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ON GROWTH THROUGH INNOVATION

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PANEL 5: THE EVOLUTION OF MANUFACTURING AND EXPORTS

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## PROCEEDINGS

MR. BAILY: Okay. Let's get started. Thank you all for being here and thanks very much to the panel, which is a stellar panel.

I'm Martin Baily. I'm the director of the Business Initiative and a senior fellow here at Brookings. I also work part of my time with McKinsey, so as someone said McKinsey's fingerprints are all over this session.

One of the things I've done both as an academic and in work with McKinsey is to look at productivity and innovation and I think that's going to be a key point that we're going to talk about today. Other things that we've done at the Business Initiative just to plug that group is we've looked a lot at financial -- at the financial crisis and financial reform. We have a new project that we're billing, trying to understand how private capital, particularly annual investing. Private equity is providing the finance for productivity and innovation.

Well, we heard earlier today one of the things that I think is a key issue is that the U.S. is a very strong hub of innovation but a lot of the manufacturing is not done here in the U.S. Now, there's sort of a couple of perspectives on this. When I was in China I listened to a long harangue which was translated to me and basically said the U.S. is exploiting China because an iPod is made for \$300 and China gets \$4 out of that -- \$3.83, actually is what the estimate was of what it takes to assemble an iPod. This was a 2005 iPod. And of course, Apple gets a whole lot more than \$3.83 out of iPods and iPhones and all the rest of it. So I can see how they feel that they're being a little exploited, but of course the bad news for the U.S., is you don't do a lot of the other

manufacturing here in the U.S. So we do get quite a lot of the income from these innovative products. We're not creating a lot of the manufacturing jobs here.

Let me now turn to the panel. And the first person on the panel is Dominic Barton, who is the managing director of McKinsey. He spent many years working in Korea and became the chairman -- McKinsey chairman in Asia. He and I had -- I had the privilege of working with Dominic in Korea in the mid '90s when we did a productivity study of Korea. He's currently based in London. I believe you're a Canadian citizen, so a citizen of the world and the managing director of McKinsey.

The next panelist is Klaus Kleinfeld, who is a very distinguished business leader. He's now chairman and CEO of Alcoa. He's held that position since 2007. Prior to that he worked with Seaman's for 20 years and was CEO of Seaman's from 2005 to 2007. He is not only a hugely successful business leader but also a very thoughtful statesman and spokesman on business issues.

And then our third panelist is Austan Goolsbee. He has, I think, one of the best jobs in the world, although I'm not sure it feels that way quite at the moment but hopefully by the next couple of years it will start to look a lot better. He's currently chairman of the President's Council of Economic Advisors. Austan is on leave from the University of Chicago. He was a leading economic advisor to President Obama in his campaign and was a member of CA prior to becoming chair. Less known perhaps to this audience is that Austan is also a skilled standup comedian, a skill that I'm sure stands him in very good stead in these troubled times. (Laughter) I'm not sure if he's going to practice that on us

on today's occasion but I will testify he can be very funny as well.

Okay. Let me start with Dominic. And I think the question for you that we had talked about that we'd like you to address a little bit is about innovation. And McKinsey has done a lot of work, knows a lot of companies, has worked with a lot of companies on the issue of innovation. So maybe you would give a little bit of your perspective on that -- on that issue.

MR. BARTON: Sure. Thank you, Martin.

What I thought I might do is talk about innovation as it relates to the U.S., too. This is based on work we're doing with clients as Martin mentioned, and also for this we talked to about 25 different organizations, primarily multinationals who are looking at innovation. And I'd say that sort of the governing thought of the takeaway -- and you don't have to listen to me anymore. Basically, we're actually quite bullish about the opportunity in innovation but to be able to capture that two things have to be done and we think they have to be done pretty urgently. One is to what we would call just level the playing field. And we heard a bit about this this morning, just the gaps that are there and some of the essentials. And we'll talk about that for innovation to work. There are now gaps, or we're certainly hitting the flat end of the S-curve, if you will, for the U.S. compared to other countries. So we've got to level the playing field.

And we would actually also argue for a second initiative which is around a public-private cooperation. It's not having government decide which industries to go after but I think it is much more collaboration in focusing on some very important, big growth areas for the future and then looking at how to set

standards, how to encourage and incentivize the investment and then the innovation, and to some extent the jobs, although I think I agree with Randall Stevenson this morning. The jobs are not, you know, we all want more jobs but we don't -- the objective function is not to create the jobs. Those come afterwards. So that's sort of the thought.

When we look at innovation just from the work we've done, and people have different theories about this, we look at five things that really drive innovation. The first is a large, and I would argue, demanding group of customers. And I think the U.S. for a very long time has been the biggest market in the world. It still is. We should recognize that even with the growth that's going on. But there are obviously shifts going on. But having a very large, significant market is important. And it's not just for the final demand. It's the feedback that you get from those consumers and customers.

The second is the deep talent pool, ensuring this is getting around the engineers, in particular, which we would also think is important. Capital. The fourth is infrastructure. And I would actually include in this digital infrastructure but also infrastructure such as the roads, the railways and so forth. Those are actually quite important as well.

And I think the fifth element, and I don't know how to describe this. It's -- there's the sense of -- there's a culture magic entrepreneurial way and there's something I know that Klaus and I have worked on. You know, Russia, for example, is very interested in many countries in importing the Silicon Valley to their country. And many of those don't work because they can't put all the other

ingredients in place but then there's this one element that's not there that's quite difficult to deal with. And I think we shouldn't forget that. So those are the five pieces.

What we would say just to rattle through where we are today is that it isn't so much about what we've done or not done, it's what the rest of the world is doing. And again, that was mentioned a bit this morning but the pace with which other countries are moving on innovation -- is it a different order of magnitude than what we're seeing being done in the U.S. today? And I talk even about -- I won't go through all the different five elements, but if you think even about the size of the markets, and we heard Jeff Immelt talk a little bit about that this morning, there will be 900 million new middle-class consumers in the next 10 years in Asia primarily. They're not U.S. middle-class consumers but about 15 to 20 percent of the disposable income. That is a very significant group in which to innovate. And that's why we're seeing a lot of multinationals do work in that area because that's where the market is.

We've heard a lot about the quality of the talent pool. Just another figure on here. You know, China's graduating about 10,000 engineering PhDs a year compared to the U.S. at about 8,000. Our rankings in the U.S. in terms of the, you know, if you look at the education scores, particularly in things like math and science. I think we rank 48th in math and science in education, according to the World Economic Forum; China is number 35; Singapore is number 1. And again, these are -- I don't think it's going to shift things overnight but these are long-term trends that we better start to focus on now.

The VC and PE. I think we've got obviously a dominant amount of that here but people are also looking overseas. And if you look at even what small countries are doing -- again, the Singapores, the Israels, and so forth, Korea -- with what small resources they have, the focus they're putting on that and trying to attract people to come there is very significant.

And then infrastructure. This is railways and the roads and the telecommunications and so forth. And I'll come back to this in the end. You know, it has deteriorated. And I won't go through the rankings but they're pretty poor. I mean, the American Society of Civil Engineers has given us a D on our infrastructure saying we need to spend about 1.6 trillion on that side. And there's various different rankings. I'm actually quite bullish about what can be done there and I think jobs can be created from it but we should just recognize it.

And then if you look at what other countries are doing, and I just rattle off some of them. Korea. When the new president of Korea came in he actually put out a 60-year vision. Six-zero years, which I thought was a big strange to do but this is sort of -- it's a long term and it's about green growth. And again, there's a huge effort going on to try and encourage and incentivize organizations in that country but also outside to be able to drive it. China, we all know, but I'll just take -- just take Beijing itself. The city of Beijing is putting \$8 billion in R&D spending. Ken would know more about this than I would but again, a commitment around clean tech and electrical vehicles and what they're going to do about buying fleets and so forth.

Russia, as I mentioned, trying to put a Silicon Valley in place,

drawing on people from all over the world to try and figure out how to make that happen. The EU, with their Blue Card Program, trying to attract more talent, especially scientific talent. Trying to get I think 20 million people over the next 20 years. And then Singapore. I could go through it but I would say one thing I've noticed over the last, I'd say, three to four years is a very significant uptick in countries. And it's not -- it's not the government so much doing it. It's actually a government-private sector linkage of people saying we've got to do something. And it's not to beat the U.S. or it's that we have to do something to drive it forward. There are big opportunities out here. Let's figure out how we can do it since the opportunity is there.

Again, I'm very bullish about what the U.S. can do because we shouldn't forget that we still are the largest market in the world and we will be for, you know, quite some time going forward. University leadership, 13 of the top 20 universities here. We've got a lot of things going. The demand. We did some McKinsey work on this. The demand for education in the U.S. and Canada among Asian postgraduate, postsecondary students is roughly 5- to 6 million people depending on different assumptions. Now, I'm not suggesting that we absorb 5- to 6 million people but I'm just saying the demand is there because we actually do have something that's quite good on that front.

So again, just to close, I think there's a couple of areas to work on this leveling of the playing field. We've heard about tax. I'm not trying to hammer on the tax but Randall Stephenson I think put it well in saying that's an area we need to look at. It's more about, again, what other countries have done

versus what we've done. The tax rates have been dropped, and so looking at where -- how do we stack up on that side? We actually now have one of the higher tax rates on that side. Again, more what other countries have done.

And what I worry about on that side in particular is a lot of the multinationals that actually have a lot of cash on hand, about 40 percent of that is outside the U.S. It's very difficult for them to repatriate that back with the tax situation. I'm simplifying this probably too much the word is, but that's one issue.

A second area that I think is as, if not more important, is on regulation. I'll just give you one vignette. Talking with a medical devices company -- U.S. medical devices company -- it takes them one year to be able to develop and launch a particular product. It would take them four years in the U.S. due to the various regulatory sides of things. And we've got some very good regulation to protect people and so forth but there is a lot of interference on that side that we need to be looking at.

Another vignette I'll just give you is we talked about healthcare before. And this is not something that we'd be able to do in the U.S. now but there is a -- there are two organizations in India that have set up call centers with doctors. One of them has about 100 doctors in a call center. They have 5,000 medical workers that have basically 6 months training. So these are not people that are going to give you, you know, open heart surgery or anything like that but they can deal with 70 percent of the medical issues. And they cover a market of about 2.5 million people. Now, again, that's -- they don't have anything to start with so it's always easier to start from a clean sheet. But you've got to look at the

sort of innovation that's going on. And I'm not suggesting we get rid of our regulation but we should at least benchmark where that is.

The other vignette I'd say is if you go to Beijing and talk to the mayor of Beijing, he has a chart on the wall which is the number of days it takes to start a business from the idea to opening it. It's 37 days. I never knew that. The other -- he doesn't have the U.S. or other western countries. The people he compares it to is Shanghai, they have their rivalries, but also Singapore, which is six days. And again, I'm embarrassed to say I don't know what the number is for the U.S. or for Canada, but I think we should look at that and try and make that as easy as possible, obviously with the caveats that we're not doing anything crazy but regulatory. So tax, regulation, education -- I think we've talked a lot about that today. I'm very much the believer, too, to emphasize more on the sciences.

One of the fellows was talking this morning. I was thinking about this. There's no -- we have *L.A. Law*. I don't think we have *L.A. Engineer*. (Laughter) Maybe something that we do on that front.

SPEAKER: I'm not sure it would sell.

MR. BARTON: The final, final point is I think there's a lot of areas for cooperation. Very deliberate cooperation between the public sector and private sector. We've just identified six. I think there are many more but these are huge business opportunities for the future. I'd say the whole life sciences farm. I'm aggregating that too much but on healthcare there's just a dramatic opportunity on that side. We talked about the IT enablement of health care that

we need. When you look at things like the Broad Institute which I think is a world-class institution, bringing different bodies -- physicists, chemists, bio scientists, and so forth, and business people. I think that's a very large opportunity. There's no reason why that shouldn't be owned completely here in terms of what we can do and where we're moving.

Advanced infrastructure, high-speed rail, you just look at the opportunities, the air traffic control. We could go through a lot on that side. There is a huge opportunity on that front. And by the way, when you think about the capital that's required, one group that we don't think enough about are actually the Chinese. We think about the China Investment Corporation would actually like to invest money in U.S. infrastructure. But the challenge is again the regulation and fears they have and so forth. But why wouldn't we also be looking outside for capital to be able to do it. Again, that might be a naïve simplistic view but I think there's capital that's out there that would be interested in doing that on the infrastructure side.

Clean tech. We talked a lot about that. I think there's a very large opportunity. Clean coal, nuclear. That's a very big bucket that should probably be disaggregated. Then fourth would be next generation water technology. Water is going to be a huge issue for all of us in the world as we move forward. There are various countries trying to push on it. There's no reason why that can't be done here. IT infrastructure and the communication technologies. And then I'd say actually advanced materials, the composites and so forth that are there. We heard that a bit on the defense side.

Those are just six. I think there are actually many more. Those are big buckets of opportunities. And again, it's not suggesting that the government has to be there to, you know, invest a lot of money to figure out. It may just be about setting the standards or providing the regulatory timeframe for people to invest, or there may be some demand, benefits that we get from it. But I think a lot could be done that would attract the business leaders and the entrepreneurs and so forth. And even capital from outside the country.

MR. BAILY: Can I just follow up on one point? I think it was Jeff Immelt said this morning that the labor cost of manufacturing a lot of the products is very small. So the disadvantage the U.S. may have in having higher labor costs than other countries is actually not that much of a barrier. So in a sense it wouldn't take that much to make some greater production economically viable in the U.S. And maybe the things you mentioned -- taxes, regulation, the talent pool, and so on. Is that your sense as well from the client, the manufacturing or other clients that you worked with? It actually wouldn't take a whole lot if we could get the policies right and you could begin to see more of that activity moving, either staying in the U.S. or moving back to the U.S.?

MR. BARTON: I definitely think we could have more. I think it obviously varies by industry with steel versus the high-tech areas. But I think there's a lot more. And I think that's again where the dialogue would occur. And that's where I compare, you know, what we're doing here versus other countries where there's a lot of dialogue on that side.

MR. BAILY: Right. Right. I'm going to turn now to Klaus Kleinfeld,

who I always feel better when I listen to him. He's got a very positive view of innovation in the U.S. and I think you're going to say a bit about how to revive that American success model. Klaus.

MR. KLEINFELD: Yeah, I'd be happy to. Let me start from where we started when we talked about this a little. I mean, when you face a challenging situation, whether it be in your private life or your business life or even with a the whole nation, my experience is you better build on your strength and don't wait until you can eliminate all of your weaknesses because you might not have survived it taking all the time to build on the weaknesses.

The good news here is there are a lot of strengths in the U.S. And a lot of the points Dominic mentioned as fundamental principles of five fundamental forces that you need for innovation. There is a reason why there is gazillions of people around the world that look at the U.S. and praise the U.S. as the model for innovation and for growth and for entrepreneurship. I mean, I'll give you a couple of those. And I'll also talk about some that -- at the end that I could see as potential drawbacks holding us back.

Let's start with the culture. I mean, the culture is probably the most difficult thing if anybody would ever want to copy that. And so many people have tried. And we always talk about Singapore but I mean, those of us who have worked in Singapore, I mean, know that even Singapore is far, far away from the ingrained, open culture here that we have in the U.S.

And how would I describe that? I would describe it in such a way that everybody kind of when you grow up, get to know, you better roll up your

sleeves and be on your own because, you know, this is what this culture is all about. By the way, it doesn't matter where you came from. If you're good, you're going to find a way up through the ranks. It's a very, very -- a society that's very easy to penetrate. And if you're good you can make it, and by the way, the rewards are big, too. If you're good, you're going to be highly rewarded. There are gazillions of examples around -- have always been around and they today look at the Mark Zuckerbergs of this world and last century looked at the Henry Fords. You know, and that's part of it.

Another big part of the culture is failure is not seen as deadly. And that's a big, big difference to almost all cultures around the world. I mean, most cultures around the world, if you started a business and you failed in the business, people would put a print on your forehead and nobody would want to touch you. If you go around -- if you go around and talk to the venture capitalists, I think the general understanding is when we look and put teams together, we put a lot of money behind and we want them to have had some failures. Why? Because we know that they learn best out of their failures and they will never repeat them. Right? So those are things that are going big time for the U.S. Right?

The other thing that's going big time for the U.S., and that's impossible -- almost impossible to copy -- very, very hard to copy -- is some clusters. And we have this gigantic cluster that's called Silicon Valley, right, that has all the elements and even more. And that really dominates some industries and that really is encapsulated in a physical space and has an unbelievable

vitality. That, I think, is the reason -- I unfortunately wasn't here listening to the first panel this morning. I was still digging myself out of the snow over in New York. So but there's a reason why the first panel sat in the media industries. We are the ones. We are dominating. And the reason for that is because we have this gigantic cluster and we invent new business models every day. And there are thousands of new startups. Let's not forget about that. And that's just one example.

I mean, you can look at some of the technology sites. And some of those were mentioned before. We have a similar cluster around Boston in the medical space, in the biotech space, which I think we're only partially aware of. And the question is, you know, are we really talking about that -- about that enough? Right? And then we have a big cluster in New York, the financial industry, where we used to be a leader under we really screwed it up. Right? And now, frankly, I mean, the good news is people forget and forgetting usually goes pretty fast, you know, and the cluster is still there so I'm pretty optimistic about that coming back. (Laughter)

So on that point I think we have a lot of these great things. Education. Yeah, I could talk about the bad schools, you know, and I know some of them fairly well. But frankly, I mean, 20 of the best universities around the world, I mean, 13 of those are in the U.S. And if you look at the last statistics, I mean, if you look at probably the most sensitive indicator for attractiveness of a country and a nation you have no other country on that planet where more people are knocking on the door wanting to become a citizen than the U.S. That

continues to be the case. Yes, there is competition coming on, but let's not ignore those facts. If we don't screw that up, and if we don't continue to emphasize these points, you know, we can really screw it up big. I mean, and we are on some of those elements because we have been the last years because we went through this tremendous crisis. We have been emphasizing the negative because it was stuck in our face. Right? It was unavoidable. Lots of stuff going on there. But in the end let's emphasize the positive because we need this to create a better future.

So now let me focus a little bit on those elements where I think we probably need a little bit of reinventing. And this model which I just described works very, very well for some industries. It doesn't work so well for others. And the others typically have one indicator -- one other element in it and that is kind of government -- I wouldn't call it regulation, but framing. I would call it a framing process. I'll give you an example. I mean, I was born in the north of Germany and I used to go particularly over the change of the year up to the very north of Denmark when I had just finished school and was visiting university. And this was the early '80s. Right? The early '80s and we actually rented a place out there, an old farm. And one day my old friend there, Jacob Jorgensen says, oh, Klaus, I will build next year a windmill. I said, oh, Jacob, that's a great idea. Build a windmill, you know. And I said, Jacob, I said, how are you going to do that? He said I have no idea. And the Internet wasn't really around at that time. I'm going to do a little thinking. You know. I saw some of these western movies and from the farms, you know, they had these windmills to get the water up, you

know. I said that's good. But do you want to get the water up? We have water. We have running water on the farm. So no, no, he says. No, no, no. You know, the government has done something. They are now talking about this. They actually think that if you have a windmill and you produce more electricity than you actually consume, you will get paid by the utility. And they are considering putting that into a law. And I said, Jacob, that's a good idea. Good.

The next year I come back and he has that bloody windmill on there. It looked like total crap. Total crap. What has happened is one single piece -- one single piece of legislation had been put in there and that single piece -- simple, super simple was if you have a windmill in Denmark and you produce more energy than you consume, the utility will pay you for every kilowatt that you put into the network the price that they charge for the end consumers. So there's gazillions of farms in wintertime there's, I mean, a lot of boatbuilding business there. Wintertime you hang around, you don't know what to do. Boatbuilding is a very manual process. You have a little workshop. And guess what? That's why the windmills look the way they do these days. A lot of carbon fiber in there. A lot of basal woods in there. And if you see the manufacturing process, that is a process that stems from boatbuilding. Right?

Now, coming to that, a little nation like Denmark can dominate in the windmill business. Right? And not because the consumers happen so much in demand. I mean, it's because there was a little bit of a frame, a smart frame, one single piece. One single piece can make a big difference. Right? So we -- and that's a small industry. Right? Now, when you think about, for instance, a

bigger issue like CO2-free coal fired power plants many would say that's impossible Klaus. Yeah, well, we've said flying is impossible, and thanks to aluminum we all fly well today. (Laughter)

So I think you get what I'm saying. Right? So I think if we were to say let's have a program put together with some bright, intelligent scientists and figure out a way how we can build a CO2-free coal-fired power plant, I'll tell you what, China, it would be hot in demand there. Hot in demand because -- and that's not only China. In the U.S. actually it would hot in demand, too. But it's very difficult for one company alone to do that. And much of that deals with the brainpower. Much of that deals with the brainpower because it really requires not entirely a fly to the moon project but something of half of the magnitude of this.

And there are those type of large scale innovation where there's a huge demand on this planet and where probably the U.S. could be dominating the world. You know, but where we have got the mechanics of what Dominic, you described when a leader comes in, put a six-year perspective on it. The reason why he does that is a CO2-free coal-fired power plant everybody knows in 10 years we probably won't have it. It probably will require 20 years. And if you want to have those type of big ideas, you know, you need a longer timeframe. And we have kind of deprived ourselves of that conversation. Right? And I think we have to bring that conversation back. Without this kind of aftertaste of oh, my God, we're talking about industrial policy. Right? Because that has -- I learned it the hard way, that has this very negative connotation here in the U.S. and that's not what I'm talking about.

I'm talking about we want to participate. We want to participate in the future as we have always done. I mean, we invented here the airplane. We invented the automotive. Come on. Give me a break. What's the next big thing? I mean, we always thought big. Right? We flew to the moon. Right? Let's think big again. Right? We can do it. And thinking all of the positive things that I said in the beginning, let's bring that back. Right?

Okay. Another thing is, and I think that's a strong point, Dominic, you made it only a small point. I believe it's a strong point. I mean, you said *L.A. Law*. *L.A. Law* to me is one of the better shows. Right? (Laughter) I say intellectually better. At least it has substance. You know? I say -- when I took my older daughter to go on a college tour, and we went to MIT, all right, and looked at MIT, I was in the room and I looked around. It was a room like this filled, right? I was probably the only Westerner in that room. Very few Americans, right? And it was filled with Indians and Chinese. Right? I love that. I love that because it shows on the one hand that this place is gigantically attractive. Right? But why do the kids, when you talk to the kids then which I did, I just asked them why did you come here? You see in their eyes they aspire to come to MIT. MIT is for them. If you can make it into MIT you are there. That is their role model. Why has a role model in a 13-year-old, 15-year-old, 16-year-old been carved like that in India and carved differently here? I mean, I don't believe that we cannot influence the kids in the same positive way. They want to do something good. Right? They want to -- they don't know -- just think of where we were at that time. We didn't know how the world really operates. We have to

provide them some ideas on how the future can be.

They love Mark Zuckerberg. Right? They love Steven Jobs. Right? They love to look at a guy like Bill Gates. Right? So they even love to look at Donald Trump. (Laughter) It worked. It worked. Suddenly -- I think it's a great show actually. I think it's a great show. (Laughter) But because it emphasizes some of the things that we need to emphasize to get the young society up to where we want it to be. Right?

But if we allow the Snookies of this world (Laughter) to dominate our societal discussion for the young, right, and I also believe that if we allow the infiltration of what we call soft drugs in our high schools and colleges, we have an issue. And we have to address it. And we can address it. And it's looming in almost all families from at least the debates that I'm hearing, right, because we're all equally concerned, right, and I think that is another aspect where we have to talk about more about those that have been successful, have some TV shows on there, talk about those. Those are great people and they are great role models. Right? So let me close with that. (Laughter and applause)

MR. BAILY: Thank you. Very wise words. Taste in TV? Not so much. (Laughter)

SPEAKER: I like the dating show.

MR. BAILY: Let me just follow up very quickly. So at least part of your message was we need the sort of smart regulation. We don't regulation which is going to hold back entrepreneurship, but at the same time we do have a role for government in these major technology projects. So can we --

MR. KLEINFELD: I would say it further. I would say it further. I would say you need a societal dialogue. It's not just the role for government because you also need to capture the angst that is in the working people in America. You know, you need a dialogue that happens in the open. Right? We have to go away from the points of all manufacturing in the U.S. is not possible. I think what Jeff Immelt said this morning is absolutely correct. In our industry, manufacturing costs, labor costs, I mean, irrelevant.

MR. BAILY: Thank you. I'm going to turn to Austan. There is an administration manufacturing policy and I think you've also put out stuff on innovation. But let me ask you to sort of respond to these comments and talk a little bit about do you think those policies are working -- will work? And what do you see going forward?

MR. GOOLSBEE: Well, yes. They will work and they are working. What policies were they? (Laughter)

MR. BAILY: This is the comedian part of you?

MR. GOOLSBEE: This is the (inaudible) manufacturing policy. You talk about currencies. I assure you're the working. (Laughter)

Where I was going to start, I mean, it's funny that we moved more and more into the cultural kind of explanations, about as far from where economists are as can be because we don't deal with humans, you know, we're economists. But I think there's an overwhelming bias toward the present in almost everybody, in financial markets, among economists, among your mom, among everybody. And when I was at Chicago I used to drive the carpool of a

bunch of kids down to school. And one of them had gotten this game Guitar Hero and he was passing the manual around and our daughter was in there and they pass it around and they had Guitar Hero '80s Edition. And I said let me see that. And I looked at the thing. I said, oh, yeah. I remember all these songs. And the kids said, Mr. Goolsbee, you were alive in the 1980s? (Laughter)

He wanted to know did I know Babe Ruth personally or this kind of thing. That -- we laugh at them for being five-years-old, but we have the same mentality depending on what your age is. You will remember we've gone through over the last 25 years two periods where the business cycle was ended and there weren't going to be recessions anymore, two periods where we had jobless recovery and there would never be jobs, and now we go into worse depression -- worse recession since the Depression. And the argument is we're toast. We're done. We can never come back.

Okay, well, now the data is actually coming in. People are looking fairly optimistic. There's a significant amount of money on the balance sheet. Corporate profits are setting records. It's true we have experienced a very traumatic event, but phase one of both government policy and the economy feels to me like we've come to the end of phase one. That was everybody's afraid we're in freefall and there might not be an economy sometime in the near future. And the policy response was about how do we stop a freefall? Look, you can be on whatever side you want. We can argue about each individual component of what the Fed did, what the administration did, whatever. We aren't anywhere like -- we aren't in any situation like where we were two years ago. If you don't think

that's true, you simply don't remember what it was like two years ago. You had Congress people telling their wives to go pull all their money out of the bank. You had people, I mean, it was a very frightening moment. I think it really could have been the Depression. In some ways it could have been worse than the Depression because finance is far more integrally tied up with the rest of the economy than it was in 1929.

So we avoided that. We now move into phase two, which there is a lot of uncertainty and we're gradually coming out and productivity was high and now output is starting to rise. Job creation naturally comes from output growth that you can't just satisfy with productivity growth. And that is starting to -- we're not going to have nine percent productivity growth on an annualized basis. I mean, maybe we can. That would be wonderful. But I don't think we're going to have that on some sustained basis. And so our output expansion, they will have to start hiring people. And you have started to see that.

Phase three is where we ought to be thinking, and that is what do we want to grow into? Where does the economy go? A key component of that is innovation and technology and education and immigration and the culture of entrepreneurship. All of that is true. But remember, there's two things making this painful. One is when you come out of a financial crisis-induced recession it's always painful. Always has been. Every country of the world and in the United States whenever that's happened it's hard -- it's painful to come out of it.

Two, we've just gone through a boom that was fueled predominantly by excessive consumption growth faster than income growth,

literally bringing the U.S. savings rate to zero and below. If you added up all the personal savings of the United States in multiple quarters in the 2000s, it was less than nothing. So that was an artificial frothiness to growth. And the second was residential construction fueled by a housing bubble which was also not sustainable. So we have to shift back to a more traditional kind of a business cycle, recovery through business investment, through education, innovation in our own people and through exports. We want to increase exports from the U.S. One major component of which is stuff that we sell people in foreign companies here, we sell it here in the United States, including education. If a foreign student comes to the University of Chicago to get an education, that counts as an export for the U.S. And last year we exported substantially more educations than we did computers. Than I'm sure we did aluminum. Than a whole lot of things.

SPEAKER: Sadly. (Laughter)

MR. GOOLSBEE: And in some ways -- sad on both sides, you know, internally we need to recognize -- the rest of the world recognizes, hey, they've got a good thing going. And it's not that we've gotten dumber. It's that everybody else realizes what they're doing is working. So we always had -- we led the world in the share of 25-year-olds with a college degree. Our rate has not gone down. It's just that a whole lot of other countries said that's a good combination. If you've got a lot of college graduates you've got high-paying jobs and high-skilled work and you track good industries. And so they put a huge focus in trying to up their shares. And the U.S. has now fallen behind.

Now, I guess we've caught up a little bit. In some statistic, we were

number 17. I think we're now number nine. And we were just below Bulgaria and just above Costa Rica. Now, I said -- I had a graduate student who was from Bulgaria. He said what are you saying about Bulgaria? I said, look, I'm not saying anything. What did I say? If you're educational level is just between Bulgaria and Costa Rica, 25 years from now your income level is going to be somewhere between Bulgaria and Costa Rica and that is not the American conception of, yeah, okay, maybe we'll be somewhere between 41st and 72nd depending how many new countries are invented, you know, and the other ones break up.

That's not our thing. We are going to grow our way out of this. When we get -- as the fire starts heating up people are going to feel a lot better. They always have. We were alive in the 1980s. We're going to be alive now. We're going to be growing in the near future. You've already started to see it. And people are going to start saying, hey, we weren't in the dumps as everybody said. We're a lot better off. You know, remember, China is growing fast. We're 12 times richer than China. They could double their incomes. We'd still be more than five times richer than them. A lot of the growth rate in developing countries comes from having a very low base. Okay, there are a lot of strengths in the United States and I think that in the language of the economic growth formula it's sort of K, H, and A. It's expanding the capital stock and encouraging investment. Where there is funding now sitting on the sidelines ready to come in, they didn't pay it out in dividends. They didn't say there are no investment opportunities in the U.S. Businesses sat on the money and they're now, I think, starting to use

that money and we're trying to use tax policy and others to encourage them to invest here at home.

H is human capital and investing in our own people. That includes innovation, R&D, as well as K-12 education and higher education. We know we've got to do that to be competitive in the long run and we should. And A is technological advancement, which the U.S. has been a historic leader. It has also had a major component coming from the government that national laboratories, the NIH, a variety of research and development funded through the National Science Foundation, through AARPA, through the Energy Department, have always been basic building blocks that could be commercialized and turned into massive commercial success for U.S. companies. And many of those benefits have saved our lives. They keep us alive longer. They've lit our houses. They've done a bunch of wonderful things for our standard of living as well as employed our people. And we shouldn't forget that.

The first thing to me that feels like it's caught in a crisis are investments. Because we have a bias to the present you say, oh, my God, we have no money. We can't afford. Let's deal with what's going to be 10 years from now when it comes. Right now we've got to consolidate. And that is an impulse we've got to push back against. We've got to be about a growth strategy. If we are growing there's virtually nothing we can't do, whether it's fiscal consolidation, whether it's innovation, whether it's making the investments we need, getting people -- motivating them to want to go get higher education in engineering. If we are growing, people are loving it. They want to go -- if you're

in the 1990s and we're adding millions of jobs and people are getting rich in Silicon Valley, every kid wants to go to Silicon Valley. They say that's for me. I want to live that lifestyle. If we're in the dumps, people are going to find something else to do. You know, we're going to watch the Super Bowl. The guy says, well, you know, I guess I'll fall back on my second option being a Super Bowl quarterback. You know, put the focus in a different place.

So I think K, H, and A are where we've got to -- we've got to fundamentally be about that. And that's not just for a thin crush of people who have a PhD in electrical engineering. I want to emphasize that. If you start looking at broad sectors of the American economy, whether it's retail, services, manufacturing and different others, improving productivity and innovation has delivered very high standards of living for average Americans over time. The last 5 to 10 years we've kind of broken that change that the growth rate of the country is tied to the growth rate of the middle class. And I think those two things have got to be tied together.

I'm sorry to go on a little longer but that's my view.

MR. BAILY: Thank you. Well, this is our second panel to take a swipe at sports and I do want to acknowledge that it is possible to be both a sports fan and interested in technology. And Glenn is an obvious example. And I would put myself in that category.

We have time for two quick questions because we've sort of run through our time a little bit. So can we get a couple of questions? Yes, one here. Can you make sure it's a short question?

SPEAKER: (inaudible). Thank you to Brookings for organizing this event. A lot of eminent people came and spoke but I think this panel is one of the best and one of the most inspiring. And everything that you described about being innovative and being creative and bringing in smart people, I think that me and a lot of people like me actually embody that. And even this panel embodies that because of the four people here, two of them -- one is from Canada and the other is from Germany. So one of the most attractive things about this country is that it attracts smart people. And the same thing that you said about MIT, I can actually vouch for that because currently I'm working in collaboration with MIT to create the next level of Internet. So the first was connecting the computers, next was connecting information through web pages to hyperlinks --

MR. BAILY: I like what you say but you've got to keep it a little short.

SPEAKER: Yes.

MR. BAILY: So can you get to the question?

SPEAKER: So one of the things is attracting very innovative people. And as companies which are (inaudible) other countries you see your business as a global business and why do you want to just focus on one country because you are a global company -- McKinsey, Alcoa, et cetera. Instead of just focusing on one market, to create jobs in one place, why don't you actually expand and see the whole world as your platform to grow upon?

MR. BAILY: Let's take a second question and then we'll get a response. Yes. Over there.

MR. EICHISON: Thank you. My name is Eddie Eichison. I'm part of the union movement. And I've heard consistently that labor costs are irrelevant. I know I've seen actually much more pain now than actually in 2008 and no one has really talked about that. They've talked about how innovation can take place without labor and I'm asking the question as to what are we going to deal with the proletariat, maybe, you know, the lower middle classes?

MR. BAILY: Okay. A couple of tough questions. Do you have quick responses? Why don't you start, Klaus?

MR. KLEINFELD: On the immigration front let me start with that. I think you were spot on. I think this is -- I think I said it. This is one of the beauties of this country, that it continues to attract the best employees, not only through the top universities but in general because it's such a great country. Right? And freedom. The concept of freedom is ubiquitous, I mean, attractive concept. So, and somebody who has not had it appreciates it even more. You know, so I think here at Brookings the best piece I have seen recently was a piece from Darryl, I mean, written on immigration. You know. And I think that we have to be super, super clear on getting our immigration policy back in shape. And I think it has gone into the wrong direction after September 11th and we have to bring it back in shape.

I mean, to get people educated here, attract them here and then send them back, you know, or force them to go back -- it's not sending when you're forcing them to go back because they would love to stay here. Not a smart strategy and, I mean, not a very good value creator.

On this other one, I mean, my take on that is -- I said this at the end, I think we need a broad dialogue. And I think there's plenty of jobs also for people that are not so well skilled. And I've seen that but you have to change the model on how you deal with unemployment. And you have to put more options around reeducation. I think you have to put more options around also -- and it can be done with the unions, in cooperation with the unions. The big question is what's the future role of the union? I believe one of that is to provide a better guidance for how do you skill yourself. Because companies, as much as they are socially responsible, I mean, cannot guarantee lifelong employment. That would be unrealistic to say that. Right? But what we can do is we can provide skills. Right? And I think to help people navigate better through the jungle of what skills will be valuable in the future here, I think it's a great, great asset. And I've seen -- I've seen -- I mean, we currently have a situation. I don't know whether this was addressed here, where in the U.S. we have too few welders. You know, now welding is not that difficult to learn. Right? So I don't understand why that could happen. You know? We're seeing that the population is aging, you know. Just try to find somebody who is qualified to take care of your mother or your father when they are old. Right? Very, very difficult. The job to do that actually needs a human. It cannot be automated. In fact, the elderly person cannot be moved. So it will not find the way of being outsourced to India. But what we do need is we need qualified people that want to do that. Right? And I have millions of examples of that, right, but I don't want to --

MR. BAILY: Dominic, do you want to say a couple of words?

MR. BARTON: Maybe two seconds. I think on the talent side we clearly want to go where we can find the best talent in the world. And with 13 of the top 20 universities being here, when we're hiring for our German office, Madrid office, Nigeria office, we find a lot of the people here as well in those places. So it's -- I think it's part and parcel of the strength of here.

And I think on your point of the proletariat side dealing with the lower skilled workers, I think one area that we don't talk enough about which we should be actually polytechnics. We focus a lot on higher education which I think is important, but polytechnics, the welders, the radiologists, they're very important. I think this goes with the immigration. The service industry plays a very important role I think in this country in developing and training workers and the group through it. So I think polytechnics is a way where we can help build some skills quickly.

MR. KLEINFELD: And actually learn from other countries.

MR. BAILY: Right. Right. Absolutely. Austan, do you want to have the last word?

MR. GOOLSBEE: I just say to that this was the first boom -- 2000 was the first boom in U.S. history that we have data on where the median family's income fell by \$2,000 over a boom. A whole lot of bad things happen when the middle class is not tied to overall economic growth. If that is not broad based it's, in my opinion, facilitates asset bubbles, tends to be high concentration of investment driven in small sectors, and difficult to sustain. So I think we've got to embrace that broad-based mantra.

And I think when the economy is coming back now you are likely to see movement in the direction that people are going to be feeling a lot better about -- we've gone through a period that appeared to pit the interests of businesses against the workers where they say, look, we've got to find ways to save money and the best way for us to do that is get rid of all of our employees. And it appeared to pit productivity against labor. Obviously, over the long cycle of U.S. history, productivity growth has gone into wages. And I think we've got to get back to an environment where business is growing, the workers are also benefiting, the middle class is benefiting, and I feel like we are about to -- we saw that in the '90s and it feels like we could be on the cusp of a beginning like that now, too.

MR. BAILY: Thank you very much. Well, we've run out of time. More than run out of time. I would like to thank our panelists who I think were absolutely terrific. (Applause)