

CARNEGIE ENDOWMENT FOR INTERNATIONAL PEACE

**CHINA'S ECONOMIC RISE—
FACT AND FICTION**

WELCOME AND MODERATOR:

MICHAEL SWAINE,
SENIOR ASSOCIATE,
CARNEGIE ENDOWMENT

SPEAKERS:

ALBERT KEIDEL,
SENIOR ASSOCIATE,
CARNEGIE ENDOWMENT

STEPHEN VOTH, ANALYST,
SENIOR ANALYTIC SERVICE

GREGORY D. FOSTER,
PROFESSOR OF POLITICAL SCIENCE,
NATIONAL DEFENSE UNIVERSITY

HARRY HARDING,
PROFESSOR OF INTERNATIONAL AFFAIRS,
GEORGE WASHINGTON UNIVERSITY

WEDNESDAY, JULY 9, 2008

*Transcript by
Federal News Service
Washington, D.C.*

Transcript Not Checked Against Delivery

MICHAEL SWAINE: Well, why don't we begin? I think we've got a quorum here at least. And if there are more to come, they can come in as we proceed. Welcome and good morning. Thank you all for coming. On behalf of Jessica Mathews, president of Carnegie and Doug Paal, the director of the China program here at Carnegie, I'd like to extend my thanks for you coming in today to hear this presentation.

My name is Michael Swaine. I'm a senior associate in the China program here at Carnegie and I focus on primarily national security-related issues. But today's topic and discussion has certainly a lot of relevance for that and is to me very interesting, but even aside from that is interesting for a host of other reasons. As you've seen, the topic is on China's economic rise with a specific focus on a range of issues that characterize that rise and project into the future, what this could mean for China and for the United States.

And this is based upon a substantial – by that, I mean larger than usual – policy brief that my associate and colleague and good friend, Bert Keidel, has prepared, which I hope most, if not all of you, have already seen and hopefully read. Today we have an excellent panel to both present this, of course, with Bert presenting the main thrust of this policy brief and three superb panelists to comment on different aspects of that.

So let me just introduce the whole group and then we'll proceed starting, of course, with Bert. All of you are familiar with Bert Keidel and his work. He is a senior associate here in the program. He specializes in China's macro-economy, regional development, economic system, reforms, and poverty-reduction strategies. He is also a teaching professor part-time at Georgetown University's Public Policy Institute, where he is teaching a course on the Chinese economy.

Before coming to Carnegie, Bert was with the U.S. Department of Treasury's Office of East Asian Nations. He was at that time acting director, also deputy director, and China desk officer during his period at treasury. Prior to that, Bert was a senior economist at the World Bank office in Beijing where he covered economic trends, system reforms, poverty, and country risk. So he has an excellent pedigree and background in examining for many years the Chinese economy. And I know from experience and talking to Bert, this is included not just from a far analysis in both English and Chinese, but long, extensive period of time on the ground working with Chinese economists in examining various issues that he has commented on in his policy brief.

Now, to comment on Bert's policy brief and the issues that it raises, we have three excellent commentators today. And I'll go in the order in which they will speak. The first is Stephen Voth who has worked on East Asian issues as an analyst at the CIA since 1993. He is a member of the agency's senior analytic service and has served as deputy national intelligence officer for East Asia on the National Intelligence Council. He has a Ph.D. in economics from the University of Maryland. He'll speak first, followed by Gregory Foster, who is a professor of national security studies at the Industrial College of the Armed Forces, the National Defense University here in Washington. And he previously also served as George C. Marshall professor, J. Carlton Ward distinguished professor and director of research, and executive director of the Defense Environmental Forum, a joint venture between the deputy undersecretary of defense and the president of the National Defense University.

Transcript Not Checked Against Delivery

Among his many duties, he has been for many years directing the China Regional Security study and the Environmental Industry study programs at NDU. A West Point graduate, he holds a doctorate in public administration from George Washington University and has published widely on various aspects of national security affairs as well as environmental security issues relating to China.

And then, thirdly, our commentator will be Harry Harding, to my immediate right. Many of you know Harry. He is a university professor of international affairs at the George Washington University. He previously served as dean of the Eliot School at GW and as professor of international affairs and political science there. He's also been, in the past, a professor at both Swarthmore College and at Stanford, where he received his Ph.D. and he's directed the Asia program at the Woodrow Wilson International Center for Scholars. He had also in his past life as China scholar had been at the Brookings Institution as a senior fellow in the foreign policy studies program and, more recently, served as director of research and analysis at the Eurasia Group in New York City, a political risk research and consulting firm.

So three excellent individuals to comment on Bert's presentation and to begin or to set the stage for the ensuing discussion, which I hope will be very stimulating as well. So without any further delay, why don't I turn it over to Bert, who will speak for approximately 20, 25 minutes and then each commentator, I hope, will speak from 10 to 15 minutes at most. Bert?

ALBERT KEIDEL: Thank you very much, Michael. And I also want to extend my thanks to this panel, to Greg Foster, Harry Harding, and Stephen Voth for agreeing to come and comment on this paper. It's something that I've been working on for a long time and I'll give you a brief summary of what it says and then go through the major parts with some illustrations from the technical working note, which is very much a draft, that you found on your seats.

This policy brief projects China's economy going forward for the rest of this century. That may sound like a long time and I'm really focusing mostly in my analysis on the first 50 years of this century, but it's useful to consider this timeframe. My background in this is considering other East Asian nations that have successfully grown rapidly because there are many parallels between China's economic system, the policies that it has put in place, and the environment that it has created for itself that are familiar from other East Asian success stories.

So if we consider – and I consider – the high likelihood that China will continue in that path, it's important to map that out and say, what does it imply? In doing so, I find that, with what I consider to be quite conservative growth-estimate projections, that China will – and allowing the United States to grow at about 3 percent, which is its historical trend over the last 25 years – that China will pass the United States in total GDP in about 2035. And by about 2055 or so, it will be double the United States economy at that time. So we're not talking about doubling from where it is now. We're saying it will be double what the U.S. will have become at that time.

Transcript Not Checked Against Delivery

From this flow implications. First is commercial. Given the scale of that kind of economy in the world, it will move into first place in terms of influencing the global growth pattern. It will have institutional significance in the sense that, with that kind of economic clout, China will begin to expect to take a leadership position in many of the international institutions that we now see headquartered in Washington or in New York or in Europe. And, finally, although this is far afield from what I do, in a sense, although I'll explain why not completely, it could have some military implications if China's military capabilities, to some degree, follow its economic capabilities.

The value added of an economist here is to say that what we're really talking about in military production is production. What kinds of power can you produce? And that means not an annual budget, particularly in a setting where there is a capital-intensive production structure, as there is in many military applications today. It implies, what is your accumulated stock of productive capital.

And so, as an economist, I always sort of tilt my head when I hear people comparing China's military budget to other military budgets and say, well, what's the accumulated stock that we're talking about here. Who can use what in order to be effective militarily? So that's the economist in me asking about the significance of China's long-term growth.

I then mention what some of the strengths are in the Chinese economy that I think are really likely to be responsible for propelling it forward at the pace of growth that you see in column two in the table in the policy brief, which is I think on page six. And I enumerate those. And I think they are substantial. And I'll go through those in a minute. I then mention a large number of stumbling blocks. I don't mention them all and there are some that will hopefully come up in the question period that are quite frequently mentioned as reasons why China won't be able to sustain this growth. And I examine these and come to the conclusion that, in each of the cases that I examine, these, while important challenges, are not challenges that are likely to stop China's sustained growth in coming decades.

So let me then move through that outline of what I'm going to say in about 15 or so more minutes. The growth likelihood is high, I think, as I mention, because of the pattern of other East Asian economies and also because of what we have seen in China's performance so far. One of the most important reasons why China's growth can continue is because it's domestic-led. There is a strong, and easy sense in the United States and in Europe – I've been reading books published in the U.K. – that China's export-led growth, as they see it, cannot continue in this pattern because the world markets couldn't support it.

And I think examining China's record shows that that really misses the point. And the analysis in the paper emphasizes a couple of things. First, if you look at China's GDP growth, it doesn't go in sync with U.S. GDP growth. And this is a result from an earlier paper that I did, but extended through here. If you look at the U.S., which is the blue lines here – I don't know if you can see this little red ball – that's the U.S. growth. And it had a recession in 2001. It had another one in 1991.

China is kind of out of sync. When the U.S. has a boom like a dot-com boom, China is in a growth slump. And when the U.S. is in a recession, China seems to be taking off. There is then an analysis in the table on page – in the report – of the same studies look

Transcript Not Checked Against Delivery

at the turning points in China's growth over the last 30 years. And the turning points all indicate that when China sped up – this is on page three – when China sped up or slowed down, trade had nothing to do with it. It was domestic shifts in policy and demand for investment in consumer goods.

So that is one important reason why China's economy can continue to grow; it's not export-led. It's domestic-demand driven. And so that means that China will itself be a source of demand for imports coming from other economies, which will strengthened its trade relationships with those economies and ensure that it becomes a factor in the expansion of global trade rather than a force that is somehow, as it's often pictured, leaching off of the global demand, represented heavily by the United States.

A second major reason I think and that I enumerate in the brief, why China is likely to succeed, is because its reforms over the last 30 years have created a web of incentives systems that encourage individuals and companies to make money and to do it in ways that also propel the country forward. So China has a system now – and the paper details it – that rewards people that take risk. It rewards people that go and get an education and study. It rewards people that move to a location where they can be more productive and therefore earn a higher income. And it rewards people that just work hard. And so, I think that this system of incentives is underappreciated. China has become, as the paper says, “a money-making machine” because of the new systems that it has put in place.

I also would say that, third, China's growth is likely to continue because of the strengths of its financial system. China's financial system has been designed – in some ways, repressing certain market dimensions of it – to be able to finance infrastructure and other key public investments. And this seems to be strong and continuing on with directed credits in all kinds of important ways that society needs to support the market. I mean, after all, Adam Smith said, it's the extent of the market that determines the health of your economy and the strength of your market. And this infrastructure and these public investments are really a country creating an extended market foundation and then its financial system also rewards those that put their own savings and their own retained earnings in the corporate structure into profit-earning ventures. And that is the single largest, actually, source of investment in China.

Finally, I would point out as one of the major strengths of the Chinese system – that encourages my view that it will continue to grow at these rates – its aggressive opening to the outside commercial world. This is something that Japan never did, South Korea never did, in the sense of welcoming foreign investment and aggressively seeking competition domestically from foreign forces, as China did in its WTO accession. The major impact of China's WTO accession is probably the competition that it brought to China's domestic economy by encouraging under the new post-GATT rules not just tariff and other border changes, but also integration of domestic economic institutions into a global setting. So those are some major strengths that are detailed and outlined in the paper, why I think China will continue.

I mention stumbling blocks that are often put out there. Now, I think – I'm not going to go through these various slides that I have. I just wanted to show actually a couple of quick points. China's surplus is often pointed – I'm going to back away from the

Transcript Not Checked Against Delivery

stumbling blocks for a minute and continue on this issue that China is export-led – this table in exports and imports in log form. Now, those of you that are not particularly mathematically enamored won't know what that means, but it means when you put things in the log – you'll notice over here it's got a funny scale on the left – put things in log form, the slope of the line represents the speed of growth.

And so what happened when China actually took off in this current growth spurt, its exports and imports slowed. You can see the slope actually became flatter. And then, as WTO and other forces kicked in, exports and imports both grew very rapidly. And as I describe in the paper, and I have also described elsewhere, what happened in 2003 with SARS was a major domestic impact on the Chinese economy. The government was scared that SARS would slow it down dramatically so it pumped cash into the economy at a very high rate. And, as a result, when SARS became under control, the economy was overheated. And so, in 2004 and 2005, China worked very hard to slow the economy down and investment in real terms. The growth rate dropped from 17 percent down to 8 percent. So there was a major tightening that went on there and it affected imports.

So what happened? How did China get its recent surplus? It wasn't because exports accelerated; it was because imports slowed dramatically. And so we're now looking to see if China's import growth can accelerate again. And there is some evidence that it is doing that.

I also point out that the current focus on the exchange rate is really misplaced. Everybody, including in China, at a conference last month in Shanghai, the Chinese were all talking about, oh, the U.S. dollar rate with the renminbi. And I kept pointing out to them, look, the important thing in the world that's going on now is that the euro is finding its proper place in the constellation of exchange rates. The European Currency Union has had a strong trade surplus for a long, long time led by Germany. And if you correct that, you see that the euro has appreciated dramatically. The renminbi is taken as the standard, the yuan, whereas the U.S. dollar has depreciated vis-à-vis the yuan.

But China is kind of splitting the middle and so it's not that the Chinese have changed dramatically; it's that the euro has adjusted dramatically and China has quite reasonably kept itself in the middle of the exchange-rate world for two of its major trading partners. And I've also pointed out in the technical note that China's reserves are often taken as a sign that it's accumulating too much money, that its trade surplus is too large. But if you look back here, this is Singapore's reserves as a share of Singapore's money supply. It lost more than 20 percent of its money supply in foreign exchange terms during the Asian financial crisis. How many countries could afford to lose that much foreign exchange? Until very recently, not very many.

And as you can see now, it's only recently that China itself has had reserves that have passed the 20-percent mark in terms of its domestic currency, so that this looks like a new standard for prudent exchange-rate holdings. And you'll also notice that China's holdings of foreign exchange as a share of its money supply are the lowest of the countries here that I've listed. I admit, I haven't listed all of the countries, but it's an interesting illustration for those that would point to exchange-rate reserve accumulation as a sign that China is relying too heavily on exports for its economic growth drivers.

Transcript Not Checked Against Delivery

I'm not going to go into some of these other details. The model that I've used is a bit complex because it models domestic prices for the Chinese economy and the U.S. economy and it merges this in with purchasing-power parity calculations. But let me save some of those issues for the question period, if they're of interest to you all. Here is the table that gives the growth rates. And here is another table in the technical note that shows it's just an illustration of what might happen to military stocks if the accumulation continues where you take a share of the military budget. It's quite a low share that I've chosen for both countries: the U.S. and China. And you accumulate those with a straight-line depreciation.

You eventually end up – if China were to take this course – you end up with a Chinese accumulated stock of military equipment on the right-hand side here that, eventually, with a lag of some time after the budget, overtakes the United States. Again, this doesn't include the value of U.S. bases around the world and of its status-of-forces agreement and other special advantages the United States currently has, but those could also evolve if China's wealth accumulates as these projections show that it will.

Now, let me just tick off some of the stumbling blocks and why the paper finds that they are not compelling as reasons why China can't continue to grow. World markets – I think we've already dealt that. Macroeconomic instability – China in the past has had slower growth because it's had inflationary outbursts that required severe tightening and slowing down of the economy. I think there's a great deal of evidence that China is managing its macro-economy much better than it has in the past.

These I'm going to use as an example. I may not talk about it much right now, but in the paper and in a technical paper, both in the policy brief and the technical note, I mention that if you look at seasonally adjusted data for China, even the current inflation has actually been the result of some events and some inflationary events that occurred back here in June of last year, June and July, and then during the snowstorm here.

But what's reported is year-on-year growth. And that kind of makes it look as if inflation is constant and ongoing. And interestingly, China raised diesel and gasoline prices last month, but it's just 12 months – June – after the big price surge in food a year ago so that that now gets taken out of the year-on-year data equation and it seems to me – and we'll know in a few days, so I'm really out on a limb here – that when the official data come out on China's inflation for June, they won't be as dramatic as you might expect from the increase in diesel and gasoline prices because they're using year-on-year measures. So it's a footnote for those of you that are interested in that kind of thing. You'll find some more explanation of these relationships in the technical note.

But the major point is that it doesn't look like the Chinese are going to be subject to the same kinds of errors in policy that they committed in that past and that, now, because of their higher income, they are more easily able to absorb, for example, rapid increases in food prices.

I'm going to now talk about poverty and inequality. The paper spends a bit of time saying that poverty – China's poverty-reduction record has been extraordinary. But with the newly released World Bank statistics and, actually, with a recalculation of what poverty lines

Transcript Not Checked Against Delivery

should be, we still have in China about 200 million people below the dollar-a-day line. And some people have said to me, that's ridiculous! Who can live below a dollar a day? This has got to be nuts, these kinds of calculations.

But I would – as the paper says – argue that we have a very difficult time in the United States imagining what it's like to live in a cave with very few sets of clothing, no access to health care or not very much, meat only occasionally. And, actually, a dollar a day for a family of four, 360 times four, actually turns out to be well over a \$1,000 a year. So it's not that you're without resources, but you have to use them carefully.

I encourage all of you, if you're interested in sort of a visual that you can't get from these kinds of written documents, a visual about the low level of income in China and what it means for the industrialization to take a look tonight at the Koppel Discovery Channel at 10:00. I saw a pre-screen of this week, of a show that looks at the whole phenomenon of the Chinese economy and its impact in the U.S. I think that's overdrawn, as Nicholas Lardy in his comments the other night, made to this, but the pictures you get of young Chinese or older Chinese who get nothing if they stay in the rural areas, zero, nothing, coming into the cities and doing the kinds of things that they're doing. It's really quite a useful adjunct to what you might read in print on the Chinese economy.

But the paper argues that poverty has increased, has decreased a great deal, even – but, even so, China has a large group of people – 15 percent of its population – below the dollar-a-day line. And so this has got to stay a priority of Chinese policy-makers. And we in the United States, when we continue to hit them about exchange rates or about trade perturbations also need to realize what their real focus is, which is heavily domestic.

The paper also argues that measures of inequality, like the famous Gini coefficient, that seemed to have gone up so much, in fact, could be just part of a passing trend. And this is quite controversial. It goes back to Simon Kuznet's work on 19th- and 20th-century economic growth, but there also is some Japanese evidence.

And in this diagram in your working paper, you can see – it makes several points. It shows that in Japan – and this research – in Japan, inequality in urban-rural terms worsened until the 1960s. And the Japanese researchers say, it only improved because of the decline in the agricultural labor force, reaching a point where wages there began to rise and opportunities increased so much. And then it reversed as farmers were able to sell their land or rent their land in suburban areas to an increasingly industrialized society.

China is down here. In 2007 – oops, I didn't hit it right – in 2007, its labor-force share in the total labor force has not yet reached where Japan was in 1953. So China is still, in this dimension, at a lower stage of development than Japan was in the 1950s. And we have not seen a turn-up except during a period in the 1990s that my recent report on China's growth fluctuations attributes to some remarkable policy developments there and actually some independence on the rural economy that didn't last very long. And you see, it came down again.

China has not started to turn up again, but it could conceivably, when it gets over into here, to 30 percent of its labor force in agriculture or 25, you could then begin to see the

Transcript Not Checked Against Delivery

turn-up. And I illustrate what that might look like by three pictures of the distributions of the Chinese economy. These are all in your technical note. This is 1985. And you can see it's heavily rural. This is the rural distribution and a smaller urban one so that you get a national distribution here.

Today, or a few years ago, more people had moved to the urban areas so that there is a sort of a flatter distribution, which has a higher Gini. It's gone from about .31 to about .46. Now, what I did was I went forward and said, okay, let's move more people into the cities. And this is what I get in 2025. I get a hump that's bigger in the cities and the Gini kind of stabilizes. So we probably will not see it change so quickly, but the argument is that China is in such rapid shifting from a rural population to an urban population that the analysis of what those distributions have to look like means that the inequality has to go up for a while. And then, when it becomes more concentrated in urban areas, we might expect inequality to come down. So I don't see inequality itself as a sign that China is heading for a major roadblock in terms of its long-term growth sustainability.

There are questions about social unrest. And I encourage you to go to my website – carnegieendowment.org/keidel – there is a policy brief I did there not too long ago on social unrest and its economic origins. And the point is here that some dissatisfaction is essential if China is going to reform its economy the way it is. And the task of the government is to discern which forms of unrest are legitimate grievances against corruption and against malfeasance in the economy and the economic policy-making and which are natural results of changing and economy's structure this rapidly so that those that have certain expectations find that they are disappointed and that those expectations then may not be realistic and need adjustment. But that is, in some sense, a potentially messy problem.

There are questions about state-owned inefficiency that often come up, but I think if you look at the pace and the progress in Chinese enterprise reform and corporate-governance reform, Chinese corporations today are money-making machines. And they hire their executives with that purpose in mind. Yes, the Communist Party has its long arm that reaches right into the top management of most major companies, but you still see them set up to make money. And this is creating complications for the government if it wants to, say, influence oil prices and keep them down. The state-owned oil refineries begin holding back supply because they want to make money.

So I would encourage us not to think of China as still being run by state-owned enterprises, but look into just how much of those former state-owned enterprises have now been sold off, particularly all of the small- and medium-term ones and how the large – the governance of the larger ones is heavily oriented towards profit-making ventures.

We're already mentioned financial insolvency. I don't think the financial sector is insolvent. I think it's quite robust. It has large contingent assets, if you want to get technical about it, because they're all state owned. And the government has shown that it's willing to back them up. And it uses the financial system as an instrument to help it make sure that infrastructure growth is at a rapid pace.

Recently, in a Hong Kong study I did two months ago, I talked with Hong Kong infrastructure people for a week in a very intense series of interviews. And they have

Transcript Not Checked Against Delivery

wonderful systems for financing infrastructure, but they're finding that their systems, which rely on real-estate development, in some cases, can't keep up with the pace the Chinese on the mainland demand and, particularly, for high-speed rail. So they've had to go to other financing mechanisms that are much more direct because the Chinese pace, the vision the Chinese have of what they need to have and when they need it requires a different kind of financing. And so I think we're seeing that – okay, wrap up – that financial sector not being a block, but rather, in fact, an asset.

The brief also goes into analysis of the Communist Party's role. It says it is no longer a one-man, autocratic system, the government, and that we can expect some slow political reform, that we don't need to have an immediate shift to elected officials at the top of the government in order to continue this economic growth. In fact, the Chinese themselves are saying the same. So political reform can be gradual.

The paper has a number of recommendations. The first is to acknowledge that this is likely to come to pass. China is likely to grow this fast. It's a legitimate economic phenomenon. We should not look for scapegoat excuses that it's cheating or some other kind of analysis, but examine it as an economy that is doing a lot of things correctly. This leads to broad-based engagement on the part of the United States and the paper outlines the shape that that might take. It says that we could learn – “We engaged an autocratic regime over 35 years ago when Nixon went to China, a regime that we had closed up since the Korean War. What lessons have we learned about the fruits that that policy has brought to us, of engaging an autocratic regime?” And the paper argues that we might consider other countries where we have broad-based sanction arrangements with an eye to several decades down the road and the benefits that broad-based engagement with them might bring.

We should also study very hard what it is that's making China's economic success happen and, last, but not least, completely rethink our own global strategic strategies in light of what it seems China is going to become. Thank you very much and my apology for taking extra time.

MR. SWAINE: No problem, Bert. (Applause.) Thank you very much, Bert. As you can see, this paper and Bert's analysis covers an enormous array of different issues of tremendous concern both to China and to the United States – the origins of China's growth, the sustainability of China's growth, and the impact of that growth not just on China, but on the world and on the United States – looked at from the point of view of both structural analysis of different economic factors and historical comparison and looked at in terms of GDP and in terms of military capability, to some degree.

So it's a big undertaking and, hence, three analysts to comment on the presentation. And we'll start first with Stephen Voth. Stephen?

STEPHEN VOTH: Thanks. It's a pleasure to be here. I always get a lot from Bert's policy briefs and other analyses. They are always thought provoking. Let me first start with the standard caveat, that these are my personal views and not the views of my agency or colleagues. That said, let me say that there is much to commend in Bert's paper, not the least of which is that it's a synthesis of all of the work that he has done over the past few years on a broad range of topics. And while that careful and original research that he's

Transcript Not Checked Against Delivery

done on these various topics is not contained in the same detail in this paper, it's obvious that it's informed this paper.

Second, there's the astonishing sweep of the paper. It's rare in Washington to have a paper that projects out trends 100 years. (Laughter.) Also, the amazing range of topics covered – it hits basically every hot topic in China analysis from the environment to social protest to one-party rule to sustainability, military modernization. Needless to say, I'll ill-equipped to comment knowledgeably on all of those topics so I'll confine my remarks to the economic issues involved and, in particular, I will focus on the first and third general conclusions, the first one being, "China's domestically driven economic expansion is not limited by export markets and can sustain high single-digit growth rates for decades," the third one being, "China's economic size will match America's by 2035 and double it by mid-century with unclear, but potentially wrenching strategic implications that demand U.S. economic and military reassessment." I'll focus on the first part of that.

I find that I am in general agreement with these statements, but only up to a point. And I have some questions and caveats that might suggest areas to at least address or acknowledge. On the first one, that China's growth is unfettered by world market limitations, I think Bert's argument that if you look at macroeconomic fluctuations in China, they have generally not been driven by changes in trade. I find that a compelling argument.

But I think there is a question to be addressed as to whether we've now reached a turning point where China is somewhat more dependent on trade. And this will have a greater impact on its economy than it has in the past. Let's start with the sort of standard observation that the contribution of net exports to GDP isn't necessarily the best indicator of the dependence of an economy on trade. Hong Kong, for example, has had years in which it has had a relatively low trade surplus, current-account surplus, but no one would say that Hong Kong is a domestically driven economy.

Instead, one might look at the ratio of trade to GDP, exports and imports divided by GDP. Now, what's happened with China, if you look at that ratio, well, since the last major downturn in the economy in China, the last slowdown in growth in '97, '98, China's ratio of merchandise trade to GDP has roughly doubled to almost 70 percent of GDP, which is competing with Germany for the largest ratio for any major economy.

That suggests the possibility that we've had kind of a fundamental change in China's reliance on trade. Also, if you look at net exports to GDP, China is – that also suggests that China is much more dependent on trade than it has been. Net exports since 2005 have contributed, according to Chinese statistics, over 20 percent of GDP growth. During the same period, the trade surplus has expanded from about 3 percent of GDP to 10 percent of GDP. So that suggests that one might want to reexamine the conclusion that China is not dependent on trade.

This expansion of the trade surplus has occurred during a period when China has had its fastest economic growth since the early 1990s. So that also raises a question about the historical pattern, that China has had an expansion in the trade surplus during down periods and an expansion in trade deficits during periods of fast growth.

Transcript Not Checked Against Delivery

Bert addresses this question somewhat indirectly or you deal with it to some extent by discussing the recent surge in the trade surplus and you offer two explanations. One is that the macroeconomic control program that was initiated in the second half of 2004 slowed imports of investment goods because it tightened control and investment.

And the second is that there is a lag effective WTO accession. I find that both of these explanations I think are not quite compelling to me in explaining the surge in the trade surplus. The first, that it was basically a response to tighter macroeconomic controls that slowed imports, I think that works for 2005 and, in fact, many private-sector analysts in 2005 predicted that there would be a rebound in domestic investment and this would lead to a rebound in important growth and that the trade surge and the trade surplus that we saw in 2005 would then diminish.

In fact, that didn't happen. In 2006 and 2007, the trade surplus continued to expand. In particular, imports of machinery and electrical machinery, which are largely investment goods, their growth rate continued to tail off from about 40 percent in 2003 to 33 percent and down to 15 percent in 2007.

So the story – the alternative explanation that one could look at is that there's an import-substitution story going on here with Chinese companies increasingly drawing on domestically produced machinery, gradually moving up the technological ladder, but not having to import those goods from overseas. So I would suggest sort of addressing that or at least acknowledging that there is a possible alternative explanation to the expansion of the trade surplus.

Second, the argument that China's WTO accession initially led to a surge in exports but the positive effect on imports operates with a lag and is only starting, I think if you look at the terms of China's WTO accession, most of its WTO – all of its WTO commitments were scheduled to be completed by December 2007, most of them by December 2006. So I think one would expect the stimulus to imports to occur – to have already occurred now and not to be occurring in the future.

Moreover, I think if WTO accession were the main explanation for the recent surge in U.S. exports to China, which Bert alludes to, I think you'd see that across the board. And in fact, if you look at – if you compare import growth in China's – compare growth in China's imports from the United States to China's imports from the rest of the world, you find China's imports from the United States have grown roughly at twice the rate over the last two years than imports from the rest of the world, and in particular faster than imports from the EU. So that suggests at least the possibility that the exchange rate graphic that you showed has some bearing on those comparative rates of growth in imports.

Moving on to the other main conclusion that I said I would address: China's economic size will match – or actually the second part of the first conclusion that China will sustain high single-digit growth rates for decades. I am somewhat less confident than Bert that China will sustain growth rates of nine, 10 percent. I would put that somewhat lower. I still agree with the notion that China is likely to sustain fairly rapid growth rates. But I would say there are more downside risks than the paper discusses, and that it will be more difficult to sustain those high growth rates than the paper suggests.

Transcript Not Checked Against Delivery

Now, there are a couple of reasons for this. The first has to do with the historical precedence that the paper argues are examples for China's future growth. The paper says Japan, South Korea, and Taiwan all sustained growth of 8 to 10 percent in the period when they went from China's current level, about 2,000 GDP per capita to 10,000.

I think there is a question here as to whether the market exchange-rate GDP is the appropriate measure or whether one should look at PPP GDP as being more reflective of the level of development and therefore more of an indicator of future growth potential. If you look at PPP GDP per capita, Japan reached a PPP GDP per capita level of about 5,000 in about 1960. And so, it had a decade of roughly double-digit growth from then on. But moving from 1970 to 1980, the next decade, its growth was about 4 percent annual average. And so, that raises questions about using that historical precedent to project the rates of growth that you have in your table.

South Korea and Taiwan, similarly, had about 15 years of eight or 9 percent growth after reaching a PPP GDP per-capita level of 5,000. But then they dropped in the subsequent decade to 5 percent, which was in the ballpark but somewhat lower than the project rates of growth for China that you have in your table. So I think that raises questions about the sustainability of these high growth rates between the out years.

Second reason why I'm not as confident about the high rates of growth that are reflected in the table is the demographic transition that China faces. During the next 10 years, China will essentially lose its demographic dividend, the boost to economic growth provided by a relatively young population and by relatively few numbers of retirees. Net annual additions to the working-age population will decline from almost 10 million at present to zero by about 2017 in the next decade. And they'll be negative – actually the working-age population will decline – for about seven years after that until 2024.

At the same time, net annual additions to the number of retiree-age population aged 64 and above will rise from about 2 million at present to about 8 million per year. And it will remain at that level for seven or eight years. So that's a very significant demographic transition. And it's the sharpest that any economy, I think, has ever gone through. So it raises questions about the sustainability of the high growth rates that China has had and the impact of that on growth.

The third reason I'm not quite as optimistic as Bert in projecting future growth rates is more conceptual. And it has to do with the perspective on the sources of growth. The paper argues that there is historical precedent, and basically that China has to avoid policy mistakes and hiccups that could cause a downturn in growth. But if it does that, it can largely apply a historically-proven formula to continue rapid growth. And the implication is that China's past growth has been largely based on the state mobilization of capital, on the shift of labor from agriculture to traditional manufacturing and services, and sort of an inexorable progression up the technological ladder.

That suggests that China, if it avoids policy mistakes, will continue to grow rapidly. There is an alternative perspective to growth, however, which is espoused not just by Western economists but also by some Chinese scholars, which says that China's past growth

Transcript Not Checked Against Delivery

in the last couple of decades is largely the result of surges in productivity due to waves in reform. And if that's the case, then the question of addressing – the question of whether China can sustain growth becomes not whether various hiccups or obstacles will stop growth but rather what does China need to do to sustain those productivity gains in the future to produce the growth it has in the past.

Total factor productivity actually has declined in China over the last five years or 10 years compared to the 1980s and the early 1990s according to most academic studies. So what this implies is that China not only needs to avoid policy mistakes; but it may need to accelerate reforms and continue to push forward with reforms to sustain the productivity increases that have generated growth in the past. I think you touch on that in your section on whether the state stifles productivity. But I think that could be potentially expanded into a greater discussion of what China needs to do to sustain productivity growth.

Finally, I'm less confident that China will not only pass the United States in overall exchange-rate GDP. I think that's quite a reasonable projection. I think most projections, both private sector and others, going out to 2035, project that China will pass the United States in exchange-rate GDP roughly in 2035 or 2040. But as you go beyond that, I'm not as confident that China will continue to grow at substantially faster rates than the United States, and therefore double the size of the United States by mid-century. I think in the out years, the relative size of China compared to the United States depends a lot on the assumptions you make, in particular the rate of convergence of PPP GDP to market exchange-rate GDP. And small differences make a big – small differences in the assumptions make a – result in large changes in the relative sizes.

For example, if you just lop off a half a percentage point on Bert's growth projections and assume that China stops appreciating – in other words, that the PPP GDP and market exchange-rate GDP have converged by 2040 – then you remain at China is about a fourth larger than the United States. That's a quibble. And I think regardless, China's influence in global commerce and international institutions in geo-strategic issues is going to increase as a result of its growth. But it's sort of a different picture of the world in 2050 if China is 25 percent larger than the U.S. rather than double the size.

GREGORY FOSTER: I'm pleased to be a part of this enterprise this morning. I need to point out at the outset that I'm here to offer a slightly different take on the analysis that Bert has done. I am neither a card-carrying economist nor am I a card-carrying Sinologist. So to the extent that my remarks are neither perceptive nor even cogent, you will understand why and grant me appropriate dispensation, I trust. I am what you might call a strategic dilettante. And accordingly, I think it's appropriate that I'm kind of the intellectual spam sandwiched between these two slices of substantive whole-wheat bread – (laughter) – to my left.

I focus on Bert's bottom-line proposition that China will overtake the United States as the leading economy in the world in 30 years. I find his argument – perhaps because I am coming from where I am coming from – to be insightful and thought-provoking and reasonable and defensible and persuasive. Whether or not they are appealing or not raises the question of whether we, the United States, in particular, are likely to view an economically predominant China with fear or acceptance, as a threat or as an opportunity.

Transcript Not Checked Against Delivery

Now, China as a threat to be feared, certainly I think it goes without saying, will sell better politically here in Washington than it will be to argue that such dramatic economic growth on China's part represents an opportunity we should take advantage of or seek to capitalize on. But that is where I am coming from. An empowered China, I think, should be viewed, strategically speaking, as a welcome opportunity, as a prospective equal partner, not as an adversary we feel compelled to best. Now, the question of course will be whether either we or China could accept a relationship of equality.

Now, if the state of affairs that Bert Keidel outlines occurs, it clearly, first of all, will bring into question the preferred model of economic development, whether that should be an autocratic command form of capitalism or a democratic laissez-faire form of capitalism. It will clearly, I think, demonstrate the primacy of economic power today. It will accordingly place into question the future efficacy of military power. And it will accordingly raise the question of whether military power, as traditionally conceived and employed, is even necessary for the attainment of great-power status.

Now, the state of affairs will unquestionably and unquestioningly solidify China's standing as a great power, at least along two of the three major dimensions of the calculus of power. That will be in terms of China's wherewithal where we're talking about the stuff that a country possesses – wealth, territory, population, resources, effective governance, military capability, industrial capacity, national unity, and the like. And it concerns reach or projectable influence, economic, political, and diplomatic, socio-cultural, military, and environmental.

Thus, there is considerable importance, I think, in some of the supporting analyses that are in the policy brief that Bert didn't have a chance to go into in great detail, that is, the question of income or wealth distribution, the accompanying concerns about social unrest, military modernization, and environmental quality, because all of those speak to these two important dimensions of the great-power calculus.

What remains the most important open question, I think, is the third major dimension of great-power standing, and that is behavior, specifically normative behavior in the form of the assumption of responsibility, the willingness to be accountable, the ability to exercise leadership. It remains to be seen, I think, how China will perform in that regard. And thus, this will be a living experiment that we will have to live with and deal with.

We don't or can't know of course whether economic predominance will motivate China to be more or less assertive, expansionist, acquisitive, or confrontational, or how such predominance might affect deeply ingrained attitudes towards order and stability, hierarchy, and the sanctity of state sovereignty. We do know that China continues to demonstrate growing proficiency at strategic indirection and the exercise of soft power, if I may go out on a limb and use that somewhat vomiticious term. But as a characterization of instruments of power other than military, it has utility, recognizing that wealth here or economic viability serves as the underlying catalyst or multiplier as well as the motivating force. And on top of this, China obviously has a truly strategic time horizon that it adheres to and that is quite different than the time horizon that our political system tends to dictate.

Transcript Not Checked Against Delivery

Now, how should we respond? How might we respond? First, we have to ask ourselves whether we want to perpetuate a traditional worldview that is essentially realist, state-centric, balance-of-power-based, zero-sum, and hard-power-oriented, or whether we are willing to go out on a limb and adopt a new posture that is attuned to the times we now live in, a more idealist approach, recognizing the semantic connotations of that term, that is non-state-centric, that is power-sharing-based, that is positive-sum, and that is again soft-power-oriented.

It seems to me there are four major postures vis-à-vis China we might assume or adopt. One would be a posture of denial, an essentially obstructionist, negative approach that I think even for a self-proclaimed lone superpower would be impossible. There will be no stopping this economic engine. And so, for us to think that even if we were what we say we are, the world's only superpower, it would be virtually impossible to deny that.

A second possible posture is quite obviously containment, hopefully not as we practiced it vis-à-vis the Soviet Union but as Kennan originally envisioned it. But if we were to adopt that approach, I think it would be counterproductive. It would be alienating or alienative and it would be unaffordable, extraordinarily expensive to try to do that.

A third posture would be one of accommodation. Let 100 flowers bloom. Let China do its thing. Let it be. That is, I think, by half too passive, too uncertain, too reactionary. And so, that leave me to buy into the prevailing, most popular posture generally advocated now toward China. And that is one of engagement. A proactive approach that would enable us to shape or influence the future on multiple fronts. That would mean talking and doing together, rather than not talking and not doing.

I think the United States in particular needs to emphasize its comparative leverage or advantage in two forms of power: ideational power and inspirational power. That is, first of all, to capitalize on our well-developed capabilities though infrequently demonstrated to generate new ideas, heterodox ideas, unconventional ideas. This particularly would come into play in trying to engage and shape the future of our military, for example, and China's military. China, I would submit, is likely to continue military modernization along lines that are essentially duplicative or reflective of our traditional approach to military structure and activities. It would be incumbent upon us to redefine what militaries properly do, that is, to take the lead in making our military one that is essentially designed for peacekeeping, nation-building, humanitarian assistance, and disaster response rather than war fighting. It would, again, be a living experiment to see how, if at all, that might affect China's approach to military modernization.

And with regard to inspirational power, that means simply practicing what we preach, being and doing what and who we say we are, setting the example. So when we preach democracy, that means we practice democracy. When we preach arms control, that means we practice arms control. When we preach transparency, that means we practice transparency.

And so, you see as a bottom line, I manage to conveniently escape any economic critique because were I to do so, I would only betray my extreme ignorance. And I also did not delve into the substance of the Chinese character and the Chinese identity. And for that,

Transcript Not Checked Against Delivery

I think there is probably no one better to do that than Doctor Harding. So I will take my piece now.

(Applause.)

MR. SWAINE: Thank you, Greg. Harry?

HARRY HARDING: Well, thank you very much. Thank you for those very kind words. As the final commentator, I have a problem, a dilemma. We have two very different, equally important subjects before us. One is the future of China, and especially of its economy. The second are the challenges to the United States in a rapidly changing world.

I'll talk mainly about the first. I'll conclude with a few thoughts about the second, mainly to say that I think the very fundamentally important points that Greg Foster just made actually don't have that much to do with China. They have to do with a changing world. So these are two very different topics. Perhaps we could encourage our colleagues at Carnegie to have another meeting on the points that Greg has made, because I think they are of fundamental importance to the United States.

But let me talk mainly about the paper that Bert has presented to us on the prospects for Chinese growth. This is – as I've known Bert a very long time now – this is quintessential Bert Keidel. It is an empirically rich but at the same time very provocative piece of work. And it is provocative not just because it talks knowledgeably about China but because it puts China in comparative perspective, which is again something that Bert always does that relatively few other people do, or all too few people do in Washington.

It is useful in particular because he separates out the cyclical or the temporary, the short term, from the structural and the long term. And I'll come back to that, because I think he does it most of the time but not all of the time. And I will have a few slight critical comments or suggestions for improvement. Some of them will deal with the question of missing some of the longer-term structural factors that are important.

Bert talks first about the causes of China's remarkable economic performance. He talks, I think, quite correctly, about a positive state role, what many people call an act of government, the one that is market-friendly. I would agree with Steve that he doesn't talk enough about the fact that that government had the advantage of a vast supply of inefficiently and underutilized resources, factors of production, when it began reform – underutilized, vast armies of underemployed labor; vast quantities, stock and flow, of savings that were very poorly utilized; and underutilized land. So it had a huge potential base on which to build.

That leaves this mystery of the importance of the international community. And again, I agree with Steve, that I will take Bert's point that China's economic growth has not been export-driven in the sense of being dependant upon net exports. But somehow, that doesn't make the broader point that I think Bert is trying to make that China is and can be decoupled from the international economy more generally. Bert himself talked about the importance of what he termed the aggressive opening of China to the outside world, beginning in the late 1970s and the early 1980s.

Transcript Not Checked Against Delivery

If the international economy is so unimportant to China, why was it important that it engage in this aggressive opening. Clearly, there are other factors here, involving in particular the flow of incoming capital and the technology that goes along with it, management skills, branding, and the like. And so I'm left un-persuaded by the general hypothesis that we can assess the future of the Chinese economy as if it's in a black box, relatively autarchic, dependant almost entirely on domestic growth. I'm not persuaded that China is so independent and decoupled from the rest of the world.

It also raises the question, since Bert has a very high opinion as I do for Chinese policymakers, why have they been so adamant about the risks of appreciating the renminbi, because of the concern about employment consequences and therefore political stability, if in fact they are not export-oriented. If they're not export-oriented, then why would they care about the appreciation of the renminbi? Clearly, they are concerned – maybe incorrectly but they are concerned – about the way in which they are coupled to the international economy on the trade as well as on the investment front.

Second set of issues that Bert raises have to do with the sustainability of this remarkable economic growth. And here, I generally agree with what he says. It's what he doesn't say that I'm concerned about. I generally agree that both the economic and the political risks that China faces are essentially manageable. They are short term. Inflation may pop up. It probably can be controlled. A financial slowdown, a bursting of an asset bubble might occur. A bank may fail. This is also containable. The global economy may slow down. I think that is important. And that, I think, the Chinese can work around.

The concern would be with the danger of mismanagement. In other words, these are all short-term risks that are manageable, but that is not to say they will be managed well. Things can go wrong. Mistakes can be made. Or risks can multiply. And so, I am generally relatively optimistic about the kinds of issues that Bert raises – inflation, recession, political crisis, corruption, inequality – but I would be much more contingent in my forecasting, emphasizing the extent to which the Chinese government either manages or mismanages, or whether things simply – whether they are lucky or unlucky in the way things work out. And I'll come back to that question of contingency in a moment.

It's the longer-term trends and drivers that are not included that I worry about and that I think basically add some uncertainties to Bert's otherwise persuasive analysis. Steve Voth already mentioned, I think, the most important one – that is demographics – which in a long-term forecast, I really was very surprised that Bert never even mentions the demographic transition in China. That must have some impact on the Chinese economy. What is it?

The other issue that he does not raise – in some ways even more surprising because he talks about pollution – he never mentions climate change. And he never mentions the way in which the urgency of that issue and the international consensus that it must be dealt with is going to have some kind of impact on the Chinese economy. I don't know what it's going to be. That's Bert's job not mine. My job is to raise the question. It's his job to give the answer. It could be stimulative. It could have enormous and positive implications for

Transcript Not Checked Against Delivery

demand, for efficiency, for productivity. Or it could be a negative. I don't know. But I think that Bert needs to tell us.

There is also the question that he does raise about the adjusting, the need for various aspects of this political-economic structure to change. In particular, the composition of growth. I think that Steve also pointed to that. Can China sustain a growth pattern, which – setting aside whether it's external or domestic – is mainly investment-driven as opposed to consumption-driven. Is that sustainable? And is the current projected political – and political-economic structure of the economy and the political system – is that sustainable? And are we optimistic and confident about the ability of the economy and the political system to adjust in the ways that are going to be necessary.

Let me finally conclude this part of my discussion. I do want to say a little bit about what Greg has just said with some, in a sense, methodological and analytical issues here. And there are three of these that I have in mind.

First of all, I am very puzzled by several aspects of the table on page six, which is the U.S. and China GDP growth potential in the 21st century. I am puzzled about two things. Number one, I want to know how when China and the United States reach about the level of total GDP and grow at the same rate, how can China then surpass the United States? I know there are the miracles of compounding, but I really want to learn how to do this. If I have \$80 and you have 100 (dollars), and we both grow at 3 percent a year, how do I surpass you? That's a mathematical mystery to me. There must be something going on with regard either to exchange rates or what Bert includes in a footnote as domestic relative price changes. For China and the United States to grow at 3 percent average growth, real growth per decade – for China to start that period below the United States and end the period above it, I really want to know how to do that.

MR. KEIDEL: I'll tell you in a minute.

(Laughter.)

MR. HARDING: Okay, excellent. I assume it's some of the things that are buried in there. But I want those assumptions to be made far more explicit.

The other thing – and it's related – how is China going to, when it reaches about the same level of GDP per capita at the United States – I'm sorry, at the level of GDP per capita that the United States is now, how is it going to be growing so much faster than we are now? In other words, why is its average growth rate going to be higher at every level of per-capita GDP than the United States? That either implies that they are and are going to continue to do something very, very right or we are doing something very, very wrong. And we better fix it. So those are the two questions that I have about that table

Number two, as we look at the future, what is the key measure on the economic side of national power? Is the most important number aggregate GDP, because if that's what it is, China is going to surpass us far sooner. Is it per-capita GDP – in other words, the level of productivity of the economy – is that what matters?

Transcript Not Checked Against Delivery

Or is it the effectiveness of what I call an economic node being a hub? We talk about, for example, many people now argue that London is a more important financial center than New York. That's not because England has a higher GDP. It's not because England has a higher GDP per capita. But it's something about the attractiveness and the efficiency of that node. We can talk about what those things are. They don't need to bother us here. But that has nothing to do with either the per-capita or the aggregate GDP numbers.

Or, for example, is the activeness, the power of a political system in the international arena as a pole, is that function of aggregate or per-capita GDP, or will ambition, interest – many people argue that some nations punch below their weight. Some nations punch above their weight in international affairs because they simply define their role in a different way. So I'm wondering how much it really matters, even if we could do these forecasts and we could know with some confidence where China and the United States will be in relative terms, what that really tells us. I think we need to break it down a lot more than Bert has been able to do in this third paper – in this short paper.

My third and final sort of methodological and analytical concern – and this, you'll see, I come from, as Mike mentioned in his introduction, a risk-assessment background now – is that this is all basically a single forecast for the next 100 years. It is non-contingent. It is non-probabilistic. And I find that, frankly, to be very troubling. It may be plausible. It may be a good base case. But it's not the only case.

And I'd like to know what the relative probabilities are of two other scenarios. One is that China continues to grow. But it grows perhaps because of the more negative, longer-term trends that Steve and I identified. It grows slower or it slows down more rapidly than Bert has projected – steady, relatively steady, but slower growth.

The other contingency or scenario would be one where China has much more dramatic cyclical swings in its economy. And therefore, the aggregate growth over time, because of those downturn – cyclical downturns – is also relatively less than Bert anticipates.

I'm leaving out a fourth scenario, which is some sort of catastrophic failure. Maybe we would have to put that into an analysis. But I agree with Bert that those kinds of scenarios are – which Jim Mann used to call, oddly, a soothing scenario – maybe not for China certainly; maybe for us. These are relatively unlikely but I think these other slower secular rates of growth or dramatic cyclical shifts, as the Chinese try to cope with various contradictions in their economy. I think that would be useful for these long – in fact, essential for these long-term forecasts.

Finally, a thought about what Greg Foster had to say. He makes an absolutely fundamental case about what Americans have to think about and do in their foreign policy. We don't need China to make this case, ladies and gentlemen. These are things we need to do anyway. It doesn't matter whether China grows slowly or rapidly. We are in a world where there are many Chinas; there are going to be many Chinas. Maybe not as big, but we're going to have India. We're going to have other large emerging markets. It is simply naïve for us to assume that we are going to have the same relative standing in the world in 20 years as we've had for the last several decades, especially since the end of the Cold War.

Transcript Not Checked Against Delivery

We are going to have to do all of the things that Greg has mentioned, in my judgment, in order to adjust to this change. I'm always concerned that somehow, unless we bring China into the picture, nobody pays any attention. So it has to be about China or because of China rather than because of the much broader trends that are shaping our world, of which China is an important piece but not the only one. And that's why I said there is less of a connection in some ways between Greg's recommendations and Bert's analysis. Greg's recommendations will be important, will be essential, whether or not China grows with the degree of optimism that Bert forecasts. Thanks.

(Applause.)

MR. SWAINE: Thank you very much, Harry. Well, as you can see, as Harry indicated, Bert's analysis is always interesting and provocative, and provoked a lot of commentary and a lot of questions. And I know you must have questions that you would like to also ask Bert or other members of the panel.

But before I get to that – and I do want to get to that – I would like to give Bert an opportunity briefly to address some of the issues that have been raised by the other members of the panel. And I just want to tick off very quickly the ones that I identified as being particularly, I think, important. The first is the issue of the sustainability question of the level of growth that Bert is projecting over the long term, particularly in the outer years, dealing with the two factors or two issues of factor productivity and demographics that Steve Voth raised.

The second is the question of the level of gap between the United States and China in these outlying years and how much difference there could really be as a result of very small changes in growth rates. Could make huge differences in how far China gets ahead of the United States in the second half of the century. That's a very interesting question.

The third is this larger question, which is probably more difficult for Bert to address, of the issues that Greg raised of the evolution of the global system and the relationship between normative-oriented power issues or influence issues, and more classic or traditional realist balance-of-power concepts. And how those relate to these kinds of aggregate estimates of power disparities between the United States and China. I mean, what is influence over the long term and how relevant is this measure of economic disparity or differences in measuring influence when you look at countries like the United States and China in the kind of global environment that we see emerging with multiple power centers, et cetera.

A third question or fourth one is the whole question of the foreign policy, the foreign trade versus domestic and how important the foreign trade really – if foreign trade is not that important to China's domestic development, then why has China been so focused on some very critical issues – renminbi currency valuation and the emphasis on investment from the outside, et cetera? I mean, what is the relationship there?

Can China sustain an investment-centered economy as opposed to a consumption-centered economy over these long ranges of time that we're talking about? And then,

Transcript Not Checked Against Delivery

Harry's question about how indeed if you have a leveling out of rates of growth and GDP levels, how China can in fact surpass the United States in such a major way within a relatively short period of time after the center part of the century. So Bert, all of that in probably five minutes or so. Would that be good? (Laughter.) Maybe 10 minutes if you're –

MR. KEIDEL: All right. Well, I want to thank all of you – just extraordinarily thoughtful and helpful comments. And most of my reply will have to come in subsequent writings. But I do want to address them very quickly, not necessarily in the order that Michael has raised.

But the rates of growth question, Harry, you're absolutely right. It involves shifts in internal pricing, because it's very interesting. When countries grow very fast and their domestic price shifts, services become higher quality and more expensive relative to traded goods. Exchange rates is really driven by traded goods. So that we see in countries that grow this fast, it's not just their growth rates; it's the relationship. Often, manufacturer's prices drop while service prices increase. And since the manufactured prices are dropping, like in computers today, that's really what drives exchange rates to a certain group. But you get this extra punch from the rising price of things that aren't traded and that are generally non-influential for the exchange rate.

And so, I've modeled that. This is based on the model in which both the United States and China have separate categories of good with separate growth rates. And what I report here is the mean average. And the prices change for them both. And that's what drives their PPP as well because you get – the mileage on a PPP is that services are under-priced in poor countries at the exchange rate.

So you're absolutely right. You can continue – even though the growth rate measured in a base-year price – this is getting index number technical – but all these growth rates, you start with a base-year price and say, okay, how fast do you grow? But when you convert that into future current prices, which is what my modeling does, you get a different answer. And then, as I explained in the footnote – obviously in the footnote – to get something that is comparable, you have to then deflate it back to a base year. And so, I do that with a U.S. price deflator. But you would get these same ratios going out in current prices, you just couldn't look at the series if you looked at them all in current prices. But it's a very important point and quite sharp of you to pick up on that.

The other point is also good that why, when they reach our per-capita GDP now, they grow faster than we're growing now? Well, the answer is because by that point, the gap between their technological capability and where we are will be greater, and there will still be a catch-up process involved in terms of learning about where you can go in an economy, where it's technology, where you are in the product lifecycle of commodities that you can produce and export. And you will be pulled a little faster in terms of absorbing that technology and absorbing those goods. And you will catch up faster. That's what they're doing now in spades.

The TFP and the demographic – and Steve's comments are really quite helpful – total factor productivity and the growth of productivity come from one side of what influences growth. It comes from what is basically, what if you add capital and you add

Transcript Not Checked Against Delivery

labor and you look at the growth? You've got something leftover. It must be this mystery called total factor productivity change. The other side of that whole calculation process – that's the supply look-see – is the demand.

And going back to Harvey Leibenstein's work in the 1960s, we know that if you look at those basic supply-driven models, whether it's Harrod-Domar growth or the sources of growth models that are regression-based. But the TFP fluctuates heavily with what's happening to demand. How well are you managing macro-demand in your economy? And if your demand is expanding, Leibenstein showed, lo and behold, you've got this unexplained growth, but it comes from managing demand and keeping it growing.

And so this is why you can expect to require both on the productivity side. You have to have infrastructure and you have to have public investments that include education, healthcare systems, and those kinds of things that give the market its mobility, give it potential for productivity. But you also have to manage demand, and that's where we know from Keynes, the government plays a very important role and you cannot pretend that you can withdraw that role.

And I would also say that income distribution plays a role if you want to have an effective middle-class base for your demand. And so, in those dimensions, the Chinese are more aware, or at least they're saying that this is a critical factor. We in the United States seem to have backed away from thinking that, for example, income distribution or that the government's direct hand in the economy can do anything without being even more irresponsible, in terms of its budget deficits.

So I would think, in that regard, the TFP, I'm – let me also address Harry's notion about risk. This policy brief says this is likely. That means more than 50 percent. This could easily be coming. There are other possibilities, absolutely, but – and I say in here, okay, you could have a shift in Chinese government towards a paranoid kind of presence, and that they close up. But that's not the trend right now and doesn't seem to be for the next 15 years, nor does it seem to be the ideology of this particular set of leadership.

Foreign trade versus domestic trade, and I think here I want to say to Harry, I don't say that China is a target, that it can separate itself from the world. I say it's not export-led. And I think in this – my most recent report, China's economic fluctuations – which is, again, on that website – you will see that I have quite a few paragraphs on the distinction between export-led growth and what is healthy economic growth that has a major component of international trade and technology transfer.

They're different; a healthy economic expansion has to be engaged in the global economy. But it's not jerked around and driven or reliant on foreign demand. And so what China will become is an increasingly integrated part of the global economy, on the import side as well as the export side. And therefore, that is a sustainable picture because its export relationships will be strengthened by the leverage it has because it's buying so much from countries abroad.

So I would distinguish between export-led and engaged. And why are the Chinese as engaged in the renminbi controversy? For some of the similar reasons we are. They have

Transcript Not Checked Against Delivery

domestic constituents that are hurting when the renminbi reevaluates vis-à-vis the U.S. dollar. Now, this is a weakness in their structure; they have too many of their contracts denominated in dollars. Their biggest trading, export trading, partner now is Europe, is the euro currency zone and the U.K. They need to rethink how they write their contracts, also have to have more contracts in yuan; therefore, they need more sophistication in how they manage the movements between those currencies as businesses, which means working in futures markets, the kinds of things that, at a \$2,000-per-capita level, they are just beginning to do and that require a great deal of learning and human capital and regulatory infrastructure that, frankly, they still need a long way to go to have adequately.

MR. : (Off mike.)

MR. KEIDEL: Yeah, on the demographics, these are problems that a lot of countries face but none has faced it as early in their economic development as China. And my emphasis here, when I think about this – and, you know, I've modeled and you do eight specific fertility things, and you look at mortality, you do run into an aging population. But the growth that's driven China so far and will in – and I think in the first half of this century – is capital and technology enabled. So you will be increasing the human capital in the labor force that you have very rapidly, from generational turnover as well.

And I also encourage you to look at this Discovery Channel – it's called "The People's Republic of Capitalism," by Ted Koppel. It starts tonight at 10 and goes for the next few days. They really describe a farm family that uses half their income to send their only daughter to a boarding school, where she is learning how to speak English. And so the growth in human capital in China will enhance what you have, in terms of physical numbers of people, which is one of the things that is really – in these models of sources of growth, when you have joint inputs, you can't separate out which is more responsible. And one of those joint inputs often is the size of your labor force and what you are loading your labor force with, in terms of knowledge and experience.

So I encourage you to think about that, and for me the demographic issue will reduce some pressure, in terms of expansion of the Chinese population's demand. I think their condition – they won't be giving a luxurious lifestyle to their retirees, but they will have some financial issues. People will be retiring later; they will be doing more pay-as-you-go. There will be some deficits involved in financing the pension systems that they will – that are continuing to evolve and try to introduce. But I don't see it as a killer. It's going to come slowly and the adjustments will be there.

But my growth rates, you know – look, from 2005 to 2010 I have 9.5 percent growth. Now, if I were doing short-term growth projections I would have it much higher than that, but this is a long-term projection. I don't want to front-load my prediction of where China will cross the U.S., or whether it will be doubled by having – because the notion that a slight change in the growth rate makes a big difference down the line is most true right at the beginning. But I've chosen some very conservative numbers here and they don't go 8, 9, 10 percent for the first years. They drop off really quite quickly and so I would say, in terms of Harry's question about well, where's the secondary snare, where's the slower growth scenario, this is it. Thank you.

Transcript Not Checked Against Delivery

MR. SWAINE: Great, thanks very much, Bert.

Well, we have not a whole lot of time left. I apologize for that, but I think the discussion here has been very, very stimulating thus far. So we are taking questions from the floor now. Please give your name and your affiliation; please do not make a long statement. Please ask a question and make it relatively short, because I want to try and get in as many questions as possible. Thank you. Do we have microphones? Yeah, okay. Peter.

Q: Pieter Bottelier, at Johns Hopkins SAIS. Very good paper; I feel very comfortable with the overall thrust of it. I congratulate Carnegie for putting this out. I hope this will become a very effective counterweight to the China collapse series that are so popular on certain TV channels.

Allow me one or two comments, and you want me to be short; I have many, but I'll just limit it to the demographics. When you look at China's demographics, indeed, the labor force peaks in about a decade or less than a decade for now, and the total population maybe 15, 20 years later, but that's not really what matters. I think you really look at the urban part of China's population. Urbanization will continue right through the middle of this century and beyond. Eighty-five percent or more of China's economy is already accounted for by the urban economy; that percentage will only grow. So the fact that the labor force peaks and the total population peaks, which the demographics indicate, don't really have the significance that people attach to it. Thank you.

MR. SWAINE: Yes? That's it, one question? Excellent. Okay, no – yes, please.

Q: Hi, my name's Chris Stone. I work for Senator Bingaman.

My question for you is – it just seems to me that, as economies become more mature, you – they tend to ossify. And I think about things like, you know, lobbies that don't exist now will inevitably emerge, so you'll get more protectionism in China just as you may see here. You'll get agriculture – and you see this in countries, you know, Japan or the European Union as well – so agriculture lobbies, you know, maybe a lobby for state industries like we saw in Russia and, to some extent, continue to see in Russia. Why is China going to be immune to that, I guess, is the question. And if it's not immune, how does China maintain this dynamism not just now but, you know, 50 years into the future? So I think that's the main question I would ask of you. Thank you.

MR. KEIDEL: That's a great point. I think China will have lobbies. We're seeing it already; members of China's NPC are standing up and saying we need more help for business, what are you doing for us. And I think that's reflected if it slows growth – and actually, decelerating growth rates that I put into my projections.

I would point out, though, that the difference between the United States and China, for much of this projection period is that China will still be catching up in a per-capita sense. It will still not see itself as the most affluent economy in the world, and there will be a competitive dimension not unlike what really drove the United States in the 1950s and in the 1960s, where we had a can-do mentality from the Second World War and we applied that,

Transcript Not Checked Against Delivery

then, to making sure that we really increased our standard of living as fast as we could, in a way to compete with the Soviet Union at that time, so it's a potential source of difficulty.

You can also say that it will smooth out a lot of the rough edges because the NGO community, of which lobbying firms are a part, will be more effective and require more in terms of hand-holding. But I don't think – my own personal sense is that that will be one of the factors that will allow growth to decelerate, or cause it to decelerate, but it won't stop it. It won't ossify, to use your word, quite as soon as we might think. That was a great question.

MR. SWAINE: Thank you. Here in the front.

Q: Yes, I'm Matthew Shane with the Economic Research Service. And really, I have two – I'm actually also extremely optimistic about China and my projections are probably not all that different than yours. But I am concerned about two things that bother me when I look at – not only with China, but actually with the current scenario and I do a global outlook, long-term outlook. And that is that we have a situation where we have sustained growth around the world that, in some sense, is out-running the resource capacity.

And, you know, I said this a year ago, where the scenario was everybody's growing faster but you're not getting inflation, and how is that possible, right. How do you continue to need more resources than were really capable and not somehow get inflation? We were beginning to see resource inflation but no general inflation, but now we are seeing that. So I guess – and China really is one of the main culprits of this because if you look at, say, China's energy use, they're using energy at about four times what the United States uses. So for each 1 percent GDP they use 2 percent energy, so their energy demand is growing something like 20 percent a year. Now, how is that sustainable, you know, as a long term? Then you got to add India, you got to add Southeast Asia, you know, and they're all like that.

And I guess that's really, you know – I don't think – in other words, yeah, if you look at China by itself as a partial equilibrium situation it's okay, right. You can say oh yeah, China can grow because you don't have a resource constraint, you don't have these other things that are operating globally. But now, we are upgrading where the global constraints are – we're really in a general equilibrium world now.

MR. KEIDEL: That's a great question and I'm delighted someone's asking me, basically, about the energy situation. Harry brought it up in terms of global warming, and the way global warming would affect China is that they would have to really try to rein in their energy use or change its form. My basic answer to this is an economist's answer, that price will make a big difference. And therefore, when we look at China today, my analysis is that China's inflation, so-called, is really an effort to introduce relative price shifts in favor of higher prices for food and higher prices for energy, both of which are desirable and beneficial, without triggering general inflation. And they're doing that with selective price controls; they're doing it by eliminating targeting spending in areas like real estate, and they are doing it with tightening of credit.

And I therefore – and for example, they just raised diesel and gasoline prices by 20 percent, and that maybe only catches up a little bit to the degree to which they have stayed

Transcript Not Checked Against Delivery

behind the world price level. But that is going to be a trend globally, and there's a technical term in economics which is shadow-pricing, that even if you don't raise your nominal price but you have shortages, and people can't get energy. They'll say, well gee, I've got to figure out where I want to use this energy and use it in a place that gives them the highest profit.

And China's system today will – and it actually worked already in the 1990s, when they began cutting off people's electric power for not paying their bills. They quickly – even though the electricity wasn't that expensive, they quickly decided gee, well we can't use this machine, we can't use that machine; they're power hogs. And they began to introduce things that brought them more profit. So you find out what brings you more profit, in terms of energy savings.

So the general equilibrium situation in the world is that prices are going to have to go up where there will be shortages, and people will introduce shadow prices to their own benefit. But it's going to be ugly because there will be groups that consider themselves unfairly treated. But there will be higher prices for energy. And I also think, as a result of the fossil fuel shift, we will see much more electricity and it will have to be, in China's case, more heavily dependent on nuclear. I think we will see a European solution, in many ways, for China's energy situation besides jet fuel, and that will be nuclear power and electricity. But great question, thank you so much.

MR. SWAINE: Thank you. In the back there.

Q: Hi, Kevin Hall, with McClatchy Newspapers.

A question: You touch on the social unrest as what scares the government. I'm wondering what your assumptions are, as you look forward in 30 and 50 years, about the evolution of the kind of government. It seems to be a government whose legitimacy right now comes mostly from economic growth, but if other factors interfere what do you see as an evolution of the government? Are you looking, 30 years from now, at a similar form of government or do you expect it to evolve?

MR. KEIDEL: Yes, and actually this is mentioned in the policy brief; I expect it to evolve, obviously. And I think it's interesting now that you find people writing, saying that well, the Chinese are fragile because they're scared that they're going to be thrown out of power. Well, that's what happens to American political parties, too. And so we're seeing – it's not really fragility, it's a sensitivity to what's important. And it's not just growth; I think the way they're now responding to pollution, the introduction of scientific development as a concept, which is their new driving sort of orders, not just growth. It includes research on a lot of things; it includes social welfare and, as I've mentioned, pollution and other dimensions. The way they've handled emergencies like the earthquake and like the snowfall in the south, these are things that show competence and show a concern for people.

But I think we've also seen a growth in NGO activity; we're seeing a larger use of polling, and I think we will see an evolution both within the Communist Party and in the way the Communist Party governs, that will increasingly insulate or camouflage the role of the party and reduce its exposure as a lightning rod for criticism, as it allows more participation to influence decisions. And I think that process will take quite a long time and

Transcript Not Checked Against Delivery

they're prepared to let it take a long time. I'm interested in studies by some economic historians; they note that really effective parliamentary systems – and the word here is effective as opposed to those that are captured by a small enfranchised group, whether it's men that own property or something – but really effective parliamentary systems evolve only after a certain level of per-capita GDP is reached.

So I'm expecting – you'll notice in a lot of the diagrams in the technical note, China's far behind Japan and South Korea in per-capita GDP terms. If you look at the – and I also pointed out it's far behind Japan in the 1950s in the transformation of its labor force, as Peter today pointed out, from rural to urban areas. So they have a long way to go as they mature, and I expect their political system to mature in ways that will help the party stay in power but reduce its presence as a lightning rod for criticism.

MR. SWAINE: Thank you. Over here? Yes, ma'am.

Q: I'm Helen Raffel, Resources for the Future, and I taught both economics and environmental science in China for five years. I have a doctorate in chemistry, so I would like to point out that I'm terribly impressed by the fact that higher education focuses ever so much more on science and math than in the United States. And the number of doctorate graduates in China is what, four times the number in the United States. And so I'm very hopeful that technological developments will help to overcome the great water shortage, spreading of the desert, and drying up of the Yellow River and that, in fact, the use of energy that produces much global warming will help to recycle ocean water to fresh water in China, and that they will be able to sell patents for energy technology to the rest of the world.

MR. KEIDEL: Well, thank you very much. That is a marvelous commentary assisting the notion that China has flexibility and capabilities that we don't consider, but always assume that it looks just like we do, in certain dimensions. Thank you very much.

MR. SWAINE: Yes, here.

Q: I am Washington – (inaudible). My question is when I was in China teaching English, I couldn't help but notice the gap between the rich and the poor in China. And I was wondering what is going to be the impact of the gap on the growth in the long term?

MR. KEIDEL: Well, thank you. That's an important question. And it's quite obvious, the gap between the rich and the poor, when you see it in the streets because the migrants come into the cities and are often looking for work. And where you really see it is if you just go to the rural areas. This Koppel show, they didn't show that segment, but it goes to the outskirts of Chongqing, and up to the top of a mountain which, until recently, had no road, but a road was put in, in gravel. And there was a 93-year-old woman up there and the producer for the Koppel show said this was a horrible place, at the top that we found up there, just so poor and decrepit and nothing there. This 93-year-old woman said this is the best time in my life; things are so much better now than they've ever been, and the producer said compared to what. She just couldn't imagine what this lady was saying.

And so what we're seeing in this transformation of China is – and the paper says it's hard to over-emphasize the low level of the standard of living in China in the 1980s. We just

Transcript Not Checked Against Delivery

really can't imagine having that little spread over a large number of people. And 200 million of them are still below this dollar-a-day standard, which is so low. But they're mobile; they're coming into the city and they're bumping up against those that have figured out how to be financiers.

Now, I sometimes think that financial officers are sort of the drug lords of our modern-day economy – (laughter) – because they make so much money that they make everybody else think that gee, if you don't make that much money, it's no good. So people don't go into sort of honest lifestyles. (Laughter.) But in China, you have some people that have achieved those high standards of living – and they are also documented in this Discovery Channel show – that are buying, you know, imported, very expensive clothing, driving very expensive cars, because the incentive system is set up such that if you're both clever and, in some places, willing to pay off somebody, which is not just a Chinese phenomenon, you can make a lot of money. And in some cases, if you're really smart and you put together a great corporation, you can get very rich.

But you still have this huge mass of people there, and my answer in the paper is that that will take some time and people will accumulate education, they'll move to the cities as Professor Bottelier said, and that process will continue for quite a long time. They'll combine themselves with capital and education, and in my – I think it's likely, and again probabilities are something to stress here – it's likely that this equality that opens up when you have this rapid development, between those that aren't there yet and those that have already arrived. That will diminish as more and more people sort of reach the other side of the river. Thank you for the question.

MR. SWAINE: Thank you.

Bert, if I could – is this a two-finger on this point? Because you have your two fingers up, okay.

Q: Doug Spelman (sp), formerly of the State Department.

While we're recommending things to see, there's a movie on in town now called "Up the Yangtze," which is an excellent documentary, and it treats some of these same themes. It talks about a family that's living at the edge of the river and their home gets inundated by the river. But the young family then moves onto a boat that is plying the Yangtze, and finds there sort of a future that she can pursue there. So it shows the gap and also how things are developing to deal with these difficulties. Anyway, another suggestion.

MR. KEIDEL: Thank you very much.

MR. SWAIN: Bert, I just wanted to raise a question, using the prerogative of the chair here, about your assessment of accumulated military stock. In your graph that you have in your technical notes, on page nine, you list this estimate. And you see – you project a point between 2040 and 2060 in which there's a complete transformation between the U.S. and Chinese relative levels of accumulated military stock. And China can accumulate a level that is significantly greater than that of the United States.

Transcript Not Checked Against Delivery

Now, you note in your note here that these are illustrations only, these calculations. And as Harry would say, in this particular case there's a high level of contingency involved in this. And in terms of the amount of defense spending that you would estimate goes into procurement, the level of depreciation and the calculation that you would use to depreciate over time, the level of focus that the Chinese would have on accumulating military stocks, as opposed to other types of non-military expenditures, and their – which relates to the question of motive, of some of the things that Greg was talking about. So bottom line, what is the basic point that you're trying – given all these types of contingencies that you acknowledge are there, what is the bottom-line purpose of this whole calculation of accumulated stock?

MR. KEIDEL: Yeah, this has three, really, dimensions to it. And as I mentioned earlier, the economist in me was rankled every time I saw the Pentagon's report to the Congress on Chinese military power because all it did was talk about the budget, the annual budget the Chinese had, and inflate it – and I use that number almost as high; I use sort of almost at the very peak Pentagon number here – and compare it then to Japan and Taiwan. There's no comparison with the United States at all, and they said to me personally, no, we're just not going to do that. But it rankled me as an economist that they only look at the budget, they only look at one annual budget. And as an economist I said, well, wait a minute. If you want to talk about what your capacity to produce something is, you want to know what – particularly if it's capital-intensive – you want to know what you've accumulated in terms of your stock of productive capacity.

And so I set about to say well, what would that look like. And what you have to do, you go back and you take the past U.S. military budgets and the procurement in there – which we actually have some measure of, but it's very narrow because it doesn't include construction – and you do the Chinese estimate, and there are people that estimate Chinese procurement. But the definition of what that actual – of military hardware item is and isn't, and what supports it and so forth, is pretty fuzzy. But what I've done here is set up a methodology.

And the first purpose is to say if we want to know where we stand right now, this measure shows that the United States has overwhelming military superiority, even with all of the assumptions I've made, not including overseas bases, not including the valuation problem of technologies we have that the Chinese just can't make. How do you value that? How do you put a number on that? This is the problem we had evaluating Soviet military capabilities in the 1970s. We found out later, well, we were really wrong. But the question of the value, what it would take the Chinese in terms of resources to produce things, if they even could produce it.

So don't just look at budgets, don't just compare them with Taiwan and Japan. Accumulate military stocks in a crude way and do it the same for China, in a reasonable sense, and you get this, at a minimum, 13-to-1 ratio of more than \$1 trillion in hardware that the United States has, that China doesn't have. And the bottom footnote here is these calculations are illustrations only. They should be read as an invitation, to those with better information concerning data and obsolescence characteristics, to generate and publish their own, improved versions. So that's one.

Transcript Not Checked Against Delivery

The second exercise that this does is it says, okay, if you take it forward and you just assume – which is a huge assumption – that they continue to spend the same amount on GDP as a military budget, and a same share of that military budget goes to procurement, what happens. And eventually, with a lag of 10 or 15 years, the economic difference between the two countries begins to show up in the accumulated military stock comparison. So that's the second point, that okay, if this is – if you look at this methodology and you just sort of use it, going forward, this is a possibility.

The third point is we have no idea what the Chinese are going to do, what they're going to feel is necessary, what they're going to want to try to do. And therefore, it behooves us to try to figure out what might make them take one road as opposed to another road because they will have the capacity, they'll have the capability, but will they have the intent to use their resources in this direction. I don't know, but I think it's something we really need to be thinking about and what kinds of things we might do that would influence those decisions on part of the Chinese.

MR. SWAINE: Thank you, Bert.

Well, with that we have run out of time. And please join me in thanking Bert and this excellent panel for a very stimulating discussion.

(Applause.)

Thank you all and see you at the next event.

(END)