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FOSTERING GROWTH THROUGH INNOVATION

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Panelists:

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P R O C E E D I N G S

MR. TALBOTT: I'm Strobe Talbott, and it's my honor to work here at the Brookings Institution and to be associated with a number of terrific projects, including the one that we're going to hear a little bit about in the course of today.

This is the fourth forum of what we call our Growth Through Innovation Project or Initiative. It's the second one that we are conducting in public, and I want to give you just a little bit of background before we get started with the program itself on how growth through innovation fits into the agenda of the work that we do here at Brookings.

Brookings is a fairly big outfit with well over 100 scholars who work in a variety of different disciplines, bring to their work a number of very different professional experiences and perspectives, and we have come up with four what we call all Brookings priorities under which we cluster much of the work that we do here.

One of those priorities is growth through innovation. Those three words almost explain themselves, but my friend, colleague, and trustee Glenn Hutchins in just a moment will tell you a little bit more about what lies behind the concept and what the purpose of that particular priority is, and the project that we are carrying out under its auspices.

Just to put it into context, let me mention what the other three All Brookings Priorities are. One is energy and climate policy, another is how to improve opportunity and wellbeing for not just all Americans but all citizens of the world, and the third is managing global change. The way in which we are going to proceed here is as we have done in the three previous forums. We brought together, as is apparent from those here in the room today, Brookings experts, public officials who will be joining us during the course of the proceedings, leaders of the private sector such as Andrew Liveris of Dow, opinion leaders, and we're going to have focused discussions among those and those discussions will be in many ways based on research work done by Brookings scholars and the discussions themselves will be led and guided by Brookings scholars such as Alice Rivlin and Gary Burtless, from whom you will be hearing very shortly.

We will today also be releasing four papers, all on the broad subject of the jobs crisis in this country, and the authors of those papers will be participating in today's panels.

Let me stress that growth through innovation like the other three Brookings priorities is very consciously interdisciplinary, both in the work that's done and in the leadership here within the institution that guides those projects. We are reaching out to a number of our research programs. For example, Growth Through Innovation is led by a troika of Darrell West, the vice president and director of our Governance Studies Program, Bruce Katz, vice president and director and the founding director of our Metropolitan Policy Program, and Martin Bailey of our Economic Studies Program.

The whole project is very much a partnership between Brookings scholars and management and Brookings trustees, and we're very glad to have with us today and participating in the proceedings three of those trustees who have been so important to this project. Glenn Hutchins, who you'll be hearing from next, Klaus Kleinfeld, and Dominic Barton.

So with that, I will turn it over to Glenn.

MR. HUTCHINS: Thank you, Strobe. I was reminded as I was listening that you're just a wonderful leader for this organization. Thank you for everything that you do.

Today in the United States, our GDP has gotten about back to its peak level of third quarter 2007 and we employ slightly more than 6 million less people to do that today. By all measures, today's job crisis is deep and complex and probably much more durable than we would like it to be, and it's perhaps one of the most important problems our nation has faced, and it's to that problem that we turn our attention today.

What you're going to see today reflects a resolution by the leadership of Brookings, the executive leaders, the scholars, and the board to focus the resources of Brookings, as Bill Clinton used to say, like a laser on what we can do to help. I think Brookings is uniquely equipped to make a contribution and perhaps quite an important one to the understanding of this problem, as reflected by four elements of what we're going to do today.

First you'll see today and I stands out, I think -- always uniquely impresses and pleases me when I do something at Brookings -- is the quality of the work of our scholars. We have very important papers that are going to be released today that examine key aspects of the crisis and offer paths forward. The authors will be on our panels today, and they will be joined by others of a more distinguished scholars, and you'll see Brookings' intellectual throw-weight on parade today, and that should be fun.

Second is the broad scope of what Brookings does. You'll get a glimpse today of the range of issues, geographies, and disciplines across which Brookings scholars work. Today, we're going to explore a broad range of business sectors, from manufacturing to high-tech, and look at the issues from this perspective both from the national policy questions as well as state, and particularly metropolitan initiatives.

Third is Brookings' engagement with the real world, something we call impact. Our work today is not going to be a sterile academic exercise, but one which is deeply informed by dialogue and exchange of views with important leaders in business and government, who you'll hear from today and I want to thank them in advance for their participation, making the effort to come today.

And finally, fourth is our leadership. In addition to our institutional role as a thought leader, Brookings' leadership itself has made a profound commitment to disentangling the knotty problems we're going to discuss today.

Three of our program leaders, as Strobe mentioned earlier, have made huge contributions to today's event and the underlying initiative and I want to thank them personally. Martin Bailey, Darrell West, and Bruce Katz, gentlemen, thank you very much for what you've done. Our senior-most leadership has endorsed, supported, and worked hard at this project. Our CEO, Strobe Talbott, as well as our chairman, John Thornton. Our board has been deeply engaged. Two of them are going to be on the panel -- panels today, as Strobe mentioned. Klaus Kleinfeld and Dominic Barton. Thank you, gentlemen, very much for that work -- as well as Anne Fudge and Steve Denning, who have been real dynamos behind us.

Collectively, our leadership has resolved to put the resources of Brookings at work today on behalf of the 13 million Americans who are unemployed. And so, let's get started.

The first panel is led by one of Brookings' great luminaries who certainly needs no introduction on this stage, Alice Rivlin. Thank you, Alice, for coming here today. And, one of our other scholars, Gary Burtless, who has produced one of the papers that is being issued today, which I'd recommend that you read. Our own Klaus Kleinfeld, CEO of Alcoa, and guest of ours and a very special guest, Andrew Liveris, is CEO of Dow.

Thank you all very much for coming, and I know we're all looking forward to your panel.

MS. RIVLIN: We're going to hear a lot today about ideas for strategies for making the U.S. economy more competitive and creating more jobs. But, we have to start from where we are and where we are is a difficult spot, as all of you know.

We have to start from a realistic look at why the economy is struggling. Why do we have 8.5 percent unemployment? And a lot higher number, if you include all the people who are either looking for work and have gotten discouraged or who have a job but would like a better job or to work more hours. And, why has unemployment stayed so high for so long? What is standing in the way of a more rapid recovery? So, the job of this panel is to focus on why we are where we are and where we might be going.

One thing that you may be very glad of is, you're not going to hear any political blame game today. You will hear no references to it's all the fault of the Democrats, it's all the fault of the Republicans. You will hear no politics, but sober analysis of what the situation is and what can be done. But, that's not to say it won't be controversial. It's a very uncertain situation, and you will hear different views of what is happening and what might happen.

To start us off, we have my colleague, Gary Burtless. One of my favorite colleagues. You can always count on Gary to know what the numbers show, to have dug deeply into subjects like unemployment or unemployment compensation, or what really is happening to the distribution of income, what's happening now that we've had welfare reform for 10 years. Gary applies his very considerable skills to those kinds of topics, and he will summarize for you the main points of the background paper which he and his colleague Adam Looney, have written and which I hope you will read. It is available. And then, we will turn to the CEOs of two major global companies to see how they see the markets and U.S. competitiveness.

So, Gary. You and Adam Looney did what I thought was an excellent job of laying out the current dismal state of the labor market and how we got here. The high unemployment and the slow growth since the recession ended, that the recession precipitated by the crisis of 2008. We had stagnant wages for a long time. There isn't a lot of good news in your paper. We've had inadequate consumer demand, and all of this has been especially influenced by the plunge in household net worth as a result of the catastrophe in the housing market. And you and Adam have also explored hypotheses about why the economy hasn't come roaring back.

So, I hope you will tell us about what you found. And in a few minutes, for those who have not read the paper, summarize what you think the situation is and why it isn't better.

MR. BURTLESS: Well, this is the first session of the day, so I think it would be worthwhile to talk about what got us to the current fix and then, what are the explanations for why unemployment has remained so persistently high over the last 24 months.

Most everybody in the room recognizes that the great recession was connected to a big run-up in house prices, and then a collapse in those house prices, with fallout for the financial institutions that held all kinds of financial instruments that are backed by home loans. The spectacular decline in the value of houses, which directly hurt consumers' buying power, translated into an equally spectacular fall in the value of a lot of the financial products that are backed by home loans, and that collapse in those critical values brought the financial system of the country very near to collapse.

Fed action, Treasury action, the TARP legislation played critical roles in keeping that financial catastrophe from occurring. So, the financial system of the United States continued to function but there was a huge falloff in the value of, first of all, the financial institutions and, second, all of the non-financial institutions that are selling goods and services to the American public.

Between 2007 and the beginning of 2009, the net worth of U.S. households fell by more than a quarter. That erased $19 trillion worth of wealth in the United States, measured in today's prices. The stock and bond markets have partly recovered, so there has been a rebound in some of the asset prices, but we've still seen about a $15 trillion disappearance in the wealth that households had before the recession began. There has been essentially no rebound whatsoever in home prices. They fell sharply and they're still very low.

Now, if households spend about 3 percent of the value of the assets that they own, the drop in that household net worth would translate into consumption falling by about $400 billion a year. That means without the crash in asset prices, the flow of household consumption would be about 4 or 4-1/2 percent higher than it was in the last quarter.

Now, a lot of the lost wealth was in housing, which is a very widely-owned asset in the

United States and there's a lot of evidence from the last 20 years that, in fact, households spend more than 3 percent of the improvements in wealth that they have in their homes. They may spend as much as 5 percent of it, and this suggests that household consumption might be $750 billion higher without the erasure of so much household wealth.

But whatever estimate you prefer, the house price collapse and the ensuing asset price decline removed a whole lot of consumer spending power from the economy. The drop in consumer spending can be expected to reduce business demand for workers, which has another impact on consumer buying power. When people lose their jobs, they lose the wages that those jobs give to them.

In short, the direct and the indirect effects of this financial crisis, the big, spectacular decline in home values, has created a huge shortfall in aggregate demand in the United States. The Fed's action, the TARP legislation, a variety of stimulus programs have all offset part of this loss but not all of it. Interest rates have fallen at the short run for safe assets to zero percent, so there's not much more the Federal Reserve can do through traditional monetary policy tools.

The drop in the economy directly reduced the market incomes of American households. Those fell 10 percent compared with their peak levels before the recession began. All of the federal counter-cyclical measures tended to reduce that decline, that 10 percent decline on what the market gives us as household income to just 3 percent loss. We pay less taxes than we did before the recession, we receive more direct government benefits, mostly in the form of unemployment benefits. But still, there's been a decline in disposable income in the United States, which also reduces consumption. So, there's been a huge loss in household wealth, which still depresses consumer demand for a wide range of the goods and services that are produced here in the United States.

We are emerging from the slump, slowly, and way too slowly, most people would say. The gap between what the economy does produce and what it could produce is about a trillion dollars, or roughly 6 percent of what the potential output of the United States is.

Now, there's a very straightforward explanation for why we are where we are, with 8-1/2 percent unemployment, with an unemployment ratio that has dropped 5 points -- 5 percentage points -- since the beginning of the recession, and we have a 6 percent gap between potential and actual GDP, and the explanation that fits the facts is that there's just too little aggregate demand in the United States.

Using conventional monetary policy tools, there is little more that the Fed can do. It has reduced interest rates in the short run to as low as they can go. It cut short-term interest rates on safe assets to zero early in the slump, and that's where they have remained.

The usual policy remedy, when you've exhausted monetary policy tools, is to rely on fiscal policy. Some of you may be saying, well we tried that and it didn't work. There is no evidence that the fiscal policy failed, none. Six months after the onset of the biggest stimulus package that we had in the slump, the economy stopped falling like a rock and started to grow again. Within a few months, private sector employment began to grow slowly, but it began to grow and its grown ever since. About a fifth of the growth in the private sector employment since the low point has been offset by declines in the number of people on public payrolls. State and local governments face harsh fiscal realities and they are reducing their payrolls, offsetting some of the gains in the private sector.

I estimate we would need about 10 and possibly 11 million more jobs today in order to reach full employment. Last year, we added 1.6 million jobs. At last year's pace, we would need about 6-1/2 years to generate 10 million more jobs, and during that 6-1/2 years the population of working age is going to grow, so we'll need millions more jobs besides that.

What is tragic is that much of the excess unemployment is unnecessary. There are a lot of useful things that, say, 2 or 3 million more employed Americans could do if they were put on public or private payrolls to improve the country that we live in. There are millions of savers eager to offer the United States government their savings by purchasing United States government debt, and in other words to lend funds to the government at historically low interest rates so that the government can put those funds to use. If households and businesses are unwilling to spend their cash reserves on consumption or on investment, the federal government can certainly identify, it can organize, and it can complete useful projects with the money that households and businesses are willing to offer to the federal government for that purpose.

So, the first thing we can do to boost aggregate demand is to build or to improve the nation's public infrastructure. We can also offer direct incentives to businesses to add to their payrolls, this year or next year. For example, we can exempt businesses that expand the number of people on their payrolls from making payroll tax payments on those additional workers. This makes it cheaper for companies to expand their businesses this year and next, in comparison to expanding them three or four years down the road.

So, what are some of the other explanations for why we're in such a persistently terrible state as far as the labor market is concerned? Well, one is that there's a skills mismatch. Today's unemployed simply lack the skills that the expanding businesses and occupations need, and consequently this mismatch means that they're unnecessary unemployment, which could be fixed if we retooled the skills of unemployed workers, which could be fixed if we paid businesses that are expanding to train workers in those skills.

A second theory is that the social protection in the United States has become much more generous in this slump compared with all of the previous slumps since World War II. Now, it's certainly true that the United States has been more generous to its unemployed this time than it was in earlier recessions. That may have added 2/10 of a point or 3/10 of a point to the current unemployment rate. Some economists say that it's added 8/10 of a point to the current unemployment rate. Still, the fact is that the unemployment rate even if we subtract 8/10 of a percentage point from it would be very high by post-war standards, so far after the end of a recession.

Personally, I'm not sure that the upper level estimate is a very good one, but something to remember is all of the improvements in our social protections since the slump began have been explicitly temporary. Many of them have already come to an end, and I'm pretty sure that the extensions in unemployment benefits up to 99 weeks are going to be scaled back over the next year or two, and they're likely to go back to where we were before the recession began within two or three years.

My reading is that the unemployment rate is high and it has remained stubbornly high because the unwinding of the house price boom had direct and indirect consequences that has removed a lot of buying power from the nation's households, and that in turn has made businesses very unwilling to expand or to make investments that are going to increase the scope of what they produce here in the United States.

The remedy, it seems to me, is to take direct action to boost aggregate demand through the most reliable tool available to us right now. Namely, direct government purchases of investment goods and indirect subsidies to employers to expand their payrolls and businesses in the near term, rather than four or five years from today.

MS. RIVLIN: Thank you very much, Gary, for a very lucid position of your paper and its findings.

Let me turn next to Klaus Kleinfeld, who runs Alcoa, an absolutely huge industrial company -- global company -- that I think employs about 60,000 workers here and in many other places.

You've been dealing with this very difficult situation around the world with volatile markets and rapid change in lots of dimensions, and you've dealt with it for a lot of your career. You came from another big global German-based company, namely Siemens.

So, could you tell us in a few minutes how you see the current situation, both the economic situation but especially the future of the labor market in the United States? And if you comment on the skills mismatch hypothesis. Has it affected Alcoa, and how do you see it generally?

MR. KLEINFELD: Sure. Why don't I go straight into the aspect. You described the environment, and let me throw a few slides out on what opportunities do we have here to create jobs. Because I'm with you, there are a lot of opportunities here, and some of those can actually be put off on a pretty short-term basis.

I see basically three what I would call levers there. The one thing that you already talked about is the workforce of the future, and that has two aspects. I'd be happy to elaborate on that. One is the re-skilling, and the second one is immigration. I think we cannot leave that part out, right?

So, the second thing I see is innovation -- I mean, growth through innovation. The first public panel here we had a lot of good ideas around that. We should not forget about it, and again that also in my view has two big sub-aspects. One is entrepreneurship. America is the country where entrepreneurs are grown. Thousands of stories -- the American dream, I believe, is still alive, you know and will be kept alive, I believe. And the second thing is large-scale innovation where you need government. On the first one I think the best the government can do is just set the frame conditions right and that's it.

And the third big aspect is the question of countries are competing around the world for a share in the globalization market, so to say, right? There's a lot of things going on. You saw at the Detroit Auto Show this week, I mean, more politicians have been going there and why did they go over there? Because a lot of the automotive companies -- foreign automotive companies see the U.S. market growing and believe they want to have a bigger share in there. And what do they do? They invest here. So, the whole competition around foreign direct investment, you know, to get more of it over here.

And one very simple -- bringing some of the things that have been outsourced in the last years, bringing those things back. As a matter of opportunity, work environments have changed in many places, not to the better. Whether these things have been outsourced to experiences there -- I mean, mixed. And also, here the environment has changed.

And the third thing on that end is dealing again with the same underlying issue that immigration is dealing with, with the question of who do we let in? I mean, when you travel around the world you see that the middle class is growing all around the world. Once they have their refrigerator and their car, they want to travel, they want to see the world that otherwise only comes to them on TV. So, tourism is booming.

The interesting thing is, last year France saw more Chinese visitors than the U.S. did, and I think that is not a question of the preference of the Chinese but more a question of how we deal with it. I've seen estimates from experts that say through tourism alone, which is already today the fifth-largest sector here in the U.S. is tourism, alone we cold create pretty short-term 2 to 3 million jobs, right? And when you talk to people around the world, they all would like to come and visit the U.S. So, there's a lot of ideas.

So, on the re-skilling front, let me go to the re-skilling because you asked are we affected by it? Absolutely are we affected by it. And we talked a lot about -- I mean, K-12 education, let me leave that aside. We know that that's an issue, there are good solutions there. But let's talk about the occupational skills.

The way that the occupational skills are changing drastically -- I mean, the workplace today requires people are knowledgeable about handling difficult equipment. So, we see that there's a shortage here in the U.S. and almost all places. I mean, we have started -- in a lot of our sites here in the U.S. we have started programs, together with the community college so that we can do in the evening hours and on the weekends, that we can do re-skilling training. And what do we offer there? We offer industrial machinist jobs training, so to say. We offer industrial maintenance training. We offer welding -- we had a discussion about welding where Andrew also said we need welders. And it's not that difficult. I mean, you don't need that -- to be the biggest genius for all of those three jobs, but --

MS. RIVLIN: Even girls can do it.

MR. KLEINFELD: Absolutely, and I would encourage girls to do it. We're doing that with great success. Last year, 900 people have enrolled in that program. We will continue to do that for Alcoa only, right? And it's very, very successful.

But again, I mean I don't want to leave the immigration side of things out because I believe that when you look at the statistics here, I think 25 percent of all start-up firms in the high tech space and engineering space have been founded by immigrants. And I recently mentioned that statistic to Vladimir Putin and got a very interesting response. He said, America is really great at doing these things. We don't want the President of Russia, you know, basically acknowledging and us starting to forget about this, right? I think we have to come back to the roots there, right?

So, there are my thoughts on these subjects.

MS. RIVLIN: Let me pick up on one thing you said about entrepreneurship because I think a lot of us think entrepreneurship is something that starts in somebody's garage and is inherently a small business thing.

Do you want to talk about it a little bit from the point of view of a big company?

MR. KLEINFELD: Sure, but the small company pot is important because you need to instill this mindset -- I only briefly touched it. The mindset of entrepreneurship is truly a unique feature here in the U.S., right? It's one of the things that gets adored from the rest of the world and there are some structural aspects also.

When you look at -- I think it's almost 40 percent of the venture capital money worldwide is available here in the U.S. You talk to kids that are in other places around the world that want to start a firm, they have much more difficult time to find people that invest in them. So, the equal system, the fabric that we have been able to build here, in general, is extremely favorable. The mindset, the cultural aspect that we have here, is unique and we should be mindful of that and should continue to build on that, and basic -- this structure. We have a Silicon Valley that only exists here in the U.S. We have partial Silicon Valleys that exist in Boston. Just this morning on the way over here, I saw a statistic that New York has now received more venture capital funding for the first time, you know, this year, which is great.

This is really not a competition, I think this is something where things come together, right? Build an ecosystem which feeds into itself.

The other thing is this large-scale innovation. When you see some of the large-scale changes -- and I see the energy sector as the biggest one. There is so much going on in the energy sector. It's almost too big even for big companies. And because the deals were so many fragments -- if you want to put this together, it deals with so many fragments that together it could act synergistic. So, you need kind of an intelligent coordinating hand in that.

And, I'll give you a for instance on that. A good friend of mine just recently told me that he had been invited by the Chinese -- he's on one of those advisory boards. During their spare time, they drove him out -- and he comes from the energy field. In the spare time, they drove him outside of Beijing to a test field and it's about a two-hour drive from Beijing. This test field is literally -- I haven't been there, I only describe it second-hand. He says it's basically every windmill operator in China has a couple of different windmills there. So imagine this is a field that has three areas. One is a wind farm, what with different types of wind turbines. In the middle you have different types of storage devices -- energy storage devices so you can test those ones, and on the right-hand side you have solar -- different types of solar.

Now, the cool thing with that is with the combination of that you actually mimic something that creates a base load because during the day, there are many areas where the wind dies down, you're in the daytime, and when the sun comes out. So when you combine this you get rid of the classical problems that you have with these type of renewable energies that you only have at peak times. So if you combine these things, and if you put in the middle some type of very effective storage device, you can literally mimic large-scale what we otherwise only got through kind of nuclear power plant, but you get it all from renewable.

To do this right, you need a lot of companies, including the grid to handle this, with elements of the smart grid. Those are the types of things that I think we need on large-scale innovation, where companies can be brought in but you need some intelligent hand around this to say, well let's take a look at that. And in this case, I think it's handled by some universities that have come together. It's almost a let's go to the Moon projects. I think it would be worthwhile, absolutely worthwhile to do it, if we don't want to lose the boat.

I saw yesterday that we are praising now that more investment has been going into renewable here in the U.S. than in China. That actually is a pretty lame statistic because if you look at the -- it's a very lame statistic because if you look in to what's happened in this industry, this industry has been highly subsidized in the past. So to get it started, it's fine to get it started like that, right? But the reason why currently a lot of the solar and the wind power firms around the world are having trouble is because governments are withdrawing their subsidies and are telling them you have to stand on your own. I just think it's the right thing to do, but they can't stand on their own because the model doesn't get worked, right? So, that shows a dilemma here, right? So, that's my thought on that.

MS. RIVLIN: Thank you very much. (Laughter)

One of the things Brookings does is try to distinguish between lame statistics and real statistics. Thank you for that. (Laughter)

Let's get Andrew Liveris into this, because you also run Dow, which is a big chemical company involved in all sorts of different kinds of products. I was on the board of a different chemical company some years ago and the one thing I learned is it's a very cyclical business and it's very intertwined with consumer products at every level.

So, Andrew. Can you tell us a bit about how you see the current jobs picture and how you react to some of the things that Gary and Klaus have said?

MR. LIVERIS: One of the difficulties of being last in the panel is, everything's been said but not everyone's said it. So, I do want to make sure I kind of highlight some of the key points that I violently agree with that's already been said by Klaus and Gary and others.

And I think if I can start at the widest end of the funnel, we are indeed global. 160 countries, 50,000 product families, not as cyclical as you think these days because we've gone to science-based agendas, but we have a lot of touchpoints with 2/3 of the company outside the United States. And like Klaus, a huge wingspan in terms of employee base.

I tell you that the United States and the forces of globalization on capital, labor, and consumption -- I think we are not having the right debate, and I think this forum, this panel, and what Brookings is doing all day today is what I consider the beginning of a very large debate that the United

States needs to have. And at the widest end of the funnel, it's really that short-term fixes in the short-term political cycles are vastly inadequate now for what's going on in this globalized world of ours.

And really what we do need is very thoughtful strategies -- if you like, 5-year and 10-year plan approaches. So it's not business as usual, it shouldn't be government as usual. How do we integrate great thinking that occurs in think tanks like this one with what global enterprises like Klaus' and mine are now experiencing and seeing, and how we make decisions. And the myths -- you know, the myths that we're going overseas because of cheap labor and the myths associated with protectionism elsewhere and, you know, what is fair trade versus free trade and what does that really mean? And energy policy, and how those all factor in to our decision making.

It's no longer follow market, it's no longer putting a mill in a market just of the same of that market. Because to state the obvious, we only have 300 million consumers here -- albeit, up until 2008 very big consumers. There is 6.7 billion outside. So, this world of ours is a massive opportunity that needs to have the United States very integrated not as the center of gravity alone anymore, and certainly the break in the housing bubble that Gary so well described, has put a new pressure point on the word "consumption". So, follow market -- put in mill -- has a new dimension, and it's the globalization of skills.

And I want to get down to that one because that's where I think the panel was honing in on, in a minute, but I want to stay wide if I can for a while because we're following skills. Other countries -- and Klaus alluded to it -- are putting in place 5- and 10-year strategies -- and I'm talking about free market economies. I'm not talking about directed economies like China who clearly have a 5-year plan and a 10-year plan. I'm talking about countries like Germany and others that are free market economies but they're a little more directed, a little more thoughtful about where we're going as countries. Where countries are going in this globalized world where capital is flowing and markets are fairly open and in terms of labor and skills decisions, these are being made based on where you can find the skills.

And I would tell you that the short-term fixes, whether it be the stimuli, monetary, and/or fiscal, whether they be exports -- which is a phenomenal story here in the United States in the last year or so. I think that focus on exports has been much needed. But clearly, those are short-term and what is really required -- and I think our leaders in government and leaders in business need to come together and figure out how to do this in a very thoughtful way -- is, how do we in fact create new demand? Gary referred to it. Where is this new demand? And clearly, I would hone in on the three that have already been talked about.

I think the country is in huge need of directed-demand around infrastructure, directed-demand around energy policy, and clearly the whole focus on renewables, whether it be solar or wind. And as Klaus has already indicated, this is a holistic approach, it isn't a piecemeal approach. Natural gas and now the shale gas boom and how it can play into a revitalization of the United States economy. It's a once-in-a-lifetime opportunity, in my view, to a low-carbon answer to many of our fossil fuel booming issues.

And then of course, this whole discussion around exports and what a disgrace that we've only had three free trade agreements in the last seven years under two different administrations. That was not a political statement. And so really, at the end of the day, how do we put energy, infrastructure, and exports central to the agenda in a 5- and 10-year look?

And I would tell you that there are policy impediments that are out there, whether they be the tax kind or whether they be the regulatory kind. Whether they be, indeed, the fact that we are very uneducated on trade at the factory floor level. Our American workers don't understand that 10 million jobs in the United States are there because of exports.

We have a lot of structural impediments, but for me the big structural fixes are in front of us, and I think the debates of today are going to help us get to -- Klaus has already alluded to one, which is immigration, and I think that's a biggie for the United States that it needs to stay well in place and we need to be very open-minded about it. Keep bringing in people from all over the world to help this country become its next century of entrepreneurship, because that's why people come here.

People come here because of the freedom model, and you've got a German accent here and a vaguely Australian one. (Laughter) We are here because of your freedom model, and just to be very clear about that. So, bringing in the best schools around the world from wherever they come.

Education and, clearly, the address to STEM. That's a big structural fix and I won't dwell on it because of my limited time. Skills retraining and skills mismatch. I want to segue from that point into the advanced manufacturing partnership that I co-chair from Susan Hockfield. I think Secretary Bryson is going to refer to it in his remarks when he gets here after this panel, but we are for the first time in my many, many, many trips to Washington finally bringing together universities, big corporations, small companies, and government departments to take taxpayer dollars that are already being spent and focus it. Focus it with the input of the private sector and our institutions, our research institutions, and honing in on the pillars that matter.

And just to repeat them for you -- Secretary Bryson will go in to some detail, I'm sure -- which technologies. We've already identified the technology areas, inclusive of energy efficiency and renewables. But advanced sensing, advanced materials design, information technologies, and nano-manufacturing technologies.

We've addressed shared infrastructure. How to get the synergy of the whole versus the lack of synergy of the part. Manufacturing innovation hubs is one idea that's coming up as a proposal.

Third, education workforce development. Here, the community colleges come in. Taking from the German model and taking the high school diploma and retooling that high school diploma for modern age manufacturing. And last but not least, policy issues that I've already touched on.

This is a little more directed market economy than many in the free market model are ready to accept, and I really say -- and I want to close with that statement that I opened with. This country has to realize that countries are competing like companies, and they are bringing in manufacturers of the advanced kind like Klaus and Dow and others to their economies because they recognize the two major drivers. One, new job creation. Not just inside the plant fence, but around the plant fence. One to five, all high-skilled. So, it's not -- you don't just count the jobs in the manufacturing plant, you could them in the supply chain.

Two, innovation follows, okay? This is not low-tech manufacturing, it's high tech which means that your research universities that are attached to it grow around it and then have a proliferation of entrepreneurial action, big company and small company kind. That's directed, that's our competition as a country, and I think we have to really realize that if we don't bring the debate to that level we're going to not only have a jobless issue for a long time but we will actually lose out. Whether it's a question of new industries or whatever it may be.

So, that's my thoughts, Alice, for a start.

MS. RIVLIN: Terrific. Well, I think it's very interesting that these two immigrants have brought our attention to the contributions that immigration can and has made.

I wonder if either of you think more could be done by the business community to educate the public about the benefits of immigration. That, you know, we have this backlash which is largely directed toward people perceiving that they're losing their jobs to immigrants. Could the business community be doing more to turn the tables here?

MR. LIVERIS: Want me to start? It's a violent year, so I think -- it's an all of the above. I mean, business leaders -- I think Klaus is a great example of this and many of us who are out there today -- CEOs are becoming much more active out there in public policy than ever before. I think the era of hiding and just honing in on one aspect of running a global business, i.e. the P&L, is over. And I think we touch so many areas, not the last of them being how to get the workforce of the future designed.

MS. RIVLIN: Right.

Mr. LIVERIS: And immigration is there for our policy, that matters. So we've got to educate our workers and we've got to be doing more in concert with government and local community people.

MR. KLEINFELD: I think we're almost beyond the information point because -- here Darrell has written about it. It was last year, right? About immigration. I said publicly even without you being present that I think that this is one of the best books that I've read on it because it provides a solution to the stalemate that we're seeing.

I've come to a point where I believe business leaders should be absolutely crystal clear to both sides of the aisle that we are not willing to accept and are not willing to discuss with anybody here who is supposed to be an elected official representing the good of this country who is not willing to have an open mind on the immigration issue.

Basically, you see a stalemate. On the one side people say, well you know, we only accept the H1-B1 visa thing if you also find a solution for bringing the illegal immigrants on, and the other side says, well we will never talk about the illegal immigration but we want the H1-B1, so decouple it.

Obviously this cannot be decoupled. I believe it really cannot be decoupled and I think there are solutions to solve it in the right way because there are 12 million people that are there. How can you really work in an environment with that? I think that's ludicrous to believe that, right? And there are good answers and there are partially bipartisan answers, and we have to take it on. I think the business has to actually be much clearer that we are not willing to accept it because it brings our competitiveness in the U.S. down.

MS. RIVLIN: Let me raise another question before we throw it open to the audience. Gary touched on infrastructure, but you talked mostly about it as a way of creating additional demand rather than as a way of increasing productivity. And I wonder how the business leaders look at the U.S. infrastructure at the moment, which many of us see as crumbling, and how it affects you?

MR. LIVERIS: Well, I think we've all heard the stories where you land at airports in the U.S. and you feel like you're in the third world compared to landing in Beijing, et cetera. So, that's the consumer-oriented view to infrastructure. But road, rail, ports, pipelines.

We have gridlocked the approval processes. We have over 60 agencies involved in permit issuing. There's only a couple states in the nation that are easier than that. The ability to get anything done in this country as a private sector company is almost beyond belief. And so you know, we're trying to break through.

I joke often when I go overseas I get red carpet, when I go inside the U.S. I feel like it's red tape. (Laughter) And really, it's just gridlock in terms of, you know, even getting solutions for our enterprise.

Now if you explode that up to the national level and say, well how do we actually coordinate this between federal, state, and local, I think the answer is very evident. I think it's not only a productivity issue, it's actually determined from investment issue. And we go to states that are more friendly in the permitting process and can expedite because you know, obviously time is money. I think you all know which states they are, there's not many.

MR. KLEINFELD: It is a big issue, it is a bigger issue than I ever thought it would be, and it has increased over the last years, unfortunately. The interesting thing is that on the local level people are very understanding because they understand what needs to be done to keep the competitiveness up, but their voices are not getting through or it takes a long time.

And unfortunately, what people don't see is how heavy the competition is for investment. We are -- what Andrew says is literally true. When we go to some places, I mean you really have a welcome bus there, basically, waiting and people saying, well you want to invest? We give you this, we do this, we do that for you, right? So, that's a very fast environment. And they are competing for our investment, right?

And if you compare that to investing at a place where you say, well I need that permit, I have this thing still hanging there where I have un-clarity, you know, and how do I get that resolved? The local leader says, well yeah, I can get it resolved but then it gets pushed out. You know, it gets pushed out. I say, okay, for another four weeks. Well now it's another three months and, by the way, I was willing to present it to my board in three months and unfortunately I don't get an answer so I'm not going to present it to my board, you know. And this is stuff -- I could give you a whole list of things here in the U.S. Very unfortunate, and I think a better dialogue and a better understanding would be very, very good, and unleash some of the investment that's sitting there on the side. It might not be sitting there for a long time anymore.

MS. RIVLIN: We've got a lot to digest here, but let me take the last few minutes to invite the audience to raise questions. Identify yourself. Somebody will bring you a microphone, I believe. And since we have a CSPAN audience, it's good if you wait until you get the microphone before you start speaking. But, direct your question to any member of the panel, but keep it short, please.

MR. LEBOWITZ: My name is Jack Lebowitz, I'm a special volunteer at NIH. I retired from NIH, but still hold a special volunteer status.

Would it be possible to the fiscal policy to lower the dollar? You know, it's a high dollar now, which would increase exports enormously.

MS. RIVLIN: Gary, you want to tackle that one?

MR. BURTLESS: That wouldn't be the main objective of running more simulative fiscal policy, I don't think. It's certainly true that a lower value of the dollar would help the United States find more customers in other countries for the things that it produces. But at the moment, we have to face up to the fact that the United States is still regarded outside of this country, at any rate, as a place where money is reasonably safe and our currency is an excellent store of value against the risks in a dangerous world.

We derive benefits from that fact. It's cheaper for us to visit overseas, we get foreign products more cheaply, but there's a price for the people who produce goods and services in this country that either compete with things that are imported or produce things that could be exported.

I do think in the long-run, part of our long-term solution to our problems is having a weaker U.S. dollar.

MR. VANOKMAL: I had a question, for Klaus -- for both of you, actually. I'm Anton Vanokmal of Ashmore EMM, also an immigrant.

You mention the fact that regulation and delays are essentially strangling improvement -- both of you mentioned it -- improvement in infrastructure, which is itself needed for innovation. But at the local level you often found a welcome. And so, can you go into this in a little bit more depth to make us understand where this strangling effect really comes from and whether you have ideas on how to change that?

MR. KLEINFELD: I think it comes from -- I have an old saying that my folks know, that when intelligent people look at the same facts they come to the same conclusion, right? So let's assume that most decision makers are intelligent. Actually, which would be my experience.

So then the only answer is that they have very different information and they don't talk about it enough. So, the people that are on the ground usually understand the situation and how this going to hurt or help them much better than those ones that are in higher echelons. And very often, the ones on higher echelons don't take the time to get this type of information, and then also don't get a strong enough sense of urgency of how important it is to get this matter resolved. So, they kind of follow their usual procedure, which is you know, we have a backlog, we take it when it comes, you know, and it's going to take half a year to a year just to eat it up, right? Whereas on the local level people understand this is something that in half a year to a year will have damaged us and a window of opportunity will have gone by. That's what I've seen, in different types of facets there.

MR. LIVERIS: I would just elaborate that regulatory environments have begun to be addressed to help the disconnect that Klaus just answered with. But I would tell you that what happens is consultative processes with the private sector on, firstly, existing regs -- you know, whether they may be environmental or permit issuing in terms of citing a factor, et cetera -- are fairly well-understood at the local level. But at the federal level, the amount of paperwork required for the locals to get approvals is horrendous. And then looking forward, it's gotten worse.

There's over 287 new EPA regs coming down the pipe already that then, basically, say to you, well, look. I don't even know what my regs are going to be. So, the locals may be dealing with the current but the ones coming stifles them completely and saying, well you know, just a second. I better not take a risk.

And when you get down to the local level at the, you know, mid-management level, they have no power, in fact. And so, we have disabled -- government is incredibly inefficient in this country, sorry to say. I alluded to it with the 60 state agencies. And that's where we've got to get ourselves much more efficient, and consultative processes at the local level with local officials in the private sector is one way to beat that.

SPEAKER: Is it mostly environmental?

MR. LIVERIS: It's a lot, but not just environmental. It's --

MR. KLEINFELD: A lot of it is environmental, you're right. Our industry is very specific, in that regard.

MR. LIVERIS: Well, and the Keystone Pipeline decision is a good example of stopping something vital to the nation.

MS. RIVLIN: We have time for just one more question. Right here.

MR. WILHELM: I'm John Wilhelm, I'm the president of UNITE HERE, which is the hospitality workers' union in the U.S., and also a trustee of Brookings.

I was very heartened to hear what both of you said about immigration. I don't see how we solve our economic problems without fixing the immigration mess. I was especially happy to hear you say, Mr. Kleinfeld, that you don't think we should artificially divide up the segments of that issue.

Having said that, I will admit to considerable frustration that the business community says the right things about -- at least from my point of view -- says the right things abut immigration and puts zero political muscle behind that. In 2007 Kennedy-McCain, while not a perfect piece of legislation, would have gone a long way in my view toward addressing these issues. And those of us who worked hard on that bill with those two bipartisan senators discovered that there was zero muscle from the business community around that issue.

And I'm curious as to whether you believe we can do better in that regard in the next few years, considering -- and this is not a political statement, this is just a factual statement -- considering that the presidential candidate who I would suspect is the most likely to get substantial business support has jumped over the right wall -- that is to say, the wrong wall -- on this particular issue. (Laughter)

So to me, we won't solve it unless the business community puts muscle behind what you all have said here today. And I'm curious as to whether you think that's realistic.

MR. KLEINFELD: Yeah, well I said what I've said because I've seen the same picture that you just described, right? And that has altered my also moderate public statement to a more non-moderate public statement because I believe -- I mean, somebody just recently said change has never come from Washington, change usually gets brought to Washington. And I think that's one thing that we have to be mindful of. I mean, we have to take it in our hands and make clear to our representatives here how important this is for the competitiveness of this country. I believe we can make the case, I believe we have to make the case.

On your point of how realistic is it in the current environment with the candidate that you are talking about, I mean my friends tell me that I should not mistake a situation where you want to become the candidate with a situation of what your policy will be if you get elected. So, that is the thing that gives me hope on that. But I could not agree more. We have to take it more aggressively into our hands and with that approach of saying, this is what we want and we are not compromising on it, and we have a solution.

I think on the immigration side -- that for me was really an intellectual breakthrough for me, Darrell, from your study which ended up in the book by saying we don't offer the illegal immigration aspect up for free. And there was this aspect of you have to learn English because it also changes your chances in a job market. You have to have some type of test on how our Constitutional system works because not everybody comes from an environment, you know, where you have learned that. And the third thing, if I recall that correctly, was you have to compensate for if you haven't paid taxes here and you have lived here for a while, we will build some type of financial model by which you have to pay up and compensate for it. I think that these three things make a lot of sense to me, and I have really not met people that, at least privately, said to me that is a very good approach, and I agree. But we don't want to touch it politically these days.

MR. BURTESS: Well, Andrew, I would --

MR. LIVERIS: Well, I mean -- I just want to mention, I would add, the business community is going through a severe wakeup call on the skills mismatch point that we've just had a discussion on. Therefore, immigration in whatever of its forms -- I mean, look. There were 30 research institutions that had foreign owners in China in 1999. Today, there are 1,200. Why are we going to China? Because we can get the skills, but equally, we can't bring the skills here anymore, okay? It's so difficult to get people into this country.

And let's face it -- and I have three children, none of them have done science so I can say it without passing my own red-faced test -- our children are not studying science and engineering anymore. As we've moved up the wealth curve we've got enamored with other professions and they've been it. That's a generalization, but our immigrants love going in to the science and engineering professions, and we need to make sure that we keep that pipeline coming because of the big skills mismatch we have in science-based professions in this country.

So, for that reason alone the business community will get reawakened to it, I believe.

MS. RIVLIN: Well, thank you very much. I think this has been a good start. (Applause)

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