apparatus look strikingly similar to those in China's East Asian neighboring economies in their heyday. The institutional transitions

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<sup>65</sup> Quoted in Dali Yang, *Remaking the Chinese Leviathan*, Stanford: Stanford University Press, 2004.

described above indicate the profound changes China's economy has undergone. Whereas the Chinese Party-state continues to own SOEs and major banking and other financial institutions, the Chinese economy is no longer the administered economy of the 1970s. As previous panelists have noted, China has a large and robust private sector and the Chinese economy is diversified both at home and internationally.

The Chinese government continues to issue growth targets for the Chinese GDP annually and in its five-year plans, but such numbers, particularly those for five-year periods, are largely forecasting exercises. For much of the time since 2000, the Chinese economy overshoot government target growth numbers by large margins, suggesting that government targets were honored in the breach. It's only since 2012 that Chinese GDP growth numbers have come to be very close to the targets of between 7-8 percent per year.

### *Dynamics and Challenges of Economic Restructuring*

Whereas much emphasis in economic analyses on China is on the need to rebalance in favor of more consumption and away from an investment-led growth model, it's also important to take a look at the socio-political foundations of sustainable development.

Until recently, the Chinese economy rallied under the rubric of Deng Xiaoping's "One Center, Two Basic Points." That one Center referred to "economic construction" and it acquired the status of a national fetish. Politicians' incentives matter in economic development. In the past thirty years, local officials in China have played an indispensable role in the rapid rise of TVEs, the gradual decline of SOEs, and the dramatic improvement in infrastructure, the rise of massive new cities, and the emergence of China as the world's workshop.<sup>66</sup>

What separates Chinese officials from hand-grabbing governments in most developing and transitional countries? Supporters of the fiscal federalism thesis argue that fiscal contracting and factor mobility forced the central and local governments to respect property rights and promote business development. Some other researchers believe that Chinese local officials are mainly motivated by the career prospect of promotion to develop their economies. Building on some of the insights from these existing approaches, my coauthors and I offer an alternative analytical framework that can account for the Chinese local governments' continual drive for growth as well as the key growth policies adopted. The introduction of three institutional factors, i.e. central-local fiscal arrangement, regional competition, and industrial linkage, allows us to explain the evolution of revenue-seeking local government officials over time: their drive to launch SOEs and TVEs in the 1980s, their efforts at protectionist developmentalism as competition began to heat up, and, since the 1990s, their divestiture of local SOEs and focus on land taking, urbanization, and industrial buildup.

Whereas the existing approaches tend to depict the Chinese transition and development experience in a rosy light, e.g. "China miracle", "successful transition", "amazing growth", our alternative framework allows us to both explain the dynamic aspects of China's growth and

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<sup>66</sup> This section is adapted from Fubing Su, Ran Tao, and Dali L. Yang, "Rethinking the Institutional Foundations of China's Hyper Growth," forthcoming.

transition as well as recognize the costs and limitations of China's developmentalism. In fundamental ways, China's remarkable growth since the 1980s has relied on a certain disregard for, if not outright violation of, the rights of labor, land, intellectual property, and environment plus growing access to developed country markets. Indeed, on numerous occasions the taking of land was a violent process, with local authorities being a key player in land-grabbing. Even today, in spite of revisions to the regulations on land requisitions, demolitions or land takings can still turn bloody when local officials rush to obtain the land and ride roughshod over residents who refuse to give up.

Yet it is also clear the essential ingredients of China's developmental dynamism can also be its limitations. The most striking corollary of local developmentalism in China is a sustained rise in land prices for commercial development and in property prices, which, together with loose credit, fuelled much speculation and a major property bubble by the early 2010s. Concerned about the bubble getting even more out of control, the Chinese central government adopted various measures to cool the sector but there are concerns that a bursting of the property bubble are putting substantial pressure on China's fragile financial system. So far the effect of property crashes has been confined to a small number of cities such as Erdos (Inner Mongolia) and Wenzhou that are relatively far from metropolitan areas. Domestic construction from railroads to power plants is also moving toward a slower mode of expansion than in the past.

While exports have grown in tandem with the massive buildup of manufacturing capacity in China, it is simply unacceptable for China to keep having massive surpluses in trade and it is also a growing burden to manage its multi-trillion dollar foreign exchange reserves. In any case, the great recession of 2008-09 has curbed demand from developed economies and thus Chinese export growth. Meanwhile, with rising land and labor costs in China, China has begun to see some low-end manufacturers move away from China.

The Chinese central government has been at pains to encourage domestic consumption and to promote investment in education, health care, and innovation, with some success. Yet the transformation of China's development patterns into one based on innovation and domestic consumption also calls for transforming the dynamics of Chinese local developmentalism. This will not be easy as a constellation of interests has coalesced round this developmentalism and profited from it. Local governments across the country are addicted to the land-based industrialization and urbanization. Through land requisitions and leasing, local governments have built up ties to businesses and developers and secured loans from banks and other financial interests. Through these webs of interests and the investment projects that connect them, local officials and other elites have profited handsomely. An indication of the power of this coalition of interests can be seen in the desultory attempt to revise Land Management Law (LML) and raising the costs of requisitioning land from farmers. While the National People's Congress put amending the LML on its legislative agenda in both 2009 and 2010, it was not until November 2012, toward the very end of Wen Jiabao's term as premier, that the State Council executive meeting finally approved a bare-bones amendment to the LML calling for fair compensation to be given for land requisitioned from rural communities for industrial and commercial use. Even then the NPC has dragged its feet in approving the amendment. In contrast, when during the global financial crisis the Chinese central government decided to stimulate the economy, both central and local authorities eagerly embraced the move and borrowed heavily to invest what

they what they had been doing all along, namely railroads, highways, subways, and industrial parks, as well as real estate. Local governments are saddled with debts incurred during that stimulus binge.

### *Energy Efficiency and Emissions Reduction during the 11<sup>th</sup> Five-year Plan*

Yet the hyper growth decade of the 2010s also coincided with a steady decline in the percentage of population that indicated that they were happy. Instead, there has been growing concern about quality of life issues, including food safety, drug safety, and air and water safety. In fact, it was during the era of Hu and Wen that Hu's emphasis on adopting a scientific outlook on development included ecological civilization as a component.

Confronted with escalating environmental costs and a growing number of public protests, the Chinese government announced in 2006 that the nation would seek a 20 percent reduction in energy consumed per unit of GDP, and cut the amount of key pollutants by 10 percent during the 11<sup>th</sup> Five-Year Plan period (2006-2010). China's Leaders hoped this would "basically arrest the trend toward environmental degradation." But the five-year plan looked quixotic on arrival and in the first half of 2006, energy consumption per unit of GDP actually increased. More vigorous measures in 2007 produced some improvement, but still fell short of targets.

Following the initial setup, Premier Wen Jiabao vowed in March 2007 that the 2010 goals for energy efficiency and emissions were "binding targets." This top-down imperative sparked a frenzy of activity, including more central monitoring of local environmental performance, more environmentally-attuned incentives for local officials, and significantly greater investments to promote energy efficiency and reduce emissions.

Most visibly, the National Development Reform Commission (NDRC) and the environmental administration pursued a vigorous strategy of holding local officials accountable for environmental performance. In 2007, the NDRC signed energy efficiency responsibility contracts with 30 provincial-level governments, and made energy efficiency a compulsory component for projects requiring government-approval. At the same time, the environmental administration created regional monitoring centers so it could independently measure local performance. In March 2008, this administration was upgraded to become the Ministry of Environmental Protection (MEP) and given cabinet status and. The State Council also set standards to hold provincial governments and about 1,000 key firms accountable for their environmental performance.

The MEP immediately sought to wield its newfound power, including public shaming of regions and companies that fail to meet standards. In 2008 the MEP publicly released data on each province's performance in reducing water polluting discharges and sulfur dioxide emissions. One 2009 report singled out water treatment facilities in eight cities (spread across Liaoning, Heilongjiang, Jiangsu, Zhejiang, Anhui, Guangdong, Sichuan, Gansu provinces) and eight power plants for poor performance in treating waste water and removing sulfur dioxide. The facilities named in the report were required to undertake remedial measures by the end of the year. During that period, the errant city was barred from submitting major projects for approval and also lost access to some central government capital funds.

In October 2009, the NDRC announced with fanfare its ranking of provinces based on how much progress they have made in fulfilling the environmental targets. The public ranking (and shaming), coupled with the threat to cut off funds and project approvals, got the attention of local officials. After Yunnan officials found they were lagging behind the national average in the first half of 2009, they quickly decided to begin construction of 43 water treatment plants. In a rare display of the changed ethos, Shanxi Province received widespread praise for its negative growth and campaign against dirty GDP.

The responsibility system has been backed up with major central government funding to invest in treatment facilities and to help shutter pollution-heavy production capacities in iron and steel, paper making, cement industries, and especially small-scale coal mines and power plants. Central government funding for environmental protection rose 33 percent in 2008. In 2008, despite the Chinese economy growing at 9 percent, energy consumption per unit of GDP decreased 4.6 percent from 2007 while discharges of water pollutants and sulfur dioxide also fell. As a result, the declines in both emissions indicators made up for the shortfalls of 2006-07 and are thus on track toward fulfilling those “binding targets.” As time neared for the 2010 targets, some localities even resorted to draconian and unsustainable measures, cutting off electricity supply to entire communities, in order to meet central government targets for energy efficiency.

Yet the limitations of the existing system were also apparent. As the Chinese economy softened during the Great Recession, the Chinese authorities rushed through with a massive stimulus package. In accelerating the stimulus spending, environmental considerations were eased and more projects were greenlighted without going through the requisite environmental impact assessment.

### *Xi Jinping, Sustainable Development, and the Ascendance of the Environmental Regulation*

As Xi Jinping and Li Keqiang became China’s president and premier respectively in March 2013, they pledged to steer the Chinese economy toward a new model, foster domestic consumption, and build a “beautiful China”. In the last two years, China’s leadership has guided public expectations about the Chinese economy to what is known as the new normal, with a target economic growth rate of 7 percent per year for 2015. Highlighting the uncertainty concerning such targets, Premier Li Keqiang has repeatedly noted that the target rate is not set in stone but that actual performance might deviate from the target rate within a certain margin.

While the Chinese leadership have reduced their emphasis on GDP growth rates, they have in the meantime paid special attention to altering the incentives that have propelled local authorities to engage in local developmentalism. In particular, environmental performance has become a major component, at 20 percent in Hebei, in evaluating local officials.

After its initial flurry of action, the MEP trimmed its sails pursuing a high-profile environmental agenda because its actions would generally impinge on powerful interests. Following the 2013 airpocalypse, however, public demands for environmental action increased sharply and would reach its most visible point with Chai Jing’s 2015 documentary “Under the Dome.” Riding on a wave of growing public concerns, the China National legislature approved a revised Environmental Protection Law (EPL), which went into effect on January 1, 2015. The EPL



allows much stiffer penalties against illegal polluters, including hefty fines on a daily basis and criminal penalties and jail time.

To promote more vigorous action in environmental regulation, the Chinese leadership in March 2015 appointed Chen Jining as the new MEP minister, replacing the long-serving Zhou Shengxian on the latter's retirement. Chen, formerly the president of Tsinghua University (Xi Jinping's alter mater), is an environmental scientist by training and clearly has the trust of President Xi. Such trust provides a fountain of political clout for Chen and the MEP.

Chen didn't disappoint. In April 2015, the MEP refused to approve the construction of three dams, including the Xiaonanhai Hydropower dam that was already written into the development plan for Chongqing municipality. The MEP ruling concluded that these dams would threaten the habitat of certain species.

In the same month, the MEP called for public meetings with leaders of various municipalities and public confronted them over their failure to take action against various polluters. The Hebei bureau of environmental protection in turn called in the leaders of smaller cities/counties and publicly reprimanded them. The environmental regulators demanded urgent action within specific time frames and the leaders of the concerned localities promised to respond to the complaints.

As environmental regulators, joined by NGOs and civil society protests, step up their efforts, regulatory costs will thus increase. Even while national leaders seek to boost investment and growth, the vetoing of the dams and efforts to shut down heavy polluters strongly suggests that China's leadership is willing to sacrifice some growth in favor of the environment. Stiffer environmental regulation may very well be a game changer.

### *Government Reform and Entrepreneurship*

The Chinese development model based on cheap labor, cheap land, lax regulation have lost significant momentum. While investment remains important, increasingly Chinese growth must come from reform. Therefore, the new five-year plan will largely fall under the rubric of the two decisions approved by the CCP Central Committee plenums in 2013 and 2014. The Decision of 2013 dealt with comprehensive reforms to enable market forces to play the decisive role in the economy. The Decision of 2014 laid out a plan for the promotion of governing the country in accordance with the law. Lately Xi's guiding principles have been encapsulated under what are called the "four comprehensives", namely, Comprehensively build a moderately prosperous society, Comprehensively deepen reform, Comprehensively govern the country according to the law, Comprehensively apply strictness in governing the Party.

Any serious discussion of the 13th five-year plan will need to first consider the progress in and prospects for implementing the two Decisions, including taking into account the massive campaign against corruption, which has brought down some of the most prominent players (or big tigers) in Chinese politics. While it's still premature to assess the progress of Xi's vast political agenda, in one area a sort of virtuous cycle appears to have emerged and will likely have profound implications for competitiveness.

As noted earlier, China today possesses a hybrid system where the state sector remains substantial and the Party-state commands enormous resources but the market also plays significant role. Under one-Party rule and lack of judicial independence, such a system is prone to the creation of crony relationships.

In my book *Remaking the Chinese Leviathan*, I highlighted the Chinese leadership a decade earlier had come to realize the importance of transforming the government in its functions and quality of service. These efforts were undercut later on as Chinese growth accelerated during the HU-Wen era and the focus of leadership turned to stability maintenance.

With growth slowing down and traditional tools of investment pump priming being of limited utility because of high debt levels and overcapacity in many sectors, the Chinese leadership has turned to the encouragement of entrepreneurship through the creation of free trade zones and the rationalization of government administration to improve transparency and ease registration and other bureaucratic requirements. In fact, a “fever” for mass entrepreneurship (大众创业) now pervades China. In 2014 the number of newly registered businesses grew by 46 percent, partly because of reforms in the tax system (change from business tax to VAT for service firms) and partly because of easier registration processes.

The ongoing efforts to rationalize the government administration will further reduce the burdens on businesses. In the past China’s leadership struggled to reduce the number of approval items and some reforms to reduce perks for government officials and staff, such as curtailing the use of official cars, faltered. In 2014-15, however, sentiment has vastly changed as Premier Li Keqiang seeks to steadily reduce the number of government approval items. The major factor behind the change is the massive campaign led by Xi Jinping and Wang Qishan. As more and more officials are caught in the anticorruption dragnet, officials have come to appreciate how having the powers of approval make their these officials the targets of bribery. In a variety of areas I have examined, there is strong desire by superordinate government departments to eliminate or delegate the powers of approval. Thus the anticorruption campaign has proved to be of fundamental importance to changing the way bureaucrats behave and may well prove to be of lasting importance to the creation of a more nurturing regulatory environment for entrepreneurship. In fact, the persistent and massive anti-corruption drive coupled with the implementation of the 'eight regulations' concerning Party and government work style have sharply curtailed benefits and grey income that many members of the officialdom once enjoyed and have in recent months helped persuade some of them to quit their government jobs in favor of the private sector and entrepreneurship.

### PANEL III QUESTION AND ANSWER

HEARING CO-CHAIR CLEVELAND: Thank you. That was excellent. Commissioner Slane.

COMMISSIONER SLANE: Thank you for coming. It's really interesting.

Mr. Frey, the U.S. Chamber put out a report in December in which they indicate that the Chinese government is going after foreign companies and selectively enforcing antitrust, tax and other laws with the intent of trying to make life very difficult for those companies that are competing with Chinese companies who have mastered the technology.

Are you experiencing any of that in your studies?

MR. FREY: Yeah. I've not seen the specific report that you reference, but in terms of the environment for MNCs in China, I think the Chinese government is extremely pragmatic in attempting to steer the economic and commercial transformation that's underway and looks for areas of gaps in their capability, their experience domestically, and is very, very adept at leveraging or inviting or opening doors for foreign companies to come in and inject technology experience, know-how, where it meets their needs.

I think that we're seeing great shifts. We've covered many of those just in the first part today in the base of the economy and therefore the areas of openness and need within China are also shifting, and so we see foreign companies, in general, not just American companies, experiencing different pressures. Some doors closed; other doors are being opened to them. So I think that the environment remains open for multinational corporations where they can identify their strategic capability and how that contributes to China's development.

I think there's other areas where the China government probably would like to see, as many governments do, like to see their domestic companies do well in spaces where they believe they have the capability.

In short, I would say there's no question that given the daunting challenges facing China today in the environmental area, in the energy area, just in the health care area, that they believe that they can succeed in their economic transformation without foreign companies. They do not believe that.

COMMISSIONER SLANE: Okay. Mr. Yang, I had a question for you. As a result of the campaign, the corruption campaign, we're hearing and reading stories of a lot of inactivity by government officials who are afraid to make decisions and hampering the growth of the economy. I mean can you, are you seeing any of that in your studies?

DR. YANG: Yeah. This is indeed a concern. In certain cases, of course, government inaction may be a good thing in the Chinese context because sometimes actually some bureaucrats are simply too active in promoting certain developments, but in this particular case, there has been some concern that lower level officials in China are no longer working as they did in terms of promoting, especially in making approvals, for example, in approving certain projects.

But I have to say that, actually, we don't have a balanced perspective on this particular issue. On the one side, certainly, in fact, there are cases whereby local officials used to be developing projects because they also have personal or private incentives in developing certain projects.

Now, of course, they would be much more hesitant, and this may be a good thing. I think in those cases, for example, for property projects very often in the past land may be requisitioned at extraordinary low prices, and sometimes coercive measures were adopted to essentially

requisition the land, now, they are less willing to do that. And I think actually that's a healthy development.

In certain other aspects, it could be that they are less willing to promote certain planning, but I have to say, at this point, it appears it's more of an issue because, for example, in the environmental area, because the environmental regulations have toughened in recent months, and this again may be a good thing.

In fact, the Ministry of the Environmental Protection recently vetoed several major projects, including one simply to protect species. This is a first. In the past, there's never been something of such a major project being denied by the MEP simply based on the idea that a rare species had to be protected.

So in this respect, I think actually this nonaction is essentially because regulatory action is occurring. In the other aspect, increasingly local governments are not acting not because they don't want to act but because they simply have run out of money. They took on so much debt, they are so overleveraged, so even if they really want to do something, they can't do it.

So I think there is significant variation across the country. In certain parts of the country, they continue to do very well, and, of course, they are building subways and all of those things, and they are pushing ahead. In certain other parts of the country, and of course you've heard mention of ghost towns and so on. In those cases, local authorities simply have lacked the powder to keep going. I think that's simply an issue not necessarily that they don't want to do things, but simply that they're incapable of doing things. So a lot of variations.

COMMISSIONER SLANE: Thank you.

HEARING CO-CHAIR CLEVELAND: Commissioner Wessel.

HEARING CO-CHAIR WESSEL: Thank you all for being here. Dr. Prasad, welcome back. Always good to have you here.

I'd like to ask questions about what all this means to us. We are the U.S.-China Economic and Security Review Commission. And starting with you, Mr. Frey. As a business analyst or system, KPMG, when our deep engagement with WTO began, the view was that the China market was a huge opportunity.

I think some companies have--U.S. industries--have taken a more pragmatic view over time, that it takes time to be able to develop benefits in the China market, et cetera. Now, we see with the strategic emerging industries, national champions, and the 12th and what we expect in the 13th Five-Year Plan, China continuing to identify certain areas for development that it views as important for indigenous innovation long-term growth.

I think you used the terms U.S. companies or foreign companies benefiting in the China market, which is great. What about U.S. companies trying to export from the United States to create the wealth here rather than just the profits there? As a business consultant, what's your advice? What are the pluses? What are the minuses? If you look at aerospace where COMAC and AVIC, you know, dramatic expansions. They want to have an indigenous development of a regional jet first, not wide-bodied, long haul, et cetera.

Same thing in terms of autos where they want to have, which they have not been as successful at, building indigenous brands that will broad support.

From the U.S. competitiveness viewpoint, do you think the 12th and 13th Five-Year Plans are opportunities or real challenges? And for each of the participants, please.

MR. FREY: Sure. Excellent question, and in your last half sentence, you emphasized the word "competitiveness," and I think I would start there. We have this dialogue, we have this question from many of our clients today, and I think summing up a complex topic, generally, my

personal feeling, and a feeling that's ultimately shared by many senior executives for American companies around the world, is if their companies can't be competitive in China today and in the future, they are at significant risk of not being competitive globally in the future.

HEARING CO-CHAIR WESSEL: But when you say competitive in China, do you mean--let's take manufacture of this, that they have to manufacture it there? This is not a complex product. What does it mean to be competitive in China?

MR. FREY: It means to convince purchasers, buyers, that your product is the best and that they will make the economic decision to buy your product. Where that's produced, be it in the United States, be it elsewhere, those are a number of other factors that need to be considered, but being competitive is winning the business decision, the hearts and minds of the consumers. That's what I mean by that. I guess that's an answer in terms of direct competitive positioning.

I would also share with you a comment that was made to me by the global CFO of a very, very large Fortune 50 American company who said that if they looked at their... and they have a very large and profitable business in China, been at it for decades. Despite those profits and that position in the market, they feel that possibly the best return from all of their efforts in China has been retarding the growth in the outward expansion of Chinese competition from other markets by tying them down to compete within China over the last decade or so.

And now with the rise of corporations from China going out, they're starting to feel those global pressures.

I'd actually never thought of the market in--never thought of the China strategy and the advantages of their positioning there in that context until this gentleman shared that comment with me.

HEARING CO-CHAIR WESSEL: Dr. Prasad.

DR. PRASAD: The nice and comforting answer to your question is that if China becomes a more balanced economy, as China opens up its financial markets, these are going to pose enormous opportunities for American companies.

The reality, I suspect is a bit different. The reality as I think it's becoming increasingly apparent is that market access is limited and comes with a cost because the Chinese have made it very clear in a variety of dimensions that what they intend to do is use market access for foreign firms in a selective manner, and through that channel, get technology transfers, knowledge transfers, corporate governance skill transfers, all of which are going to make their companies much more competitive both domestically and globally, and these are shores in which many foreign firms have foundered - Japanese train manufacturers coming in, sharing technology with China, and then finding that they now lose business because the Chinese are better at making trains more cheaply than the Japanese.

So for American firms, this is a real challenge because no matter what treaties are written, the reality is going to be that when the market access is provided, it's not going to come in a completely unfettered fashion.

There are opportunities, having said that, in areas like finance, for instance. The Chinese are very keen to develop their financial institutions and broaden their financial markets. If you take insurance, which is an area which is substantially underserved in China, American insurance companies ought to be getting a foothold there because they have a lot of expertise to offer.

But the Chinese want to make sure that their firms are in a position that they can absorb what the American insurance companies can give them, and then the question is five years down the road or even three years down the road, are American firms still going to have a lot of business?

So for American firms, I think it's difficult to stay out of that market, but getting into that market poses enormous risks as well in terms of the longer term, and I don't think we've found a good way around that yet.

In terms of the BIT and so on, there might be some protections again in terms of market access, but what can be promised about the status three to five years down the road? Not that there will be less market access, but the rules of the game in the interim may have been set up in a way that ultimately favors Chinese domestic homegrown companies over the long term. So it's going to be a tough challenge.

HEARING CO-CHAIR WESSEL: Mr. Yang.

DR. YANG: I think, yeah, this is a great question because it involves, first of all, assessment of how the Chinese have done in terms of their industrial policies. Of course, we point to the aircraft area or the train sector. The train is really a hallmark and probably the most successful ever that China has done in terms of industrial policy and is a unique situation, I would argue.

In fact, if we look at the record of Chinese industrial policy, everywhere the government has intervened extensively, usually they have tended to create a lot of overcapacity and created more problems sometimes than successes.

And in certain cases, especially in some of the regulated sectors, for example, petroleum and so on, it also invited the building of independent kingdoms, so to speak, within China, and which also became hotbeds of corruption, which the anti-corruption agencies are going after.

And, in fact, the government is inviting China to open up the state sector some more, especially to private businesses. So it really depends on which particular area.

Going forward, I do think that actually as the Chinese labor pool is shrinking, as also the labor costs are rising, and so on, I think actually there would be greater opportunities now because American products have significant reputational advantage in some ways. Our retailers are beginning to show up in China on the Internet, including, for example, Costco and so on.

So in that regard, I do think going forward, there are opportunities, but, of course, again, it varies significantly by industry. I do think, for example, in the pharmaceutical sector, there is greater respect for copyrights and so on, and it's also with the regulatory changes that are being introduced.

The challenge with regulation has tended to be that regulators have become extraordinarily reluctant to approve new products, and, in fact, sometimes they are hesitant. They're requiring additional approval steps for foreign products, for drugs that are already approved in the U.S. They require new tests in China, and sometimes that keeps valuable drugs away from the Chinese market and puts the health of Chinese citizens actually in jeopardy. So in those cases, I do think they need to change the system.

In some, for example, just today, there's an announcement about opening the credit card sector. This has required efforts to persuade the Chinese, including taking actions in the WTO to tell them what needs to be done in opening up the market. The Chinese government has not been hesitant in responding and thinking that they need to build their indigenous sort of producers.

And in the services sector, because of the size of the Chinese market, there are advantages when the Chinese can build up, for example, erect certain barriers and build up a domestic company, for example, in Internet search and so on. Once you have that, it's much harder for a foreign player, even when they open their market, it's harder for foreign players to compete, although certainly we would want more competition in that sector.

So thank you.

HEARING CO-CHAIR CLEVELAND: Commissioner Tobin.

COMMISSIONER TOBIN: Thank you.

I'm going to direct this question to Mr. Frey. I was very interested to hear about you said the most effective companies in China are the ones that are focusing on the five-year plans, and then Dr. Prasad mentioned what we all know to be true too, that there is usually a time frame during which the foreign business can play and then they get pushed out of the market.

So my question for you, Mr. Frey, how are you counseling them? Are you saying, is it a matter of positioning, like right now these are the business challenges that China wants to solve? Are you coaching them that this might be a five-year stint, and you'll need to find ways to step out after that? How does the life cycle work, and who are these most effective companies?

MR. FREY: Again, a very good question, and I'll... so I think the advisory process generally we are summing up, again, very complex discussions. I think generally it goes back to a comment that I made earlier around advising companies to think about their position within the value chain and ensure that they are necessary in the sector or segment that they are targeting.

If they are, in fact, not necessary, they are probably not welcome and will quickly see their position eroded. Now does that mean because China is a challenging place because it is changing in terms of how it views the position of multinational corporations in China that we just go away and focus on some other market where life is easy? No. It means because of the size and opportunity of the market in China, we see that we have to think very carefully about evolving that position of necessity over time.

That can be--

COMMISSIONER TOBIN: I see, yes.

MR. FREY: --that can be a position of thinking through a long-term partnering strategy. It can be starting with the position as a 50 percent joint venture partner and then doing what we're doing with a lot of companies today as the landscape for partnering changes, which is looking at how to renegotiate those agreements and take larger stakes into their business as the relative contributions of different partners have changed.

They now know the market much better than they did when they - the foreign company knows the market much better now than they did when they went in ten years ago as a 50/50 joint venture, would like to retain that company there, would like to retain the joint venture partner as a ten percent shareholder to maintain good relations and position, but, in fact, perhaps take more control of that, that profit stream, and more ability to influence the actual operations of the business.

So it's an evolving process, and again we advise companies to think every day about how to ensure you are necessary within that sector, within that value chain, and that evolves over time, and you see the most effective companies are evolving their operating models over time.

COMMISSIONER TOBIN: Can you name a few in a couple of industries?

MR. FREY: Well, yes. So the most effective companies in China, oh, gosh--

COMMISSIONER TOBIN: In different industries?

MR. FREY: Yes. So I'm a little remiss to do that because I'll offend clients that I don't mention. If you don't mind, I'd love to--

COMMISSIONER TOBIN: One on one, right?

MR. FREY: Yeah, exactly.

COMMISSIONER TOBIN: Okay. And one other piece of the equation.. You mentioned how you consider whether a business is necessary and whether it can evolve over time. How do you advise them to work with the local provinces? What's the systematic picture

geographically?

MR. FREY: Yeah, so, working with the local provinces in terms of understanding the goals of MOFCOM and SASAC within the province. Actually, I advise companies to, if you're looking for a quality partner in China, go ask, go ask the government who they are seeking to actually uplift or position or give a new opportunity to, and enter into a very - after you've done your homework with the publicly available information - enter into very deep dialogues with the government officials whose KPIs are aligned toward development of emerging strategic industries or hitting new environmental KPIs in a changing China where the KPIs are moving away from just GDP growth toward more balanced KPIs.

Understand what those government officials' KPIs are and then go into a dialogue with them and help educate them on your business and linking into potential partners or strong customer bases that that government official has either direct or indirect influence over.

COMMISSIONER TOBIN: Thank you for opening it up so we can see how you do your work.

MR. FREY: Sure.

HEARING CO-CHAIR CLEVELAND: Commissioner Shea.

VICE CHAIRMAN SHEA: Thank you all for your testimony.

My question is, okay, we see these great ambitions in the 12th Five-Year Plan, the Third Plenum directives, and what we expect in the 13th Five-Year Plan. But do you believe that China has the political and social institutions in place to realize the goals that they lay out in these plans?

Dr. Prasad, it's always good to hear from you. You said that the system is very clogged. I think you were kind of intimating that. You said that the banking regulatory system is poor, and I'm just wondering if China - along with this economic and commercial transformation which Mr. Gray talked about - really requires a political transformation for it to be successful?

For example, environmental degradation is a major issue, and it's a major issue in the plans; right? It's a major focus of the government, but you have "Under the Dome," which is this extraordinary documentary seen by 200 million people in the first few days, and then the government takes it down.

And that type of film could be useful to spurring action. I know the spur was already there, so my question is ultimately "can China succeed in realizing its economic and transformation without changes to its political governance structures?"

DR. PRASAD: Commissioner Shea, you've asked a deep and very important question, and it's one that the Chinese government is grappling with because they are very keen to move towards a more market-oriented system, again, market-oriented being defined in a very different way than we might define it.

They do want the more liberal financial system, but they recognize they need an institutional superstructure that can support what they're trying to do, but they're not willing to move forward in terms of very broad political, legal, or institutional reforms.

So how do they manage this tension? Let's take legal reforms, for instance. It's very hard to run a market-oriented system unless you have a proper system of enforcement of property rights if you don't have a legal system that works well. So they are moving forward with legal reforms, but it's legal reforms that are necessary to make the market-oriented system work well, not a legal system that will put the government at par with other agents in the economy in terms of standing before the legal system.

So the Chinese Communist Party will always take precedence over the legal system, but



the legal system is going to operate for the other economic agents who are going to be important. And this is the way that they've tried to manage this. Now, about a month after the Third Plenum documents came out, there was this other document, a Chinese Communist Party document, Document No. 9, which apparently had the imprint of presidency over it that came out, which made it very clear that western style democracy, western style free press, and so forth, were not going to be under consideration, and, in fact, were evils that needed to be avoided by China if it needed to make proper economic and social progress.

So I think the government in its mind has made this very clear demarcation, economic liberalism supported by institutional reforms that are enough to support that but not broader institutional or political reforms. The question is whether this is a tension that will spill over over time? Their bet is that so long as they deliver the economic goods, there isn't going to be enough of a push from the ground in order to put in place broader reforms.

And this anti-corruption drive is a very important part of dealing with this tension because with the reforms, there is a legitimate concern in economies like China, or even my own India, that if you have market-oriented reforms, these are going to have a dislocating effect, these are going to hurt some people, may be good for the economy overall, but those who are going to benefit are the political and economic elite.

So when you sort of signal that corruption is going to be dealt with because corruption is the way sometimes that the political and economic elite get all the benefits, if you signal that we are going to help the masses gain some of the benefits, and we are going to move forward with these reforms because these are good for you, that message comes together in a much more coherent fashion. So I think this anti-corruption drive becomes a very important part of the economic reform agenda.

When I spoke about things being clogged up, it's really a lack of capacity, as well. If you have the deposit rate liberalization overnight, today what happens, the smaller banks are going to compete very aggressively for deposits because they are the ones who don't have easy access to a retail deposit base. They will make higher price loans to the private sector, which is exactly what you want, but these banks are not well regulated because their regulatory authority does not have either the will or the capacity to regulate these small banks.

So by doing the right thing, you may unleash forces and more risks in the future. This is why they're proceeding very gingerly. So, again, at least on economic reforms, I'm convinced their heart is in the right place.

VICE CHAIRMAN SHEA: Anything from the other witnesses, if I may? Dr. Yang or Mr. Frey.

DR. YANG: Okay. Yeah, I think I would slightly disagree with Dr. Prasad on the legal reforms aspect. I see the limits of some of those reforms. In fact, the documents that the Chinese Communist Party have announced are all targeted, the deadline usually is 2020, and of course the Chinese leadership is also gearing up, they have these two centennial goals. The other centennial is going towards 2049. So this is a leadership that is very determined in terms of the long strategic kind of goal of modernization for China.

But, of course, when you suddenly unleash so many things on to the policy agenda, it's natural that you have to pick and choose. The system cannot handle so many reforms. The Third Plenum decision included 60 items. Each area is a significant reform agenda, and I think, I'm sure you have a lot of experiences in this regard.

So for now, of course, the top leadership are very frustrated. Premier Li just last night emphasized that if the top leaders have decided on something, he wants the documents to be

released within seven days. They don't want department directors to be holding them up actually within the State Council. So there is a sense of emphasis on efficiency.

Likewise, the newly revised legislation law has included provisions for changing the laws a little easier because currently the national legislature as a full body only meets once a year, and the Standing Committee only five times a year, each time about a week or so. So they are not really working full time in terms of passing laws in this case. So the new legislation law actually makes it easier, for example, to amend and then pass a law. When you pass a law, you need to change over laws to conform with it, but very often that's not done.

So as a result, there're a lot of complications in the system, but overall I see actually a real seriousness in trying to do so. They have the legislative agenda laid out. They also - the courts - are changing as well. They are trying to reduce interference of the political legal affairs committee secretaries, and all of this will take time. But in the legal area, I do think actually they are moving in the right direction even though it's not the rule of law. It's more rule by law.

VICE CHAIRMAN SHEA: It's rule by law. Rule by law. Yeah.

COMMISSIONER TOBIN: Yes.

DR. YANG: Yes.

VICE CHAIRMAN SHEA: Mr. Frey, do you?

MR. FREY: Yeah, I would add perhaps a layer down from governance itself but maybe at the implementation capability level. Like my fellow panelists, I would certainly believe or buy into the earnestness of the commitment to reform by the Chinese government, but very quickly we run into extremely challenging issues, which your question highlights.

If you start to talk about the commitment toward a better environmental record, if you look at some of the things I mentioned in my opening remarks around financing, future urbanization, and the new tools of investment that are necessary within cities to do this, and think about - there is no treasury department within the cities the way there is in American cities, who issue bonds in order to fund schools and swimming pools and things like that. There's an incredibly big skill gap at the implementation level that we quickly run into as we follow through the implications of these reforms as they're put into the field.

VICE CHAIRMAN SHEA: Okay. Thank you.

HEARING CO-CHAIR CLEVELAND: I'm delighted you just mentioned your testimony because it's the question of taxes and debt instruments and debt that I'm particularly interested in.

So in a document that our clever staff provided, Mr. Frey, you talk about a significant hurdle for local government funding urbanization is they're unable to rely on steady sustained fiscal revenues to underpin investment, and you go on to point out that only a portion of taxes that are collected remain in their coffers, and that land sales are the principal means for securing those revenues.

You talk a little bit about public and private partnerships, and then you just mentioned the ability to issue bonds.

And then, Dr. Prasad, you talk about, in your written testimony, the high level of debt in the economy is emblematic of, as you talk about, a broken system of allocation, but you point out that the total debt level reached 282 percent of GDP, which I found staggering, and I'm interested in maybe a discussion between the two of you about how Beijing views the question of debt and the needs of municipalities and the provinces to raise local revenues? How do you see them balancing this 282 percent national debt burden with local needs and priorities?

Does that make sense? Debt worries me always, and you say it's an inefficient and

wasteful system. I'm just concerned that that inefficiency and waste will begin to, as I've described this morning, the iceberg flips, and it becomes a problem at the municipal level compounding the problem at the national level. So can you talk a little bit about sort of planning and thinking in Beijing about-

DR. PRASAD: Okay. They're very aware of this tension, too, because a lot of - it ultimately comes down to incentives. The provincial governments had a very strong incentive to grow, and they've grown by using their financial system, especially the state-owned banks, which are financed, both state enterprises and also special purpose vehicles that the state and local governments have set up.

And partly this is to make up for inefficiencies in their tax and transfer system, and partly because they've not been able to issue their own debt, and at some level of good reason, so you have a lot of debt being built up in the system and being financed and channeled through the financial system, which actually makes the allocation problem much worse, and ultimately there is going to be a cost that will be borne by the householders. But things are nicely hidden in the system so this is why it's persevered.

So they are taking steps to fix it, as Professor Yang mentioned. They're already working on the reform of the tax and transfer system. They're changing the tax base, and they're also moving to a system where they're going to reduce their expenditure responsibilities that right now devolve onto the provinces, and they're going to increase the share of revenues from the sort of indirect tax system they're putting in place that goes to the provinces. So that will take care of some of the imbalances that the provinces face.

They've made it much harder for the provinces to set up these special vehicles that can be used to suck in financing from the banks. They have capped local government debt, but what they're doing is allowing the local governments to issue bonds more explicitly. Part of the reason is that it brings some of this debt out more into the open and subjects the provinces a little more to market discipline.

And basically it takes away a lot of inefficiencies in the system. So does it deal with the, so to speak, legacy or stock problem of a large amount of debt and the debt overhang? No. They're going to have to deal with that, and their hope is to put off the day of reckoning a little further and continue growing and increase the resource base so they're still playing a slightly dangerous game.

But under this dangerous game, they are trying to put in place sort of reforms that will lead to at least the debt problem not increasing at the rate it's been increasing in recent years, and at least they're also trying to reduce the adverse effects on the inter-allocation mechanism through the financial system.

So it's moving slowly, but this is certainly a very big risk that the economy faces, not that it's going to end in a financial crisis because when the lenders and the borrowers are largely owned by the state, it's a little easier to intermediate without a crisis, but it's going to be very expensive to deal with this problem, and the more they delay dealing with this, the larger the problem is going to be and the larger costs are. They're very aware of this.

HEARING CO-CHAIR CLEVELAND: Okay.

MR. FREY: Yeah, I would largely agree with those comments and perhaps overlay with some characterizations that I like to use to try and explain this issue to financial intermediaries that are visiting us from the U.S.

The question arises quite frequently can China have a Detroit? The short answer to that is, in the past, China could not have a Detroit because all of the debt was, in the end, backed by

the central government. There was no such thing as local debt. It did not exist in China.

They actually, for the reasons that Dr. Prasad just outlined, want to move to a situation where there is, in fact, real local debt, but do it in a way that doesn't create a number of Detroit's, but does it in a systematically and carefully managed way in order to introduce, as Dr. Prasad said, the market force that actually ultimately incents the right behavior by the cities.

The prior situation was entirely unsustainable because the city officials in order to meet their goals of the five-year plans around growth, GDP, et cetera, actually just went out and, as creative officials do, found other ways to fund their cities, which resulted in the situation around land sales, shadow banking that confronts China today.

Ultimately, this will be a good thing for China in order to move toward a situation where a Detroit could happen if, in fact, the city doesn't actually implement effective financial management techniques to fund and administer their city.

The question, and it goes back to the prior question, how do get from here to there is a very difficult process, and they don't have all the right skills in place today.

HEARING CO-CHAIR CLEVELAND: Dr. Yang, I want to hear your answer to this, but I'm curious when you describe the, it seems like sort of a divisible issue, as you describe it, between the debt overhang in Beijing versus the potential to raise revenues locally.

If I'm not mistaken, in the 2008 crunch, there was a huge burden placed on municipalities and the provinces to absorb a percentage of the stimulus funding costs that they in effect were--it was an unfunded mandate. How about that? So I'm a little fuzzy on how you envision this path where Beijing views it as an effort to cultivate transparency in the financial mechanisms to raise revenue and sees it as a potential opportunity for municipalities to be more viable.

I'm - as long as they can keep coming down with this hammer that you're going to assume potential stimulus costs, how does that work?

MR. FREY: This is a very complex topic. There's a number of unsustainable factors that existed in the cities and do exist today. It starts with the way the fiscal receipts are actually - or the fiscal system is implemented in China today where unlike American cities where good mayors actually compete for a larger population base, to attract them to their city, based on quality of education, health care, all of those good things that good cities have, China's mayors, if you will, were challenged by the fact that they were attracting migrant workers in order to fund large-scale infrastructure or projects under the 2008 stimulus, as you referenced, and they had to serve those migrant workers, transport all of the things that good cities do, but, in fact, because of the hukou situation, they received no revenue base, no tax receipts from those employees working in their cities.

So it goes back to a fundamentally completely unsustainable system that has to be step-by-step progressively unwound and moved toward a more sustainable future city fiscal base. I don't know if that helps to characterize the situation.

HEARING CO-CHAIR CLEVELAND: I guess I'm asking do you see in, if we had you back in five years, that we're going to see municipalities with a 200 percent debt burden as the national debt burden is now? I don't know how you quantify it in terms of provinces and municipalities.

But are we going to see - my limited experience in this area suggests that there is always a shell game going on in terms of shifting where the burden and the problem is, and my concern is that you will see a shift in the debt burden to municipalities and to provinces, and it will not solve the debt overhang.

MR. FREY: My personal opinion is this will be carefully, very carefully managed, and

to Dr. Prasad's earlier point, the day of reckoning on the liabilities that exist today will be continually pushed out until a point - and they have the ability to do that - they can roll over the debt through state mandate, would be continually pushed out until such time as it is possible to bring in what I think will be an emerging new financial system that has accountability and visibility but that has to be walled off and ring-fenced from the existing municipal books.

HEARING CO-CHAIR CLEVELAND: Right.

MR. FREY: And that will be progressively introduced in stages with debt obligations rolled out into the future, and to answer your question, I don't think we'll be sitting here in five years with as much attention as China puts on to this issue talking about massive municipal debt crises.

HEARING CO-CHAIR CLEVELAND: Right. Interesting. Dr. Yang, do you have anything?

DR. YANG: Yeah. What's interesting is this is very much a constitutional issue in the Chinese context. But, in fact, if we look at how the debt really grew, it's largely for local governments; the debts were primarily raised through local financing vehicles. Those usually are corporations set up by the local governments, and then the borrower borrows usually with explicit or implicit guarantee by the local governments.

I can already see that some local authorities are beginning to see, oh, this is debt I can guarantee. That other debt, no, that's not mine, and, in fact, so we are going to see a process of this happening, and the central government is concerned as a result. And the current effort by the central government to allow local authorities to issue a trillion yuan worth of local government bonds is part of this process to help with the terms of this debt because a lot of this debt is due fairly soon.

And the central government wants to make sure that you can spread out the terms so that they would be managed well over time. There is a consensus practically that the one trillion is too little so, therefore, and there is also understanding that there would be more to come, and this is managed. The central government invited the local authorities to report how much debt they have on the books.

Some local authorities came up with - initially was hesitant and then began to dig up as much as they could because they want more quotas for the bond issuance which has been severely limited. So it's a very interesting game between the central and local authorities.

Now down the road, however, this is interesting. So far the local governments raise a lot of the funds by selling land or using land as collateral, and that may become more difficult as the property sector slows and so on. Already, however, the central government is pushing for the registration of properties by private individuals at this very point.

In fact, they have experimented with collecting property taxes in certain cities, the cities of Shanghai and Chongqing. It's been extremely limited so far because that's a real political revolution in China. It's much easier to sell land to raise revenue because the local government controls the land, and they don't have to ask the voters for approval.

If you actually go to individual households to say I want to collect taxes on your property each year, then it's a political revolution. And that's actually going to be extremely interesting to watch over time, I think.

Now, there is also another aspect. Most of the major sources of taxes have been converted to central government, local governments shared taxes. The VAT, for example: 75 percent to the central government and 25 percent only to the local authorities. Increasingly, the revenue going to the center has to be reallocated to the localities. The process is not always

transparent. Already the authorities are beginning to talk about how to reform this.

So we are going to see more conversations both in terms of the property taxes and the property tax registration. The property registration process is promoting some selling by people who own many properties for reasons that they probably shouldn't be owning so many properties (i.e. corruption). So that actually is generating some supply of properties into the market, especially by certain officials who don't want to be seen as owning so many properties and so on.

So it's all very interesting, and I think actually there will be a significant debate and discussion about how to reform the system over the next five years.

HEARING CO-CHAIR CLEVELAND: Thank you.

I'm sorry. I thought there were no other questions. Senator Talent.

COMMISSIONER TALENT: I was late. In fact, I decided to ask this listening to your exchange with Commissioner Cleveland because I think the three of you presented certainly not a rosy picture, but your expectation that the Chinese economy, that they would figure this out, and they were reforming it, so I've been just adding up some of the things that some of the commissioners have talked about.

I want to present them to you and then ask you a question. Okay. So we have a country here which has enormous overcapacity, which we saw in the last. Debt, 300 percent of GDP almost, a huge real estate bubble, no secure tax base, the banking system that they regulate doesn't take deposits in the normal sense and doesn't invest in market enterprises, the banking system that does actually take and pay off depositors and that does invest in the market isn't safe because they don't regulate it... This is a regime that's increasing repression daily, which to me is a sign of insecurity. An anti-corruption campaign that's true, it's huge, it's also arbitrary and therefore tends to paralyze decision-makers.

And so they have all these issues, and you tell us that they're going to manage their way out of it when the people managing it are the same geniuses who created these issues in the first place; right? I mean so why do you all think that they're going to be able to sort of manage their way incrementally out of this mess that they've created?

DR. PRASAD: Senator Talent, I spend a lot of time in Washington, D.C. When a government seems to recognize the problems it faces, when it tries to do the right thing, perhaps I'm just too easily impressed.

COMMISSIONER TALENT: I'm being provocative. Your view is one that a lot of people hold. I'm looking at them, and I'm thinking there's a reason why a lot of capital is starting to leave China, including some of the people in the know. I mean I think I'd be sending my money overseas, too.

DR. PRASAD: Okay.

COMMISSIONER TALENT: I was trying to provoke you a little bit.

[Laughter.]

DR. PRASAD: The questions you raise are very pertinent ones. This is an economy that seems to have done things which should not have been done. It's managed to generate very good growth for about three decades through a process by which it's generating more risks at the same time, and this, the wheels should have come off this train a long time ago by any standard notions, and yet they seem to go through this process where they're building up more risks, but at the same time generating more growth. And it's a legitimate question: Are they going to keep out-planning their problems?

And perhaps the problems will catch up with them. But what I think, at least speaking for myself and personally, is that they do have this ability to maneuver around some of these

problems. Now, the level of control that they have is in principle one that should make it much harder because logically, a more flexible system that self-corrects should be the right way to do it, but they've been able to relieve pressures in the system over time using certain reforms.

For instance, the financial market reform they recognize is a crucial one. It's not worked very well. So far, it's generated a lot of growth but growth that is not delivering as much benefits to the population. It's creating a lot of environmental and other problems and risks in the banking system itself.

So this should have been very difficult to manage, but they've managed essentially by retaining the amount of control that they had. So at some point they're going to have to take bigger steps in order to generate these reforms, and, in fact, I had written about a decade ago that the path to reform was very clear: they needed to take much bolder bigger reforms.

But as I get closer to the process, I sort of understand, again, going back to this point about things being very clogged. So it's what economists call "the second-best world." If you have many problems, you try to fix one problem. You have unforeseen consequences. I've come to empathize with their sort of incremental approach to many of these reforms. So, again, the view that I have is that they're very cognizant of these problems, and on each dimension, they're making very slow incremental progress.

But I think your point is taken that the jury is still out whether they will be able to outrun their problems. They've managed it very effectively so far. That doesn't mean they will keep doing so. But the commitment to reform in the midst of all of this I think is what has led the panel to have a somewhat more positive view about where China is headed.

COMMISSIONER TALENT: Well, I mean, and you're right. We have a new leadership now or different leadership than we had when, for example, they overreacted, in my judgment, to the financial panic and really built up all this debt, right? So we do have a new group of people, and maybe you're right. I'm just, I'm dubitante, as the judges say. I don't think they can do it.

Thank you, Mr. Chairman.

HEARING CO-CHAIR CLEVELAND: Any other questions? No.

So what am I saying? I'd like to thank you all for a terrific testimony. It's truly thought-provoking, and I'm not sure I characterize your views as rosy so much as well-informed and a lot of experience, it sounds like, in terms of your presence in the region.

I'd like to thank you all for coming and also thank the staff who put together the proceeding, particularly Katherine and Gar, Chris and Reed, and who am I missing?

HEARING CO-CHAIR WESSEL: Yeah, you got it.

HEARING CO-CHAIR CLEVELAND: That's it.

HEARING CO-CHAIR WESSEL: Yep.

HEARING CO-CHAIR CLEVELAND: So thank you very much.

The next hearing is China and ASEAN. It will take place on May 13. The hearing is adjourned. Thank you.

HEARING CO-CHAIR WESSEL: Thank you.

[Whereupon, at 3:00 p.m., the hearing was adjourned.]