THE BROOKINGS INSTITUTION

FALK AUDITORIUM

CHINA'S ENGAGEMENT IN AFRICA: FROM NATURAL RESOURCES TO HUMAN RESOURCES

Washington, D.C.

Wednesday, July 13, 2016

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P R O C E E D I N G S

MR. SY: Good afternoon, everybody. My name is Amadou Sy, and I am the director of the Africa Growth Initiative here at Brookings. It's a pleasure to have you all this afternoon to discuss China's engagement in Africa, and this is the launch of David's latest publication with the same title, “From Natural Resources to Human Resources,” which is an interesting title. I'm sure you will have lots of questions.

We'll let David make a 20-minute presentation, and then we'll have a panel, I'll introduce the panelists a little bit later, but we have the ambassador, madam ambassador representing Uganda; and we have Wenjie who is joining us from the IMF.

So, before I give you the floor, David, he doesn’t need much introduction but let me go ahead. So, David is a senior fellow with the John Thornton China Center, and prior to joining Brookings David was, from 2009 to 2013, the U.S. Treasury's economic and financial emissary to China. In that capacity he facilitated economic and financial policy dialogue between the U.S. and China. And most notably, working in helping organize the annual Strategic and Economic Dialogue; I think a recent one just was held in Beijing. Prior to that second life, he was, for 20 years, at the World Bank working as country director for China and Mongolia; and in another life, he was also professor of economics at the University of California at Los Angeles. And I'll stop there. And he is one great -- We feel really privileged to have David here today, and please join us -- (Applause)

MR. DOLLAR: Thank you for the very kind introduction. By my count you gave me four lives, so I'm hoping I have nine lives, so that means I have many more opportunities to reinvent myself.

Really a great honor to kick off this panel on China's engagement with Africa. When I started this research about two years ago, I was speaking to an African policymaker, and he said to me that when the west of Africa it tends to see problems; and when China looks at Africa it sees an opportunity. And in fact, it's nice to have people see you as an opportunity. So that was something that stuck in my mind as I started this research and developed it.

So this has culminated in report on China's engagement with Africa. The subtitle is: “From Human Resources to Natural Resources.” It's a little bit aspirational, but it's a theme I want to develop particularly toward the end, and I will be quite disciplined with time, so we hear from other panelists, and get into Q&A.

I'll cover three topics. First, a little bit of background on African growth and trade, then I'm really going to focus on two issues, capital and labor. So first, talk about China's direct investment in Africa, and China's lending to Africa, that's the capital. Also talk about Chinese workers and migration in Africa, that's the labor.

So, let me start with some background on African growth. Africa has been growing very well since about the year 2000, a little bit later than that, early 2000s. Africa has had a very good decade of growth, during the first part of that it was growing about 7 percent per year. Wherever possible I make my study about all of Africa, but there's a lot of data available on sub-Saharan Africa, so I'm always clear when I'm just referring to sub-Saharan Africa.

You've got growth rates up around 7 percent, slowing down a bit, but really a very good decade, and not just GDP growth, this was the decade in which poverty declined in Africa, using The World Bank's standard; the poverty rate dropped by 13 percentage points between 2002 and 2011. Now notice toward the right, things tailed off in the last couple years and the 2016 figure was actually the IMF projection from a while back, but recently they've marked down that projection.

So growth has slowed down in Africa, and I think the high growth plus this recent slowdown, they both have a lot to do with China. So, China has had a big effect on Africa over this period primarily through China's demand for natural resources. China has had a very natural resource intensive growth model since about the year 2000, there are many factors. I'm at risk of oversimplifying, but China's demand was an important factor driving up prices for metals and energy.

What you see here is the metal's price index in blue, energy price index in red, and except for a brief period during the global financial crisis energy metal prices were high for about 10 years. The index was up around 200 on average, very significantly inflated from the baseline. Again, it ends in the last couple of years. But you'll have very high prices as a result of Chinese demand, this is the period in which China became Africa's largest trading partner, importing lots of metals, minerals, energy from Africa, exporting manufactured products in return.

Now, that's changed at the end, I think this is not just cyclical, we now see a change in China's growth model, it had been very heavily investment-depended for a while, but that's coming to an end. Investment growth has slowed down a lot. Industry is quite weak in China, on the other hand consumption is growing well, so the Chinese growth model is changing. So I wouldn't expect those prices to turn around, but we did go through a period where those very high prices were a boom to African economies. That's one of the reasons Africa was growing well.

Now, another important factor is that Africa was receiving quite a bit of foreign investment, some of that was coming from China. China calls its outward investment ODI, overseas direct investment, and while China has attracted a lot of attention with some big investments, again, often directed at natural resources in countries like DR Congo, Angola, Sudan. In fact, the total amount of Chinese direct investment in Africa is still relatively small.

Most of the foreign investment in Africa, the stock of foreign investment, most of it has come from the traditional Western investors, and even if you look at the recent flows, you know, China is significant but it's not providing an overwhelming amount of finance. It's less than 5 percent of the total of direct investment.

And while China is direct investment, some of the big investments are going to natural resources, actually we can say the same thing or Western investments. So it's hard to see that as any important difference. Where there is some difference concerns the area of risk or what I think of as economic governance, you know, I use an index of property rights and rule of law, and what you find is Western investment pretty highly correlated with the index of property rights and rule of law, so Western investments, other things equal goes into better governance environment.

But Chinese investment is actually indifferent. So there is a lot of Chinese investment in DR Congo and Angola, there is also the single biggest recipient of Chinese investment is South Africa. So one way to summarize that is just looking at the overall division of total FDI and Chinese ODI with respect to property rights rule of law indicator. So, on the right you've got the total FDI, mostly coming from the West; so about 60 percent of it is in the top third of African countries in terms of property rights rule of law.

Happy to report that Uganda is one of these countries, some other examples would be South Africa, Tanzania. Ethiopia just barely makes it into the top third. And Chinese ODI on the left, and that's updated with 2014 data, China, ODI is more evenly distributed. It's not targeted at the poor governance environments, but it's there in places like DR Congo, Angola; Nigeria has poor indicators, Sudan has poor indicators.

And so I see the Chinese investment as more indifferent to the governance indicators. I would also add that some of those natural resource investments in places like DR Congo and Angola, are not working out well. There have been Chinese auditors in Angola, you know, looking at the mining investments, the energy investments, and finding that there's not a lot of value being generated. So, I wonder if, over time, we might see the Chinese investment learning from the fact that it's hard to make money in an environment such as DR Congo.

But the point is that the Chinese are investing all over the continent, and that when you look at the aggregate figure, it's definitely attracted toward natural resources. But then we also look at the activity of Chinese small and medium enterprises which are mostly private, and this is research I've done with co-panelists, Wenjie Chen here, and Heiwai Tang.

And we looked at the Ministry of Commerce registry of all the Chinese firms investing in Africa, and these are mostly small and medium Chinese firms. They are investing all over the continent. The biggest numbers are in large economies such as Nigeria, South Africa, a moderate number there in Uganda. What we find interesting here is that these investments are not particularly in natural resources, in fact the majority are in the service sectors, and there's a significant amount of manufacturing as well.

So I think you’ve got a group of Chinese private SMEs starting to invest in services and manufacturing, and that’s quite welcome by many Chinese -- many African countries.

Now all of that was about direct investment, but there's also a lot of lending to Africa from Exim Bank and China Development Bank, and this is work my colleagues at the Africa Growth Initiative, Amadou, have taken the lead on, you know, they find that Africa is filling a niche in terms of infrastructure finance in the African continent through the lending of these institutions.

This is one of their slides, take away a couple things. One, there's been a big increase in external finance for infrastructure, Africa has a lot of infrastructure deficiencies, you can see the external finance was very small in the 1990s, it's increased very significantly in recent years. But the Chinese share of that I would call significant but not overwhelming. China is providing about one-sixth of the financing for infrastructure.

The biggest amount there in blue is private participation in infrastructure which has really taken off, and that's focused on telecom. The green figure is official development finance, that's the traditional World Bank, African Development Bank, Western donors, a lot of their activities focused on water supply and sanitation. China, you can see coming in with a significant amount of financing, that's the red group there.

About one-sixth in recent years of a total of about $30 billion, focused on power and transport. So actually China is playing quite a useful role, complementary role, financing a significant amount of infrastructure. So that, all together there, just to pause briefly from where I started, I think that trade relationship has had a big effect on Africa, through commodity prices and through volumes, Chinese investment has been significant, but it's not overwhelming in the way that you sometime get the impression from some of the Western press.

Now let me turn to the issue of labor and migration. This is one of the controversial issues in the relationship. Area where it's hard to get good data, Chinese websites publish figures, official figures on Chinese workers in Africa, on construction contracts and labor contracts. So this is the subset, it's a very specific subset, but it's important because it's the construction companies and the labor contracts.

The recent figure, end of 2014, very exact by the way, 259,385 Chinese workers in Africa. That's going to strike some people as small, but as I said, that's a very specific category. Howard French has written a nice book on this issue, where he estimates there are about a million Chinese migrants into Africa, most of those will be adults, and most of those would be working in some sense, maybe self-employed, so you've got a much larger number of Chinese workers if you take some of those informal estimates.

I mean, Howard French tells some very interesting stories about how some Chinese workers come to Africa on construction contracts, but then they are encouraged to stay because they see economic opportunity, that's that economic opportunity coming back. And so that's how this population is growing quite significantly.

Now, for Africa, I would argue this is a mixed blessing, because on the one hand, the Chinese workers bring skills and entrepreneurships, and the connection to China. On the other hand, these are pretty significant numbers in Africa, in fact, needs to create a lot of jobs itself.

You know, looking at how those official numbers on the construction workers and labor contracts how that plays out across countries, you've got big numbers, in Algeria 70,000, Angola 50,000. I notice Uganda has 2,817 Chinese workers, so we can hear from the ambassador if that sounds about right. Okay. But I think that's an issue for debate, because it's a mixed blessing, brings benefits but then also it stands in the way of more job creation for Africans.

And in fact, Africa needs to create a lot of jobs, you know, half of the African population is below the age of 20, so roughly speaking Africa needs to create about 20 million jobs per year, so that's both a huge challenge, and also a huge opportunity.

China, the demographics are completely different, so let me just show you the population pyramids for Africa and China. This is Africa this year, 2016, men in blue, women in orange, those are fairly even numbers. The main thing to take away, it's those enormous cohorts in the zero to 5, 5 to 10, so about half the population is below the age of 20, and that means we know the labor force is going to expand very rapidly, because those people are going to live, and they are going to move into the labor force, so we know there will be a big labor force increase.

What's interesting is right before this session, I looked to China from 1975 on the cusp of reform, and it looked almost exactly the same; 47 percent of the Chinese population below the age of 20, and that was one factor that propelled this big expansion to manufacturing in China. Many other things, but the demographics were very important.

This is what Chinese demographics look like now. In the business we usually refer to these figures as population pyramids, and the African one shows you why it's a pyramid. The Chinese one I think we have to call a pagoda. Okay? And so what you see is right now, 2016, the population is concentrated in working age from 20 to 65, the youth cohorts have declined dramatically, and there are not that many old people yet, so this is probably the peak of Chinese industrialization in some sense from a demographic point of view.

What's going to happen now is China's labor force is going to start to decline, we already see a very serious tightening of the labor market in China, wages are going up, they were up 10 percent over the last year, even though China's economy has slowed a bit. This is good for Chinese people, their incomes are going up, their consumption is going up. Consumption is mostly services, so the economy is shifting away from industry towards services, and that's one of the reasons, one of the factors that's affected commodity prices, for example, why the Chinese model is less dependent on natural resources than it used to be.

Another thing that's happening is China is starting to export capital in a very significant way, as the investment opportunities at home diminish, China is investing abroad, Chinese manufacturing value chains are starting to move abroad, and this creates opportunities for other low-income developing countries.

Sorry, I jumped ahead one slide too fast. Let me just finish on this point, that Chinese value chains are starting to migrate, let's be frank, Africa is not the first place they are going to think of moving to. There's a lot of Chinese investment, value chains moving to Vietnam, Bangladesh, other low-wage Asian countries, but we do see some Chinese manufacturing investment coming into Africa. Ethiopia in particular has made a very dedicated effort, it's taken a World Bank loan to develop an industrial zone, primarily to attract Chinese investment.

It's not restricted to Chinese investment, but in practice they've got about 20 Chinese manufacturing firms now, exporting garments and electronics, it may sound like a small number but it's actually had a significant effect on Ethiopia's economy in the last few years. So you are starting to see the kind of manufacturing investment that many Chinese -- many African countries welcome.

I'm going to briefly summarize. I'm going to start with this figure for my conclusion, so I'm kind of jumping to a slide about the attitude toward China in Africa. So this is part of the Pew Global Attitudes Survey 2015, this is just asking populations do they have a favorable view of China, and in Africa, 70 percent of people have a favorable view, and it's actually the region of the world where China is most popular, compared to Latin America, Asia, Europe. I didn't put the United States up there; I didn't want to get distracted into a different topic. Okay?

And then they ask more specific questions, for example, about Chinese investment, African populations, and these surveys are overwhelmingly positive about African investment. Okay.

So I start with that because I think there's enough evidence to conclude that Chinese trade and investment have supported this recent period of African economic growth, and African populations largely have a positive attitude about the economic relationship. Now, I have emphasized that some of the direct investments are going into natural resources and poor governance environments, and I think we are starting to see some of those not doing well, so we may see a change in Chinese behavior, but then I emphasize lots of Chinese investment going to South Africa, or Uganda, or other countries that have good governance indicators, on the African continent.

I think it's interesting that you've got these private Chinese small and medium enterprises starting to invest in Africa, and that's not directed in natural resources, that's primarily in the service sectors, in manufacturing. It would be nice to have more information to really be able to say more about what's happening there with job creation.

I've emphasized that there are large number of Chinese workers in Africa, and I think that that's a mixed blessing, and it's something that African governments are going to have to think about. When China was opening up the direct foreign investment, you know, starting in the late '70s, it severely restricted how many workers foreign investors could bring in, and this was an area of contention, China might have overdone it, but they really wanted the foreign investors to train the Chinese labor force.

So I think African countries might want to look at that experience, not necessarily copy it, but adapt it. The point is, if you can get foreign investors to train the labor force, then you are going to get spillover benefits beyond the obvious benefit of the investment, you are going to get much bigger benefits.

And then I think the demographics are important and that the foundation of the relationship is changing, and that's creating a little bit of difficulty in the short run. You know, Chinese demand for natural resources is down, actually they are -- The Chinese import volumes are holding up pretty well, but they are part of reason why commodity prices have come down a lot, and that's certainly a big factor on what's happening in Africa in the last year or two.

But I think this is opening up new opportunities, opportunity for African economies to diversity, most of these governments are expressing a desire to develop more in the service sectors in manufacturing, diversified exports, there is an opportunity now partly through Chinese investment, and partly through the maturing of the Chinese economy that's going to open up space for other countries to move into that area.

So I end with some recommendations and I didn't want to take the time to go through all of my recommendations for China, the West and Africa. Let me just say, my first recommendation for the West is chill out, you know, there's been a lot of anxiety about this relationship, but mostly seems to be generating positives with some of the issues and problems that I raised. But let me mention a few things that I think are relevant for Africa.

The first one is incredibly self-serving, we need to publish more data, and we certainly need China to cooperate on this African government, Chinese government, because people want to know how many loans, the terms of loans, there's a lot of argument about how many workers, you know. So, I think better data on this would help inform the public debate.

And then second, I think it's pretty clear for my presentation, I think it's in the interest of African countries to look at this labor issue, think about how to manage it, you benefit from having entrepreneurs and skilled workers coming in, but you want your own labor force to be trained, and so I think that's an issue to look at.

And then third, I emphasize the potential for African countries to diversify their economies, move somewhat into the space that will be vacated by China, even if it's just a small amount of that space, it could really have a big effect on their economies. But that's going to depend on a lot of internal factors, improving infrastructure, reducing corruption, ease of business, there's a whole set of investment climate issues. I think those become more relevant at this moment, when there's the opportunity to diversify away from natural resources to some extent and build a richer economy.

So bottom line is, the overall economic relationship seems quite positive, but of course there's the potential to make it more positive, and I look forward to having a good discussion with the panelists on these ideas, and on things that can be done to make the relationship stronger. Thank you very much. (Applause)

MR. SY: Thank you very much. Let me now introduce the panel. We are happy to have with us Ambassador Wonekha from -- representing the Republic of Uganda, Her Excellency Oliver Wonekha, officially became Uganda's ambassador to the United States on July 18, 2013, and continues to serve as Uganda's chief diplomat in the U.S. Ambassador Wonekha has a post graduate diploma in education from Kampala's Makerere University in Uganda.

And she has been in teaching profession for a long time, but has also worked in the coffee industry for 30 years before entering politics. She has been in the Uganda's parliament since 2001, working on diverse agricultural issues, and interestingly for us, the ambassador has worked as the Uganda delegate of the Inter-Parliamentary Union of IGAD.

And IGAD is the intergovernmental authority on development which has eight countries, Djibouti, Ethiopia, Somalia, Eritrea, Sudan, South Sudan, Kenya and Uganda. And as you know, Uganda is also a member of the Eastern African community, together with Kenya, Tanzania, Rwanda and Burundi. So I think today, we'll ask her to talk on behalf of all these countries.

So, together with the ambassador, it's a pleasure to welcome Dr. Chen, Wenjie Chen, who is an economist in the African department of the IMF where she works on South Africa and Swaziland, and she has also coauthored a paper, or many papers, with David, here. Wenjie works on global value chains, trade competitiveness and also on China-Africa relations. And prior to joining the IMF she worked as an assistant professor at George Washington University on the other side K Street.

So, I'll have to resist the temptation to comment on David's presentation, and I like the panelists to first maybe spend about 10 minutes to get their reactions to this interesting presentation. We'll start with Wenjie.

MS. WONEKHA: We agreed.

MR. SY: Agreed, okay.

MS. CHEN: Well, thank you very much to David and to Amadou for inviting us to this very interesting launch. And when I was reading David's paper, I remember all of his -- if you follow him on Twitter you can see he's all over the world all the time, in Australia and China, and really having that time to put all this together during your globe trotting is very inspiring. So, in terms of my comments. I'd like to provide with you a little bit of the background in terms of sub-Saharan Africa's macroeconomic overview that’s happening.

As David mentioned in his presentation, in terms of the growth that sub-Saharan Africa has faced, it's been a growth miracle, what we called during the early 2000s, a decade long, a very strong growth, but now we are going into a period that’s a little bit more of chopping water, so the 3 percent that you saw, that the IMF has projected for sub-Saharan Africa for 2016, it's probably on the optimistic side.

For South Africa for instance, who just came out with our staff report on the country, and South Africa contributes a large share of the overall GDP growth and for 2016 we are only predicting 0.1 percent.

So there is likely to be some downward revisions most likely on these figures, but overall it's also a more nuanced picture of the growth in sub-Saharan Africa, it's not just these negative -- or more negative trends, but it's really a tale of two Africa's, if you so wish, of those that are commodities exporters who've been really negatively impacted by the slow down, in terms of the demand from China due to its rebalancing, as David mentioned in his presentation, of the focus shifting away from investment-led growth and more to consumption-led growth, and therefore also on its slowdown demand for mostly metals, for instance.

But also on the world economy in terms of slow down of fuel prices and in the fall in these commodity prices in general. So, that has been the large negative impact on many of these commodities exporters in sub-Saharan Africa. But on the other hand, you have these countries like Uganda, for instance, or Kenya, countries that are not dependent upon commodities, but also that really had great policies in the past decade to really build a diversified economy, and those we've seen growing at a very healthy 5, 6, 7 percent growth that's more attributable to China, that you generally see.

And those countries, going forward are also very likely to still attract investments, also from China, but in other areas than commodities. So, in that sense, some of the research that David and I have done, looking at these Chinese investors that are investing in these manufacturing or services type of sectors, those are likely to go to these types of countries, like Kenya, Uganda, et cetera, where you have these other opportunities.

But for these commodities exporters there is likely to be a reset, or a re-shifting in terms of their attractiveness for investment, a lot of commodity types of investment. If you do the debt sustainability, or the profitability of these types of investments, those might be not there anymore, as in recent years. So, therefore the attractiveness of those countries, if they don't do something about the diversification within the economy, they might be in jeopardy going forward.

But overall, sub-Saharan Africa, and Africa in general, is a very key area for China. As we have seen in the latest round of the forum on China-Africa, formed last December in South Africa, where China, in fact, pledged $60 billion going forward. So, 20 billion was towards a fund called the

China Africa Fund for Industrial Cooperation. So, again, from the name you can already hear it's more towards manufacturing, industrialization, infrastructure, and then the other 35 billion is towards loan investments or projects that are based on profits; it might be some natural resources, and then another 5 billion is in fact on more aid-type technical assistance, et cetera.

But again these are pledges and it remains to be seen, especially in the investment type of projects going forward, loans, whether those will materialize, and because the African department has such a vast interest also since China is such a big partner of great importance to Sub-Saharan Africa, we have yearly visits to China, talking with the authorities with China Development Bank, with Exim Bank for instance.

And from our last visit which just happened two weeks ago, in fact, the tone of the dialogues has shifted from really talking more about debt sustainability, about the profitability, which has always been there, since China's general insistence is that, we are here for mutual benefits. So, a lot of the loans that they give are generally non-concessional, a lot of these infrastructure projects for instance, but more of a nuanced tone in terms of really having these projects being more sustainable, and really, the repayment will happen. Is it demand-based, and is it going to be long-lasting and viable?

So, I think there is a shift in that regard, which might not have been there during the boom years, when these countries were clearly able to repay from the commodities' export revenues, et cetera, but now that coming down, there might be more of a caution on both sides going forward.

MR. SY: Thanks Wenjie. Ambassador?

MS. WONEKHA: Thank you very much for having me here, in this very interesting and timely discussion. I come from Uganda, a country that is a AGOA eligible, Africa Growth Opportunity Act, with over six -- with an opportunity to export to the American market almost 7,000 products, different products. AGOA came into being in the year 2000, to go to renew, to renew their gain, right now it's being renewed for another 10 years, and one of those 10 years is already gone.

Uganda is one of those countries, the 2 percent of the countries that have benefited from AGOA, other than the 98 percent that have been exporting oil and gas to America. So, Uganda is one of the 2 percent. Why haven't we taken advantage? Because of supply side constraints. And what are these constraints? Power, no power, and where there is power it is unreliable, we can go for a week, two weeks, no power. What factory can survive with downtime of two weeks without power.

Infrastructure, either infrastructure, the roads, the rail, we need these, we have the market in America, but we cannot supply. What's happening with China? China comes in, into Uganda, besides other African countries with projects, with funding for transportation, for roads, for rail, to speak for east African community, we have got a standard gauge rail, which is running from Mombasa, through Uganda, through Rwanda, we go to Burundi, it will go to South Sudan, all these are east African countries.

And as I speak for Uganda I'm actually speaking for the rest of the African countries and specifically east African countries. We don't have the means to process those products for which we have a market in Uganda. Reading Mr. Dollar's research work that he has just referred to, there is where he says China has a great appetite for risk, and in my three years here, in Washington, I think I can safely say, I think American companies are averse to risk, because in Uganda, you must be patient, you must be present, and you must see how you will manage how you do risk management.

And I think the Chinese, they are ready to do some risk management. I have been working hard, in my opinion, to convince American companies to go and invest in Uganda. I have led a few delegations, thanks to Corporate Council on Africa, a few powerful delegations several times, that I can hardly mention five, of these companies that taken root in Uganda, because they look at the power supply, they look at the roads, there is no fast rail, that's what the Chinese are doing.

Because of the good cooperation between Uganda and China, my president has -- President Museveni has visited China more than five times, including one last year, and in the conversations that have gone on, there have been strategies that have been put in place. We have support for building Karuma Dam, Isimba Dam, Ayago Hydropower dam, I'm saying these names so you go and check out in Uganda, where these places are. I'm ready to give the visa tomorrow.

The Chinese firms, especially from the private sector, they are interested not only in mining, but they are specifically in telecommunications, and we need that. We need communication. We have in place an agreement between one company known as Citroen, one day she will help me pronounce; which has expressed the wish to do mining in the rest of Uganda, and to do iron ore mining.

Uganda is yearning to industrialize, we are on an agricultural country, we need industry, we would like to be part of the global value chains, yes. We need all the iron to grow the -- to build these industries, and we are saying China, don't take the ore to China, put the industry here, let's process the iron ore here.

We have frameworks in place where the Uganda government is in agreement with the People's Republic of China for concessional loans, for example, with China's support we are upgrading and expanding our only international airport, Entebbe Airport. The loans that we have there, about USD721 million to be paid over 20 years with 7 year's period of grace.

We have the loan to implement the national transmission backbone, and support e-government project. We have some 350 million to improve on the express highway, from the airport to the capital, from Entebbe to Kampala. We have a grant from China to address agriculture -- for building of an agricultural technology development center to address fish farming. And we have got a few more of that type.

So, for Uganda, we appreciate this relationship that we have with China to help us address power and infrastructural issues to be able to take advantage of AGOA in America. We see a complementary role of the two countries in Uganda, and I'm sure that this goes for many other African countries.

Well, I was reading what the Chinese ambassador was saying a few days ago in Uganda. There was a complaint why do we have Chinese workers? Why don't you bring the projects, fund them and we need local content. We need Ugandans in these contracts. And he said, Chinese contracts, Chinese contractors. You don’t have the skills to do the work in those contracts.

And he was asked about bringing cement, among other materials, from China to Uganda. Why do you do this? We have cement here in Uganda, and his answer was, we do not only bring cement from China, we bring it also from Kenya, we bring it from Turkey. Why? Your cement isn't of good enough quality. So maybe we have to do something. Is there any company here in America, in this audience to help us improve on our cement, so that the Chinese don’t have to bring it from their country?

It's true that we do have some people from China. You saw the figures, but many of these have come along with the contracts, and indeed, as David mentioned, some of them have seen opportunity, they’ve not only finished the contracts, they have actually created some other work along those contracts that they have completed. They are taking advantage of opportunities.

They have skills that we still have to work upon for our populations, for our young people. They are entrepreneurs. As it is right now we think they are playing a good part, but of course there are Ugandans who are complaining that the jobs that the Chinese are doing should be done by Ugandans. And I think the government also does recognize the need to skill our people to have an education system that addresses this need for skilled labor.

With the Chinese in Uganda, with the market in America and some American companies coming to Uganda, we shall truly move from where we are to a middle-income country. Thank you.

MR. SY: Thank you, madam ambassador. Before I open (Applause) -- Before I take questions from the audience, I would like to just ask one question quickly to each of the panelists. And I'll start with my right, with Wenjie. So, Wenjie, there is a lot of talk about global value chains, but there's also some case to be a bit skeptical, right. As David said, before a Chinese company come to Africa, it can think about Myanmar.

Myanmar makes me very nervous. I think it's one of the countries that got the most aid last year. You can look at Bangladesh, you can look at Vietnam, then it's a long way. And so my question is, how can African governments, what type of policies can they have to really get some of their companies into these global value chain, and maybe the solution should be to think more about regional value chains, instead of global value chains, because the bar might be too high.

MS. CHEN: Absolutely! In fact, the IMF's African department had an issue exactly on global value chains last year, in April, so twice a year we publish the “Regional Economic Outlook,” and two of those chapters generally go into more details about certain analytical topics, and one of the chapters last year was, in fact, on global value chains, and on demographic dividend, another issue that David mentioned.

But in terms of global value chains what we found was that the sense in African countries, especially commodity exporters are plugged in, in terms of delivering the natural resources to the overall global value chain. But in terms of them importing inputs, and then processing, adding their own value added, and then re-exporting the final goods, or onto the next value chain, they were very, very much behind many, many countries such as Bangladesh, Vietnam, and we looked into some of these deterrents, why that is the case, why they are not more plugged in.

And number one, as the ambassador mentioned before, is again to determine why they are not taking more advantage of AGOA, it's because of things like infrastructure, electricity access that were all in the way, but it was also things like rule of law, or ease of doing business. For instance, to get a permit to even to start a business took much longer on average in sub-Saharan Africa than many other countries that we compare to on other continents.

Transportation cost, for instance the shipping containers, the fees, the time of the shipping container reaching its final destination, were several times larger than in other countries, so those area really the main deterrents. The other things in terms of your suggestion of regional value chain, we looked into as well, and what we saw even in countries, for instance in the eastern African community, countries that tend to trade more than in other regions, it was still far away from the trade intensities, so the frequency of how countries trade in other regions on other continents.

We saw some bright spots in east Africa, for instance, Kenya and Tanzania that have increased the global value chains from the flower business for instance, in Kenya, so some other agri-business. In Tanzania also telecom industry, fiber optics, et cetera, and in Kenya. Those were almost the exception, unfortunately, but that means there's a lot of opportunities, and for government in terms of policies, again, in Chinese investments, very welcome in terms of the infrastructure, electricity, transportation.

But also, maybe, more cohesion in terms of these trade unions to really facilitate and to promote more intra-regional trade with each other. I mean, they are much closer together than exporting directly to China or to the U.S. or Europe, so there's a lot of opportunity there. In South Africa, for instance, we see some opportunities now arising from agro-processing and local supermarkets that are coming up in townships within South African cities for instance, and using, you know, Swaziland, using Botswana, or Mozambique, and local countries, very diverse agricultural outputs there in an integrated fashion. So, hopefully that will encourage more of the intra-regional trade.

MR. SY: I guess one question we would like to do more work, is to see to what extent the global value chain of a Chinese firm differs from the global value chains of other firms? Is there something specific about Chinese firms? This Huawei that different from another Apple, and so on. By the way, if you take your iPhone, some of the parts come from Africa.

Madam Ambassador, you’ve worked a lot on regional integration, you’ve worked with IGAD, you’ve worked with the EAC. One issue we've noticed is that when it comes to regional infrastructure projects, there's a lot of, lot of hesitation, because you have to deal with so many governments. It seems that all the problems are multiplied by 3, 4, 5, but yet in the East African community we've seen, for example, Chinese company work on the standard railway goals, and so on.

Are there any lessons when it comes to regional integration, working with China, or is it just the same as working with other countries?

MS. WONEKHA: In east Africa, the east African community, we have got quite a number of protocols that hold us together. And these protocols are for ensuring that we have harmonized policies, we have harmonized legislation, we are working on harmonizing our standards for everything, so that when it comes to, let's say, engaging the Chinese company on infrastructure, it's easier, we have a Chinese company that is working on the standard gauge rail, that is one very good example over an East African community project. And the factory is referred to as Northern Corridor Investment Project.

There are many projects under that title, but this is a very good example where we show what regional integration can do. And I think also, the Chinese company finds it easier to find such an integrated body to work with. Because then it is agreed, Kenya, you do your portion, this is how they have done it. Uganda, do you portion. Rwanda, do your portion, and who is holding everybody else behind?

They all sit together and address what is holding the whole project back, so that framework of the east African community is very important for us, and everybody, every member is working hard. We know we have issues with South Sudan, but we really -- we are praying, and I hope you are praying with us, that we can settle down and address the welfare of our people.

MR. SY: David, maybe just two quick questions. The first one is about the benefit of Chinese investment. So we've looked -- a colleague of ours Jeff Goodman, has looked at procurement data in the construction sector in Africa, and over time, the share of procurement won by African companies in construction has gone down, and that of Chinese and Indian companies has gone up. If you look at the labor, so like in my part of the world, in west Africa, I have many of my countrymen that take boats and try to immigrate and sometimes die trying to go to Europe.

There's really something wrong with the local labor markets, the local private sector, and so on. Are there any lessons from China, in the'70s and so on, because talking about private sector in China is something I would not go, but into propping up the domestic, private sector domestic labor, beyond just restricting the entry of foreigner that may be local content regulation, or so on.

And the second question I have is about, you know, the Chinese growth model. I mean is it really realistic for African to expect to have manufacturing coming from China, when the whole debate these days is about robotization, and robots taking the jobs, and you see so many studies. There's something that makes me very nervous actually, because if robots can do the jobs, why bring the jobs to Africa? So these are the two questions I have.

MR. DOLLAR: Okay. Thank you very much. So on the first question, the procurement question is very interesting. You know, as you say, Jeff Goodman and other colleagues here looked at publicly-available World Bank data which is -- You know, which a nice data source, looking at who wins procurement contracts, and in most parts of the world local firms win most of the civil works contracts. It's kind of natural, you know, so 90 percent of the contracts in Latin America are won by Latin American companies, because they have this local advantage.

So, I Africa, it is still a slight majority of contracts that are won by African construction firm, so obviously there is a big construction industry, a lot of those are South African firms. But as you say, China has risen over time, and taken on a remarkable share, more than 30 percent, if I remember correctly. And those are World Bank competitively-bid contracts, so there's nothing funny going on there.

I suspect these Chinese companies many of them have gotten a foothold in Africa, because, you know, they come on a Chinese-funded project initially, and as the Ambassador was saying, well, you know, the other Chinese-funded infrastructure project with some concessional lending then it has to be a Chinese construction company. So that gets the company a foothold in the door and then they compete successfully for World Bank contracts.

There is another study down the street, showing that not only do they win a lot of contracts, but they actually do a very good job performing. There is no problem with the performance of Chinese construction companies. So that’s one side of the problem, is that model is very effective at building infrastructure, you know, under the right institutional framework. But my own -- you know, as I said in my presentation, China itself, very restrictive about bringing in any kind of foreign workers.

So, friendly advice, that African country would be to look at kind of a middle ground. One effective way to deal with these things, is often a kind of sliding quota over time. So you might say, okay, you can initially bring in 80 percent of your labor force can brought in from abroad, but then that has to go to 60 percent and then 40 percent, a lot of these firms are establishing a foothold, they are planning to be, say, Uganda for years. So that would be credible to say, you've got to localize over time.

And then you can also keep an eye on the cost, you may discover, well that turns out not to be realistic, it's too difficult. But the lesson I draw from the Chinese is they made the foreign investors train local people, and actually it worked out well. You know, the foreign investors often found after a short time, oh, actually this is cost-effective. So I think some kind of -- You know, and that is by the way, a kind of local content requirement. I've got more sympathy for requiring local labor than I have for, say, local parts, local manufactured products, because then you start tinkering with the value chain, you can get undesirable results.

I worry about your second issue as well, I would the good news is, on robots, they haven't been able to create robots that can sew, okay. They haven't been able to create robots that can do certain types of labor-intensive jobs that are done with electronics. So I haven't given up hope that there is room for a new round of developing countries to come in, you know, and the thing about that export-oriented model, is it's always nice to have the exports give you a little kick to get started.

But actually, you know, China has always sold most of its manufacturing output to itself, you know, so part of it is once you get this growth process started, people's incomes go up, they start demanding these products, you know, so in the end you sell a lot of these products to yourselves, you know, which is good. So, I guess I'm skeptical with the idea that the robots are just going to crowd out a vast part of the world population.

And one more thing I would add about, you were back and forth with Wenjie about. You know, it is challenging for Africa to get into some of the value chains, but looking further down the road, Africa is the only place in the world that's going to have net labor force growth. You know, so for the moment, there's a lot of labor in south Asia, but 20 years from now Africa is pretty much the only place in the world that's going to have labor force growth.

You know, in that, starting from 20 years going out, another 10, 20, 30 years. And so if you play the long game, then there's a lot of potential, still, I think to diversify.

MR. SY: Maybe hedging strategies to start building our own African robots. So, the real reason why we are here is to hear from you. So I'll open the floor to questions. We have discussed among ourselves, and we need some gender balance in terms of who you will address your questions to. So, please, don’t hesitate.

So, I'll go to the lady in the front, and then I'll diversify and go to the gentleman in the back there. Yeah, you. So, please identify yourselves very quickly, and I would ask you to keep your questions to the point.

SPEAKER: Thank you. Thank you for the presentation. My name is Chin-Hao Huang, I'm the senior research assistant to Professor Deborah Brautigam, at the China Africa Research Institute at Johns Hopkins SAIS, which is just a couple doors down. My question I guess for all three of you is, ambassador, you mentioned that AGOA is an area where you find that both the U.S. and China there are areas of complement and cooperation, and that made me wonder about the impact of the zero-tariff treatment that China also offered to Africa, and I believe Uganda is one of the recipients.

So, do you feel like the zero-tariff treatment offered by China, which operates on a similar basis as AGOA where many products that could exported to China could be exported duty-free. So do you feel like throws a wrench into this cooperation and do you feel like this is actually a chance for maybe opening AGOA as zero-tariff treatment up to a more multilateral duty negotiation? Thank you.

MR. SY: The gentleman, there.

SPEAKER: Thank you. My name is Jake Bernard. I work at the Africa Center for Strategic Studies. This is a general question for the panel. I was wondering if you could talk about the economic -- I'm sorry -- environmental ramifications of Chinese investment and manufacturing within Africa. Chinese industry doesn’t have the best reputation for following environmental regulations, and as they develop more of a consumer-based economy, and outsource some of the manufacturing to places like Southeast Asia and sub-Saharan Africa, I'm wondering. Is there a concern that this could have very detrimental effects on the African environment?

MR. SY: Okay. I'll take a third one. There are so many faces. I'll take the gentleman there. And we'll have another round.

SPEAKER: Thank you all, for the great panel. Ambassador, as a Ugandan-American, I'm very (inaudible) to see you here on this panel. My question was more around the training institutions. One thing I noticed my parents came here a long time ago, the Uganda diaspora, came here to go to school. And so I was just wondering, ambassador, if you could speak to even outreach to academic institutions, or great institutions like Brookings Institute, having them go back to Uganda or other countries to help train and develop some of that capacity.

I'm fortunate to work for a company, (inaudible), which has actually done a lot of these types of things throughout Africa, with our projects trying to help build up that capacity. So that's just another aspect, I was wondering if you could talk to maybe brining the development capacity there and helping train up some of those colleagues -- people back home. Thank you.

MR. SY: Thank you. So, we had three questions, the zero-tariff treatment, environment regulation, and the third one about training institutions.

MS. WONEKHA: I will, I think the first question came directly to me. Well, China, does provide duty-free market for Uganda, at least, you know, for grain, for raw hides and skin, for coffee, for tea, for spices. What is unfortunate about this is that we export this stuff to China in raw form, we would like to industrialize, we want to add value before we export them to China.

And so we are working hard with the Chinese Government to help us industrialize to add value, and I am here pleading with the Americans, that they help us to add value, so we do not only have the market, but we sell value-added products. And value-added not just to the project, but it means more money for our people who produce those products. So we are -- Yeah, we would have the market. And of course with AGOA we have been told, you know, we have to look beyond AGOA, you know, so it will not go on forever, this arrangement.

As for training, yeah, training, there is a lot of training that is offered by American universities and the various bilateral arrangements. It does happen. I'd also like to mention here, that every year China gives us 200 scholarships for training of our people. So really it is us, the Ugandan Government to ensure that we have those people trained in those things that the Chinese are staying behind for, in Uganda. So, we need to be smart.

MR. DOLLAR: I can take the question on environment. Thank you. So there is a fairly long section in my infrastructure chapter on this issue, and it's live online by the way, so everybody can read it for free. You know, China's general principle has not been signed up to international environmental or social standards. Chinese banks have been reluctant to sign up for the Equator Principles, for example, and the Chinese view is that they'll follow the rules and regulations of the country they go to, and I actually think that has a certain appeal, that idea, but as I emphasize there are some of these projects occurring in countries with poor governance, and there have been some documented cases where there have been environmental abuses.

You know, searching for petroleum in a national park, for example, that particular case, if I remember was Gabon, and it was actually civil society groups that kind of discovered that and called the company out on that one, and the activity ceased. So, I have some sympathy for the idea that you -- you know, you really kind of need to build up civil society, to support, to police these things.

But I'm happy to say that on the side, Chinese ministries now, have started encouraging firms. So China's MOFCOM which has responsibility for outward investment, you know, is encouraging firms to meet international standards. At the very least to me China's standards, which are very good on paper, for environmental and social issues, and I think you are starting to see some the smaller Chinese banks signing up for the Equator Principles.

So I think it's an area that's improving, but it's definitely something I write about at some length in the manuscript.

MR. SY: Actually on this question I would recommend a recent publication by the International Energy Agency, which looks at Chinese investment in the power sector, and as you know, Africa this opportunity to basically use sustainable infrastructure, renewables, hydro, solar and so on. And this report argues that Chinese investment in African infrastructure is heavily balanced towards renewables. For example, the ambassador mentions some hydroelectricity project and so on. So, it's available.

We'll take a second round; I have to take people from the back. Maybe -- I can't see you very well, but that's the last row there, yeah. Then I'll come to the front here. We have time. And then here, yeah.

SPEAKER: Hi. My Yolani Retski. I'm an anthropologist of China. I teach at George Washington University. My question is about the reverse direction, so in the United States we see China as this great outlet for -- You know, as a great market, right? A huge, huge market for what we produce, and there's a large informal population -- a large population of, you know, sort of independent, informal traders in China, there's an estimate of 200,000 Africans living in Guangzhou alone, and it's estimated there are about 0.5 million Africans living in China.

But like I said, they are there informally, they are sort of informal traders, so I'm wondering if there is -- if you see an opportunity for a more formal market, a more formal market for African products to develop in China.

MR. SY: Then go ahead (inaudible).

MR. ROBERTSON: Hi. Thank you very much for this fantastic presentation. My name is Winslow Robertson. I am at China-Africa strategic consultancy, Cowries and Rice. And I wanted to ask about, you use the term investment a lot, but as we know China doesn’t invest that much in Africa, it loans a lot of money into Africa, and I'm wondering in terms in loans, the issues of debt sustainability, and as African commodity markets change and the ability to pay back, not all loans are resource-backed. There is a lot of great research by your organization that points to the diversity of these loans, but is debt sustainability a concern?

MR. SY: And the last one from here, yeah.

SPEAKER: Hi. My name is Soci. I'm a lawyer, and I work at General Electric. My question goes mainly to Africa, the “Tale of Two Cities” -- the Tale of Two Counties -- and you were talking mainly that there's a lot African countries who are heavily reliable on commodities. My country, Nigeria, is one of those. But there's also a lot of countries in African, sub-Saharan Africa which are also, looking at the other opportunities, and that could in agriculture, private investments, et cetera. You’ve mentioned Kenya and Uganda specifically.

I guess my question is, what can both China and African countries do to promote the counties that are looking at opportunities outside commodities, especially now with the downward of the oil prices? And I guess it goes mainly to both Wenjie and ambassador, so maybe you can talk about from the China side as well as the African side. One thing that comes to mind is the agriculture demonstration centers, but I know sometimes there's difficulty as far as it's being affected. At least there's been some criticisms around that.

MR. SY: Thank you. The question about African informal traders in China, and maybe the opportunity of formalizing this relationship or this presence. We have discretion about investment and loans, that China doesn't invest, it lends, so maybe you have something there. And the question about the sustainability, the debt sustainability of African countries themselves, right? And then I have a question, which is the last one, which is fresh memory, is I will let you --

MS. CHEN: I'll start with the last question, the Tale of Two Africa's, as I mentioned before. So, as we see in terms of the commodity exporters there are large fiscal deficits arising. There are a couple of things they have done, some of the countries in terms of devaluing the currency for instance. Angola comes to mind. You know, see higher inflation coming up as a result of that, and so a lot policies that are in the mix, and that these countries have to face.

And we actually wrote a chapter on that in the recent "Regional Economic Outlook," that just came out in April, about a policy reset for a lot of these countries. So this is really the time, have to dig deep, and look into the economy in terms of diversification, but also more near term it's going to be painful, and decisions they have to make to make this period, the least painful as possible, but really to overcome this hurdle so that they can, in the long term, diversify the economy and be less reliable on commodities, as we don't really see commodity prices going back in the near or medium-term for that matter.

So there has to be some fundamental shift in terms of the economies themselves, but until more positive pictures, the countries like Ethiopia, some of the Eestern African countries that I mentioned, like Uganda, or Kenya, they've been enjoying very healthy growth rates, and continuing forward to do so, and that's because -- I think not because they are non-commodities exporters, but really because of mix o good policies, and also some good luck.

But in terms of the policy mix that they have undertaken, really, to develop some of the areas in Kenya, for instance, the banking, mobile banking sector, that's really thriving. And also in other countries, in Ethiopia we see a very different approach there, but yeah, we have high growth rates, manufacturing being on the forefront in terms of their development. And then also the government really implementing infrastructure projects; electricity, addressing electricity shortages, ease of doing business.

So providing this overall package for having a conducive business environment, not just for outside investors, but I think also for local entrepreneurship, which is a really big labor creating effort, a lot of SMEs, are really the largest provider of especially low-skilled jobs that you can bring in more labor force to work, and then building it up from there, in terms of increasing the domestic demand.

So, again, infrastructure is the big thing, electricity is going to be -- and even in a country like South Africa which is the most advanced in terms of sub-Saharan Africa, you had electricity shortages being such a problem, it shaved down almost 1 percentage point in terms of growth in 2015.

So, going forward these are things that these countries have to really address, and it’s hard times right now for many of these countries, and it's going to be a painful process in the near future for a lot of the commodities exporters, but these other countries have definitely a leg up already, and going that right path and following that is going to be key. In terms of debt sustainability, can I just mention a little?

MR. SY: You go ahead.

MS. CHEN: So, as I mentioned before many of these projects in commodities exporting countries that are either backed up to commodities exports, or not backed up, but in terms of their repayabilities, so to speak, or profitability down the road, that’s becoming more into question. And we know in terms of a lot of these projects in oil, for instance, in Angola, they are barely new -- any new investments for instance. So, right now, what's going on there is just these existing investments that have been in place already, a lot of them have been also curtailed or terminated.

I know in South Africa a lot of the mining, for instance, by the Chinese they are abandoning on many of the mining projects. Not just by the Chinese but in general, a lot of the companies are pulling out. The gold mine has been on the decline for many, many years, so it's not a recent phenomenon, et cetera, but it's definitely very hard going forward in terms of the sustainability of these projects.

And these will have major repercussions, in the economy, so in South Africa we did some study in terms of the linkages within the economy, so although mining itself contributes only a very small percentage, I think less than 10 percent of overall GDP, its reverberating effects onto the financial sector, of the works that generally are very highly paid, because they are a part of the well organized mining unions, et cetera, those will have impact on their wages, et cetera, that the government will have an impact on overall consumption, fiscal implications, tax revenue, et cetera.

MR. SY: Okay. Maybe, David, I can ask you to quickly take the question on investment versus loans?

MR. DOLLAR: Right. So, you know, Chinese lending to Africa is very significant, as you kind of intimated in your question. I would add though that I do think that direct investment is pretty significant too. I think I forgot to mention it's cumulated now to $32 billion stock of Chinese direct investment in Africa, and that’s a fairly significant number.

The total stock of lending to Africa is bigger than that, but not by -- you know, not by many factors, for example. So in terms of debt sustainability, you know, my model of the world is that while it's imperfect kind of measuring, you know, economic governance, or economic management, whatever you want to call it, there are differences. You know, Uganda has good economic management and there are other countries in Africa, you know, there is a dispersion.

So my model of the world is that, well managed countries take on debt and they are able to service it, and it fits into their macro framework. We have lots of African countries that are weathering the slowdown in Africa quite well, and as I understand very few of them are going to the IMF, so far.

Now there will definitely be some countries that run into debt sustainability problems, partly through Chinese lending, but partly through going out to international capital markets, and there are going to be ones that have poor economic management to start with, and/or ones that got really large unanticipated shocks, basically.

Venezuela obviously is not part of Africa, but Venezuela is an interesting example where China is learning that it lent Venezuela a huge amount of money, it's not going get repaid, it's having to reschedule. That may very well happen with Chinese loans to some of the African countries that have poor economic governance.

But, you know, I want to come back on a positive side that for a lot of well managed countries taking on a certain amount of external debt is part of good management for a developing country.

MR. SY: Mm-hmm. So, we are supposed to stop at 5:00. I'll remind you that we have -- we continue the conversation, we have a Twitter handle, it's hashtag #ChinaAfrica, and please also look at our website we can take comments also through Brookings website.

But I would like to finish with each panelist giving the last time -- I mean, for a last word; key takeaways from this afternoon's discussion. So, I'll start with madam ambassador.

MS. WONEKHA: Thank you very much, Mr. Chairman. China, Africa, natural resources moving to human resources. Well, I laid out what is happening specifically in Uganda. I think it is a great opportunity for all of us to engage forward. As China does the infrastructure, I think America should use this infrastructure to have business between Africa and Uganda. Because not that U.S. gas doesn't do infrastructure, but I have heard it said, in many fora, that U.S. doesn't do infrastructure.

So China is doing infrastructure, U.S. continues to support us so that together it is a win-win situation, everybody benefits. Thank you.

MR. SY: Thank you. I heard a joke about Uganda which I'm dying to say, but this is a serious event, so, but I'll say it anyway. It's the country where the Kingdom of Buganda is, and the Baganda people live, right. It's not a joke, but I like that. So, sorry. Wenjie.

MS. CHEN: So, I think -- Thank you, again, David, for this, I think, very fruitful dialogue and also research because whenever I encounter the topic of China Africa, there's a lot of myth and prejudice, and a lot of heated debates always going on, especially in the West. And I think what we really need more of is David's type of work, and work that we've done together, looking at more data, looking at more substantiated data, not just stories, but really go deeper into what's happening as an underground, and finding more scientific evidence of the impact of China-Africa engagement in terms of trade, investment, migration, and so I hope this will start more awareness about this topic and also continue forward. So thank you.

MR. SY: If I may add. I mean, I think also we should not underestimate the usefulness of case studies, and we like the regressions and the R-Squared, and so on, but I think to learn more about this relationship, especially about the role of the private sector and so on, case studies are very useful. So, David, last word?

MR. DOLLAR: So, thank you very much. I really enjoyed the panel and appreciate all the comments and the questions from the audience, so just reinforced to me, that his is a really an important topic, and this is really one of the important developments in the world.

First, you know, China emerging, is probably is the largest investor in the world. You know, that in and of itself is an important issue, but China's activities in Africa, and Africa's potential, I think all of this is a really great topic. The nice thing about being a researcher is you can usually conclude that one thing you need is more research. Okay?

So, you know, maybe I can find some additional funding, but I really like the spirit of a number of the comments, and we could benefit by more on-the-ground assessment, including case studies, data too, by the way, Amadou. It would be nice to have some surveys of Chinese firms operating in Africa, really get more information about the workforce, training of the workforce, all kind of issues that were brought up by people here.

And also the issue of Africans in China. I hadn't really thought about that. I mean, that's an interesting issue, too, and how that kind of reflects back on the China economic relationship in Africa.

MR. SY: Well, thank you very much for coming. And please continue the conversation. Again, hashtag ChinaAfrica on Twitter, look at our website, Brookings, Africa Growth Initiative, Thornton Center -- China Center. Thanks, again. (Applause)

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Expires: November 30, 2016