THE BROOKINGS INSTITUTION

FROM RECESSION TO RECOVERY TO RENEWAL

A HAMILTON PROJECT FORUM
FEATURING VICE PRESIDENT JOE BIDEN

THE RENAISSANCE MAYFLOWER HOTEL

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PARTICIPANTS:

Welcome:

ROBERT E. RUBIN
Co-Chair, Council on Foreign Relations
Former U.S. Treasury Secretary

Opening Remarks:

MICHAEL GREENSTONE
Hamilton Project Director and Senior Fellow
The Brookings Institution

Panel Discussion: Innovative Ideas in the Hamilton Tradition:

KAREN DYNAN, Moderator
Vice President and Co-Director, Economic Studies
The Brookings Institution

DOUGLAS ALMOND

Columbia University

RICHARD FRYER
Harvard University

MICHAEL GREENSTONE
Hamilton Project Director and Senior Fellow
The Brookings Institution

Panel Discussion: Opportunities and Challenges for the U.S. Economy:

ROBERT E. RUBIN, Moderator
Co-Chair, Council on Foreign Relations
Former U.S. Treasury Secretary

ALAN BLINDER
Princeton University

ALICE RIVLIN
The Brookings Institution

THE HONORABLE SHERROD BROWN (D-Ohio)
United States Senate

EDWARD GLAESER
Harvard University

Keynote Remarks:

THE HONORABLE JOE BIDEN
Vice President of the United States

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PROCEEDINGS

MR. RUBIN: Could I have your attention, please? Thank you. I am Bob Rubin, and let me thank all of you for being here on behalf of all my colleagues on the Advisory Council of the Hamilton Project as we hold our initial event of the 2010 season.

As you may know, the first three directors of the Hamilton Project are now serving in distinguished offices in federal government. Peter Orszag, our first -- well, in chronological order -- Peter Orszag is, of course, director of the OMB; Jason Furman is deputy director of the National Economic Council; and Doug Elmendorf moved on to become the head of the Congressional Budget Office after Peter. We are proud of them, and we are very proud of our new executive director, Michael Greenstone.

Michael stepped down as the chief economist of the CEA on the last day of January, and then he returned to a dual role in life, partly to his tenured position in economics at M.I.T. and partly to running the Hamilton Project.

We are also highly fortunate that Karen Anderson, upon leaving the CEA has come back to join us as managing director, and we are very grateful to Brookings Institution for all of the support that they have given us since our founding and for the wonderful way in which they have worked with us.

The Hamilton Project will continue in its role of promoting serious debate and policy development on critical economic issues at a time of enormous complexity and importance in the economic arena. As you know, we ordinarily hold events around a single issue. We base the events on papers that are peer-reviewed, and then we'll have two panels, one discussing the papers and then one more general panel. The object of all of our work is to promote growth, to promote widespread increases in income across all income levels, and to promote economic security.

Today's event, however, is not in the typical Hamilton mode; instead, we're going to have two broad discussions on long-term economic issues facing our country. The first panel will present more specific policy proposals in the Hamilton tradition with Doug Almand of Columbia University; Roland Fryer of Harvard University; Michael Greenstone of M.I.T. and the Hamilton Project.

Opening comments and the moderator's role will be performed by Karen Dynan, co-head of economic studies at the Brookings Institute.

The second panel will address a broader set of issues with respect to the opportunities and challenges facing the United States with Alan Blinder -- again for the long term -- with Alan Blinder of Princeton University; the Honorable Sherrod Brown, United States Senator of the Great State of Ohio; Ed Glaeser of Harvard University; and Alice Rivlin of

Brookings and visiting professor at Georgetown University.

Then, as the highlight of our program -- well, every participant is the highlight of our program -- but as a special highlight of our program we are deeply honored to have keynote remarks by the Vice President of the United States, Joseph R. Biden.

Following the Vice President's remarks Roger Altman, who will introduce the Vice President, will provide concluding comments and bring our program to a close.

Let me make a few very brief comments about, if you will, the substantive environment for this entire discussion. I think all of us would agree that our country faces complex and extraordinarily critical challenges both for the short term and the long term. Most immediately, the American people are suffering a terrible toll from the great recession and at the same time we face unsustainable fiscal deficits for the years and decades ahead.

For the longer term, which is the primary perspective and focus of the Hamilton Project, we must put in place a policy agenda, including fiscal matters, critical public investment, and much else that will enable our country to realize its potential, a potential that we at the Hamilton Project believe our country has for a successful future and a rapidly transforming global economy. We believe that with our dynamic culture and our history of economic and political resilience our country can succeed

even as the global economy becomes more competitive and changes at a dramatic rate, but to do so that our country will have to make difficult decisions and face hard tradeoffs.

The Hamilton Project believes that our economy should be market-based but believes with equal strength that strong and effective government is essential to provide the many requisites for a successful economy that markets by their very nature cannot provide.

With that, let me turn the program over to Michael Greenstone, eminent new director of the Hamilton Project, and Michael is going to take us through the Hamilton Project's new strategy paper that sets out the challenges and some of our thoughts about approaches to those challenges for the years and decades ahead.

Michael? (Applause)

MR. GREENSTONE: Thank you, Bob. I also want to thank the team at the Brookings Institution, who have been important and valuable partners for the Hamilton Project since its launch in 2006. And I want to acknowledge our Advisory Council, many of whom are here today. This is a distinguished group that includes leading academics, a Nobel Prize winner, former Cabinet members, former elected officials and captains of industry. It's a unique group, and I look forward to working with all of them in the months and years ahead.

For those of you who are unfamiliar with the Hamilton Project I thought it would be useful to review our goals. We seek to advance America's promise of opportunity, prosperity and growth. We believe that long-term prosperity is best achieved by fostering economic growth and broad participation in that growth by enhancing individual economic security and by embracing a role for effective government in making needed public investments. These are four interrelated judgments that inform all of our work.

So what has prompted us to release a new strategy paper? Our country is beginning to emerge from the most serious economic crisis in the last eight decades, but recovery is not enough. The fundamental goal of our economic policy should be renewal. The long-run economic health of the country is at risk in ways that pose an even greater threat to our long-run prosperity than the Great Recession. In the fact of these challenges, it is vital that there be a diverse and robust debate about the choices going forward, participating in that debate, not just through analysis but by providing well-researched thoughtful solutions to these problems is what led to the creation of the Hamilton Project in 2006. Moving forward, we will continue to contribute public policy proposals commensurate with the challenges of our time.

In thinking about economic policy today, it's impossible to start

without beginning thinking about the great recession and its devastating impact on American families. Its impact can be told in many different ways. There's two numbers I find especially daunting: 1, there's currently 15 million Americans who are unemployed and many, many more who are working part time who would prefer to work full time; 2, households have lost over $8 trillion in wealth due to declines in housing and stock prices. However, in many ways, these numbers fail to capture the uniquely acute fears that are produced by economic insecurity and undermine the country's social fabric.

For example, extended unemployment has a series of real-life negative consequences. It leads to lower wages upon reemployment; it places great stress on families and marriages; leads to elevated rates in mortality; and it can even reduce the future earnings of the children of the unemployed. These impacts are an important reminder that the goal of economic policy and what we seek to contribute to is not simply a well-functioning economy but a country that works well for everyone.

The surest way to confront these problems is through board-based economic growth. This chart on the screen illustrates per capital income growth from 1990 through 2009. It then projects how per capital income would increase through 2030 at annual growth rates of one, two, and three percent. This very simple exercise demonstrates that even seemingly

small differences in growth rates can have dramatic impacts on incomes in periods as short as a decade.

There are both external and internal barriers to achieving higher levels of growth, achieving two percent instead of one percent. Externally, the global economy is becoming increasingly competitive. Capital can crisscross the globe looking for the highest rate of return, and two giant destinations for capital, namely China and India, are growing stronger. In a likely related trend, the wages of many Americans have grown only slowly and some have even declined over the last few decades.

At home, growth is determined by the choices that we make today. There are several areas where increases in investments are necessary, and I'm just going to highlight three today:

One, basic research as an engine for innovation and growth, however, the federal support for basic research is a fraction of GDP is at a post-World War II low.

Two, a high-performing K to 12 education system is crucial for increasing work force productivity, however, the U.S. system underperforms much of the rest of the developed world even as we spend the most.

Three, scientists tell us that climate change is the consequence of emitting greenhouse gases, however, to date we have not confronted this challenge

These challenges have at least four similarities: none of them can be solved by one bold stroke; all require persistent and sustained effort; all require government in action; and none can be solved without new resources. At the same time that we face these challenges, however, our fiscal situation is compromised. Before the great recession, the country's fiscal situation had been deteriorating and lacked the plan to control the surge in projective entitlement spending that is accompanying the retirement of the Baby Boomers.

The most telling measure of a country's indebtedness is the federal debt to GDP ratio. This is a measure of the country's capacity to repay its debt. The higher this ratio, the greater the strain the debt places on a country. Between the beginning of 2007 and the end of 2010, as illustrated in this chart, the federal debt-to-GDP ratio is projected to increase from 38 percent to 61 percent. This is a level not seen since the end of World War II. Further, it is projected, as demonstrated on the chart, to continue to grow rapidly in the coming years.

The great recession and the resulting and necessary policy responses that starkly exposed the budget situation, by some calculations they have shortened the time available to address the budget deficit by at least a decade. The reason these high debt levels are so unsettling and troubling for the country's future is they increase the probability of several

adverse possibilities. High rates of borrowing consume resources that could be put to more productive uses and are likely to increase interest rates which crowd out private investment and ultimately slow GDP growth.

Furthermore, high debt levels remove flexibility to confront unexpected challenges such as future recessions, and experience indicates that such high levels of debt can cause global capital markets to lose confidence in a country's ability to repay. When this happens, countries are forced to make abrupt changes in spending and tax policies with little consideration for their impact on their citizens' well-being.

So where does this leave us? The engine of prosperity in the United States is the private sector. It's workers and businesses who determine the nation's wealth and direction. However, they'll never be able to do what they do best in an economic environment where workers are unprepared to compete in the global economy, technology is not innovative, and climate change poses risks that inhibit growth. The Hamilton Project believes that the solution is to reprioritize expenditures for investments that promote future prosperity.

Further, the United States should confront the deficit as soon as the recovery has gained sufficient momentum. Over time, the federal debt to GDP ratio must be lowered from its current level. Our future prosperity rests on tackling these challenges in a nation that's recovering

from a devastating recession, and in an era when people want more from government, and yet seem unwilling to pay for it.

Although the challenges ahead are real and the stakes are high, there are many reasons to be optimistic that the American can overcome them.

The U.S. economy continues to be the most innovative in the world. More businesses are started here; more patents are filed here than in other country.

Perhaps more important, the United States has a long history of rising to meet great challenges. In the coming months and years, the Hamilton Project will put forward evidenced-based policy recommendations that intend to help the United States meet these challenges.

Our first full-fledged effort at this will be 10 days from now when we jointly host an event on the future of the American worker with the Center for American Progress. This is the first of two conferences with the Center for American Progress, and it will feature panel discussions and a thought-provoking discussion between Michael Bloomberg, mayor of New York; and Larry Summers, director of the National Economic Council. That discussion will be moderated by Charlie Rose.

For those of you who absolutely can't wait for 10 days, you're in luck. The next panel is going to present three pieces of -- let's say, two pieces of cutting-edge academic research and some by me and some

accompanying policy implications. They won't be full-blown Hamilton recommendations but are intended as teasers for what's to come.

So, now, let's get down to work. Thank you very much.

MS. DYNAN: Thank you. I'm delighted to be here, and I was particularly excited about participating in this specific part of the program today, because for me it exemplifies what it is about the work of the Hamilton Project that is so compelling. So, with that thought in mind, let me highlight three distinctive features of the three presentations we're going to hear today.

So, first of all, each of the proposals has been crafted by a leading speaker within the field of economics. Secondly, each of the proposals addresses a timely and very important policy issue. And third, each of the proposals draws off some recent piece of powerful research to create a concrete, specific policy recommendation. And as Michael was saying, the sort of evidence-based policy recommendations -- they're really the hallmark of the Hamilton Project, and they really continue with a long tradition of valuable work coming out of the Brookings Institution. So, these are all papers, or the underlying work is -- they're all papers that have been through rigorous review within the scholarly community, and to be sure they followed kind of the natural scholarly life cycle of either being headed for or already published in top journals, and they'll have impact that way. They are

already influencing the next cohort of researchers, and the ideas are being disseminated within the policymaking community. But what we're doing today is we're asking the authors to translate them now into specific proposals so that we can really have immediate impact with them.

So, in terms of the substance, Michael and Bob have already laid out what it is that ties these papers together. They're about what investments we can make to achieve broad-based prosperity.

We have a theme in this session. The theme is really the life cycle. So, our first paper is going to be by Doug Almond, and he is going to address prenatal issues. So, it's really about investments that expecting mothers can make and we can help expecting mothers make in order so their children will have higher well-being and be more productive later in life.

Then Roland Fryer is going to wrestle with what interventions we can make with regard to children in schools and how we can help them go on to a better life and to be more productive measures of the force.

Michael is going to tackle the existing workers and what sorts of investments that we can do for them to increase their productivity and to increase the productivity of the nation as a whole.

So, with that background in mind, let me turn things over to Doug Almond.

MR. ALMOND: Great. Thank you very much for coming to

hear these proposals today.

What I'm going to talk about is the importance of the prenatal period for the later-life productivity of workers.

So, as Roland is going to talk about some more in a few minutes, the acquisition of skills occurs throughout childhood, and economists have spent a lot of time analyzing periods in which people acquire skills. They have a return on the labor market. So, the attendance of a 4-year college has been shown to increase wages, and the usual rates of return -- they're calculated -- are on the order of about 8 percent for each year of schooling.

Interestingly, if you start to progress backwards through childhood to two-year college, the rates of return don't fall that much. When you're considering something like a community college, returns stay around 8 percent, and similarly for graduating high school rates of return are high.

Now, we can continue to go further in the life cycle and think about primary schooling. In the case of primary schooling, we're not going to think so much about whether you go to primary school, but in this case since most everyone in the United States goes to primary schooling, the question is what's the quality of primary schooling and how does that affect wages later in life? And so there's some studies on class size that have been widely cited finding reducing class size has substantial effects on later-

life earnings. And, similarly, going still earlier to pre-school and the Head Start program, benefits of that program accrue through the whole work life cycle.

What I want to talk about today very briefly is the prenatal period. Obviously in the prenatal period we're not talking about schooling so much as we are about the health as experienced during the prenatal period.

So, basically over the last 5 or 10 years in economics, there's been a great deal of research on how health around the time of birth has persistent effects on both health in adulthood and productivity in adulthood as well. So, much of its early research has linked measures health at birth, things like birth weight, to adult labor market outcomes. So, one widely cited study finds it about a 1 percent increase in earnings in response to a 10 percent increase in birth weights. So, there's a relationship between outcomes and adults' productivity is a very persistent and robust one.

Over the last few years in economics, what's been done I think very carefully and in a great many different contexts is looking at specific prenatal health events and how these trace through to later-life productivity. So, a set of studies looks at extreme nutritional deprivation in the prenatal period and finds that experiencing something like a famine in utero is much worse than experiencing that famine, say, at age one or age two; that the significant effects of that deterioration in health had a critical developmental

stage show up in compromised adults' health but also compromised adult productivity.

In addition to sort of nutritional decreases, economists have also looked at an infections, so infections are something that are obviously a lot more common that famines, and looking at things like malaria, pneumonia, influenza, things like that, we find that exposure to infections in utero is particularly damaging to educational attainment, intelligence as measured by IQ, and wages.

What I'm going to do now is just briefly highlight one study of mine that looks back to the 1918 influenza pandemic in the United States.

So, this next figure that I show plots two things. So, the dotted line, which I'll ask you to look at first, is the number of deaths in the United States in 1918 and 1919. We plot the number of deaths for each quarter, so starting with the first quarter of 1918, going through the fourth quarter of 1919. What we see is the first three quarters of 1918 had essentially zero deaths to influenza. However, in the fourth quarter of 1918, we had over 200,000 deaths from influenza. So, a really striking number that persisted above normal levels into the first quarter of 1919 and then basically fell back to zero.

Now, as striking as these mortality figures are, the most common experience with the 1918 influenza was not to die from it,

fortunately; it was to be infected by it, get sick for a while, and then recover. And so what the 1918 pandemic provides is a natural experiment in prenatal health. So, mothers' health deteriorated. And then the question is that cohort or that group of individuals that was born a few months later that happen to be in utero during the height of this influenza outbreak -- how did they look later in life? So, the solid line here plots the average health observed 70 years later, okay?

And then fortunately economists, health economists in particular, like to measure health backwards, so that's basically increased as in a health index means worse health. What we see is that the black line is fairly flat with the exception of the second quarter of 1919. If you were born in the second quarter of 1919 and therefore disproportionately exposed to the height of the influenza pandemic that occurred six months earlier, your health is that much worse observed 70 years later.

These health effects extend beyond simply compromised self-reported health. Cardiovascular disease is a main reason why prenatal influenza exposure compromises health. But we also see that the productivity of this cohort is also reduced in addition to the health effects, so those exposed prenatally to the 1918 flu are 15 percent less likely to graduate from high school, 20 percent more likely to not work due to a physical disability, and their wages are 5 to 9 percent to lower. So, circling

back to the original estimates, this reduction in productivity that occurs from influenza infection is kind of similar to the return to a full year of schooling.

So, I'd like to make three brief policy suggestions in the spirit of this finding that the prenatal period is especially important. One of the most obviously is to boost influenza vaccination rates in the United States, which are fairly low and are especially low for women of child-bearing ages.

Secondly, I think we can leverage existing programs to greater effect, so roughly 40 percent of births in the United States are covered by the WIC Program. However, most of these births that are covered by the WIC Program -- the enrollment occurs not in the first trimester but in the second or the third trimester. Much of this research by economists has found that the first half of pregnancy is particularly important, so if we could accelerate enrollment into WIC to be just a few months earlier in pregnancy, we could be realizing some substantial productivity and gains later in life.

And then, finally, even if we leave aside the question of public policies that target the prenatal period, there may be low cost things we can do to recognize pregnancies earlier in pregnancy. So, most pregnancies are not recognized after the first months, and many months later mothers on their own usually take behavioral actions that are beneficial to fetal health. However, some of those changes in behavior may occur later than is optimal. So, low-cost intervention to detect pregnancies earlier could trigger

some of those behavioral responses that benefit later life productivity.

Were we going to take -- okay. Thank you very much.

MS. DYNAN: We have just a couple minutes now for the other panelists to ask some questions to Doug, and I will take the moderator's prerogative of asking the first question.

So, Doug, you know, actually, the research that you presented actually I find to be some of the most compelling research out there on the topic, but it does focus on fairly extreme health exposures of the 1918 pandemic, and I was just wondering if I could get you to talk a little more about whether you think this applies to less extreme exposures.

MR. ALMOND: I think it does, and your question is very well taken in that certainly in the case of a famine or a flu pandemic the policy prescriptions are already there, that we shouldn't have them. So, the question is for less extreme events are there things we should be doing, and indeed the evidence which I think is more recent than looking at these more extreme events is quite similar in that seasonal outbreaks of flu and sort of more modest changes in nutrition during the pregnancy also register surprisingly long-term effects.

MR. GREENSTONE: So Doug, you know because I called you, my wife was pregnant or is pregnant and was -- the first trimester was during the H1N1 period. We followed everything you said. How much more

is our daughter going to earn? (Laughter)

MR. ALMOND: Congratulations on the pregnancy.

MR. GREENSTONE: No, seriously, how big are the -- (Laughter) -- we want to get the savings right.

MR. ALMOND: Right, so basically, for having avoided exposure to a relatively extreme flu outbreak, the wage effects are on the order of 5 to 9 percent registered throughout life? Yes. So congratulations.

MR. GREENSTONE: Can we get it back from her? (Laughter)

MS. DYNAN: And Roland, with some hesitation, I'm going to ask you if you have a question for Doug. (Laughter) That's probably just as well.

So, yeah, so why don't we just roll into Roland's presentation then?

MR. FRYER: Okay. All right. Good morning. Thank you, Michael. Thank you to the Hamilton Project for inviting me here. I hope I don't say anything in the next 10 minutes that will cause you not to invite me back. There we go. Fantastic.

I have three goals this morning. One, I want to convince you that public education in America is in trouble. In fact, I think we have a national emergency, and we'll talk about that a little bit. Second, I want to

give you a brief report on an innovation that we just concluded, which was paying kids incentives for doing well. I'll give you a very brief report on that. And the third thing I want to do before I leave is to convince you that in the search for solutions to our K-12 education problem, if you don't remember anything else from whatever I say today, please do not search in the set of solutions that make adults feel comfortable. All right? I was watching this spot on TV last week, and there was a teacher who was complaining about the idea that contracts might be altered. And I believe the exact quote was, "How are we going to buy a house if we don't know if we have a job year to year?" And I thought, who does she think she is? A Harvard professor?

All right. Here's my brief report, "Financial Incentives and Student Achievement." This is work that's been conducted over the past few years in four U.S. cities. Here's some quick motivation. There is a large racial achievement gap in America. You probably heard about it. The gaps arise at age two, and there is -- kids age when they enter kindergarten, for example, the gaps are equivalent to being eight months behind in math and five months behind in reading when kids enter kindergarten. Okay? When you look in the fourth and the eighth grade, the gaps have expanded since they entered kindergarten. And, you know, if you look in D.C., for example, 4.5 percent of black students here in Washington, D.C., are proficient in math. Okay? I didn't misplace my decimal point -- 4.5 percent, okay?

That's crazy, 4.5 percent. There have been many attempts to close the gap with pretty little success. We've tried early childhood programs and we see that that can boost kindergarten readiness for sure. The gaps often fade as kids enter school. We've tried small schools, smaller classrooms, we tried a lot of things, and there has not been one district in the history of our country that has actually closed the achievement gap. We've made some progress, but we haven't closed the gap yet.

So let's talk about student incentives. So the bottom line here is that well-designed student incentives -- and I'll tell you what that means in a second -- produce pretty good results at a low cost. Okay? And so I've converted the estimates per Michael's suggestion/demand into months of schooling. And here you have the cost per student for some popular programs as well. Okay? So well-designed incentives, when you run them as a randomized trial, you have a treatment and control group, et cetera. They can boost achievement on the order of magnitude of about 2.2 to 3.1 months of schooling. If you look at Head Start, it's about 4. The average New York City charter school is about 1.1 months. If you reduce class size from 22 kids to 15, you get about 2.8 months. So you can see the cost here as well, right? So in D.C. when we ran these experiments -- and I'm going to tell you what they are in a second -- the average cost is a little over $500 per kid. In Dallas, the cost was about $14 per kid, okay? If you look at the

average cost of Head Start, that's over $5,000, et cetera. This is not going to well-designed incentives. These other programs are not going to close the racial achievement gap, but I can tell you that well-designed incentives certainly have a positive return on investment.

Okay, so here's what we did: 260 schools in 4 cities. Those four cities were Chicago, Washington, D.C., New York City, and Dallas. About $10 million was distributed directly to kids.

So we opened up actual bank accounts for the students -- I know more about the Patriot Act than anyone should ever need to know -- and we deposited the money into the back accounts. We sent in, you know, financial literacy for the kids, et cetera. I'm not sure if it took or not because one of my kids came up to me about three months ago and said, hey, I really understand my bank account. I said are you going to save? He said, absolutely, I'm going to save professor. I said, well, how are you going to save? He said, I'm going to put my money into the bank for about a month, earn some of that interest, then I'm going to spend it. It's not perfect, but, you know, for a fourth grader, a month is a long time. So we had second graders in Dallas.

We had sixth to eighth graders here in D.C., and in New York City we had fourth and seventh graders, and in Chicago we had ninth graders. So the bottom line is in Dallas, for example, we paid kids $2 a book

to read. Okay? Now, don't walk out, $2 a book to read. In New York, we paid kids for their performance on tests. And what we found is that when you pay kids for things like behaviors -- you pay them to read books or you pay them to come to class and not have any behavioral issues that would cause disruptions in class -- then you get an actual, reasonably big benefit in terms of student achievement. If you just pay them for the achievement on the backend, yes, you get no results. Okay? So if you pay them -- in an economist's language -- if you pay them for inputs, okay, you get good output. If you pay them for output, they get excited and look at you because they have no clue how to actually produce that output.

Here's a quick graph to show you visually how big the effect sizes are. The line at the top, if you can see that, is the effect of lowering class size. And so you see in Dallas, the effects of our program a little larger. In D.C., a little less. In New York City and Chicago, where we paid kids for output, not very many results.

Okay. Quick policy implications. So the program in Dallas, the cost was about $14 per kid. We got results, which were the equivalent of 3.1 months of schooling. In my sense, that's a lay-up. So in terms of policy implications, that's pretty clear. But more than that, I actually think that we just need more -- and I hate to sound so much like an academic -- we need more innovation here. We need to understand how incentives

work more. A lot of folks thought that they would actually decrease kids' learning because it would crowd out their intrinsic motivation. In our results, we find no evidence of that. I think we need more time to understand the potential power and the cost effectiveness of incentives going forward.

MS. DYNAN: So Roland, thank you for that really interesting presentation. You obviously talked about the need for more research in this area. I was wondering if I could just, you know, get you to talk a little more about whether -- and maybe there's research been done or maybe it's just research that needs to be done -- can you talk a little more about whether you think certain categories of students are most receptive to these sorts of programs? And if so, how is that we target those categories?

MR. FRYER: Thank you. Thank you. Great question. So one thing we found was that most programs, most education programs, that kind of -- they benefit girls more than boys, and we found the exact opposite in the incentives. They worked more for boys than they did for girls, and they actually worked a lot more for minorities than they did for non-minorities. In the third category in which we found kind of the most powerful effects were kids who had behavioral problems in the previous year to the experiment. When you actually paid them to have good behavior and to come to class and to sit still, et cetera, their test scores actually went up more than any other subgroup. So I think what's interesting about incentives

to me beyond the cost effectiveness is the ability to hit groups that we know are incredibly hard to target.

MS. DYNAN: And can I ask you, too, your results are different across cities. Of course, you're doing different things in different cities --

MR. FRYER: Sure.

MS. DYNAN: -- and I'm just curious if you think there are city-specific factors that are also getting in there and affecting the differences and results. And, you know, the reason I have this in mind is because if you're thinking about a program that you're going to apply nationally. I mean, how much confidence can we have that applying the program will actually yield positive results in all sorts of cities?

MR. FRYER: You didn't ask Doug such tough questions. (Laughter) There's a question-toughness gap on this panel. (Laughter)

I think we can be as confident as we can be having run kind of the first national experiment on incentives in urban education in America. So not too confident. That's why the biggest policy recommendation I have is to keep -- is to avoid our kind of squeamishness over the idea of paying students to learn. I know it makes you feel uncomfortable. My grandmother was a teacher for 37 years. She said, do you have to do that? Like I get it, okay? But what we're finding is that these can have very high returns on investments if done right. And I'd like to expand them up to see if the Dallas

model will work in New York City and Detroit and other places. So I think -- I don't know the answer to your tough question, but more experiments and more pilots will yield answers to those important questions.

MS. DYNAN: Thanks. Doug, Michael, I think Roland's looking for softballs, but I encourage hard questions. (Laughter)

MR.GREENSTONE: So I wanted to jump in. I think part of what Roland has touched upon, but I think is so exciting about his work, he's kind of, you know, the focus is on educational outcomes no matter how you get there. And in that spirit, I think kind of a third rail oftentimes -- paying students is maybe a third rail so maybe this is a second-third rail -- is incentives for parents.

And as -- you know, I keep bringing up my family. As Roland knows, we have a seven-year-old son and, you know, he doesn't always think most clearly, and it's a little bit hard to imagine that we could apply -- I mean, we try to apply incentives all the time with very limited success. So -- and that's just for cleaning his room and things like that, but I wonder, are there any experiments on the horizon that might try and get inside the family where principle parents might have some influence on this as well?

MR. FRYER: Yes, yes, there are. My grandmother had the first incentive program. It was called the "go get your own belt" program. (Laughter)

So, yes, in Chicago, in the fall, we are going to be looking into parental incentives for teaching students, kids, what they need to learn before they go to kindergarten relative to center-based early childhood. So, you know, we spend $12,000 a year in early childhood centers. One option would be to say, hey, what if the parents could earn up to $12,000 a year if the students learned what they needed to learn going into kindergarten? So that will start in the fall.

The second piece, which we're trying to start now, is I'd like to actually see an incentive -- here's a crazy idea: Take an incentive program and have student incentives, maybe teacher incentives, and parental incentives all centered around a common goal. Right? So getting everyone on the actual same page to produce achievement for our children. And I'd like to see those happen. Again, I don't think they're going to be the savior for American education, of course, but they may have a positive return on investment.

MS. DYNAN: Great. Why don't we go into Michael's presentation?

MR. GREENSTONE: Okay. What I'm going to talk about is related to a topic that I think will come up later today, which is there's been -- over the last several decades there's been a long-run decline in the manufacturing sector in the United States. And one idea that's often

recommended is innovation clusters. And the great thing about innovation clusters is they're incredibly difficult to define and they kind of mean everything to everyone. And so what I have tried to do in some of my research is to operationalize what an innovation cluster is, and then try and test what its impacts are. And I'm going to talk a little bit about that today.

And so to be precise, what I'm going to -- and this, you know, might rule me out from everyone else who has alternative views on innovation clusters, my view is that an innovation cluster is just when a bunch of firms locate in the same place who do roughly the same thing. And the intuition for why they might be a solution for the troubles in the manufacturing sector and for general U.S. competitiveness is, it's very simple, the ideas that people are located in the same place or are roughly doing the same thing, there's a free flow of ideas. And if I sit next to -- Karen and I sit in the same building at Brookings, and by being able to sit in the same building I might run into her in the elevator one day, and she might give me an idea, and I could write an extra academic paper, which as we all know has extremely high productivity for the U.S. So obvious examples of innovation clusters are the information technology, collection of firms in Silicon Valley, the life sciences in Massachusetts, and in manufacturing in the Pacific Northwest.

And I should mention this notion of innovation clusters and

their potential usefulness and success. It's widespread.

In the United States, you often see these very aggressive bidding wars for new plants to locate in a particular place. There's the famous story of the BMW plant that I think went to South Carolina. There's a Mercedes plant in Alabama. And each of them was showered with tons and tons of incentives. And, so, to date, that's largely been the purview of local governments.

Internationally, this has actually been the purview of central governments quite frequently, and by one calculation, 52 different countries have innovation clusters. China is on the list, Brazil is on the list, Russia is on the list. And, so, again, what I'm going to try to do here is talk a little bit about what do we actually know about them and what are their impacts?

This is just drawing from some research with Enrico Moretti, who's at the University of California, Berkley, and Richard Hornbeck, who's a colleague of Roland's at Harvard. And the idea of this study was, again, we really wanted to make this idea operationally. What we're envisioning is suppose you could just take some really big and important seeming manufacturing plant and just drop it out of the sky somewhere, and if you're able to do that, then you're going to have an increase in activity in a very particular industry in a particular location. Now, unfortunately, the Internal Review Board at MIT wouldn't allow us to conduct that experiment.

But, as an alternative, there's a journal, if you're having trouble sleeping at night, called *Site Selection*. It's a corporate real estate journal. And one very nice feature of that magazine for the purposes of this research is they have an article every month called The Million Dollar Plant, and in this article, they describe how some very high-profile plant chose where to locate, and these plants, again, are often showered with scores of millions, hundreds of millions of dollars in incentives.

When they begin deciding where to locate, they hire a corporate real estate consulting firm, they consider 50 counties, and they eventually winnow it down. They keeping winnowing it down, and what's revealed in these articles and site selection is the county that the plant actually chose and the runner-up county. And the idea is that this might approximate what we would be able to get out of an experiment. So, the idea is to use the county that almost attracted the million-dollar plant and compare it to the county that successfully won the million-dollar plant. And the question that I'm going to present some evidence on is: What happens to the productivity of the guys who were already sitting there making their widgets, doing whatever it is, and then what also happened to employment?

Okay, and, so, this is presented in this graph. So, the vertical line shows the year before the new plant opened and what you can see is that the difference in productivity in winning and losing counties is pretty flat.

It's a little bit higher in the winning county before the plant comes, and then when the new plant opens, there's this very sharp change in trend in productivity. And, in fact, after the new plant opens, 6 years later, the statistical evidence would suggest that productivity among plants who were already there doing their own thing has increased by about 12 percent.

And to put some economic meaning on that, the 12 percent increase in productivity is equivalent to increasing output, holding cost of the number of workers, machines, and factories by $430 million. It's really a dramatic increase in productivity.

And there's a very similar finding when it comes to employment. Again, there's kind of the difference between employment in winning and losing counties. In the manufacturing sector, it's roughly constant before the plant opens, and then after the plant opens, there's a large increase in employment in the same industry as the plant. And that increase is about 9 percent 6 years later, a 9 percent higher level employment.

Okay. So, in the spirit of Hamilton, we've got this loose concept of innovation cluster, we now have found some evidence in how to turn this into an actionable policy. So, late at night, my idea was something which I've named the Federal Innovation Cluster Fund. And the idea is local governments have a much better idea than the Federal Government of what

is going to work on the ground, and the idea is to have local governments come to the Federal Government and say well, this is a plant or this is an industry that we want to grow in our area, and we want to provide this level of incentives, and what one could imagine doing is our Federal Innovation Cluster Fund providing some kind of subsidy for that. There could be a cost-sharing program where they covered 20 percent of the cost. An alternative version would be to pay some fixed amount per worker. In principle, what this would allow, it would allow some of these spillovers between the new firm and the existing firms to be located in the area where they'll be largest.

And, so, that's an example of turning research in action for Hamilton. So, thank you. (Applause)

MS. DYNAN: Michael, if I could just press you a little harder about your research, you've chosen --

MR. GREENSTONE: Be kind.

MS. DYNAN: I think, by nature, the locations of these plants have all been covered by this industry publication, so, I think that inherently means that there are high-profile cases.

MR. GREENSTONE: Yes.

MS. DYNAN: And I'm just curious about whether you have a sense of is this in a generalized and we're talking about plants that are not nearly as high-profile?

MR. GREENSTONE: Yes. So, I think it's very unlikely that those results would apply to an average plant. These are very high-profile plants where they've engendered all this bidding to begin with, and I think the way one could get policy to target them is by having this cost-sharing. So, the Federal Government would only get involved if local governments were willing to put up the certain amount of money.

MS. DYNAN: And if I could just ask you one more question, I think the thing that keeps us all up at night, and I'm sure it keeps you up at night, or did when you were in your last position, is just that there's worry with these sorts of programs that one area is just benefiting at the expense of some other area, that it's, in a broader sense, some sort of zero sum game, and can I just get you to talk a little more about how you know that's not the case?

MR. GREENSTONE: Yes. I think most economists' first intuition for this is that these programs where you pay a plant to show up is just shifting economic activity around the country. And I think what's so important about the results I showed is it is true it shifted economic activity, but there's also this spillover part, and it makes the other people around that plant better, and that can expand the overall size of the economy. And, so, in many respects, I think that finding kind of is a push us back or contradicts the intuition that a lot of us have, that it's just a zero sum game.

MS. DYNAN: Yes?

MR. FRYER: Sure, I have a question. So, I'm not married and I don't have kids. (Laughter)

MR. GREENSTONE: Is your wife pregnant?

MR. FRYER: Not that I know of. (Laughter) But if I were and I moved next to a plant, how much could I expect to earn more? (Laughter)

MR. GREENSTONE: Well, that is an incredibly easy question. The productivity I measured was in a sector that produces something. You work in academia. (Laughter)

MR. FRYER: Fair.

MR. GREENSTONE: Any more questions? (Laughter)

MR. FRYER: There's a toughness gap.

MS. DYNAN: Is that your final answer?

MR. GREENSTONE: I think that was my final answer.

MS. DYNAN: Okay. (Laughter) Then let me come around. Let me just pose a question to all of you.

Oh, I'm sorry, Doug, did you have questions for Michael?

MR. ALMOND: No.

MS. DYNAN: Okay. So, Michael talked in his earlier presentation about the fiscal strains that the country are facing, and just how incredibly tight times are in terms of the federal budget deficit. So, how we

spend the money is just critically important, and, so, I was wondering if I could get a sense from each of you, and maybe Michael's proposal is so specific, maybe I know the answer, but Doug and Roland, what's the first dollar that you would spend in terms of putting these things into action?

MR.ALMOND: So, that was an equally difficult question. So, I think a nice thing about a focus on the prenatal period is that many of the interventions that one would do to avoid harm are very inexpensive to do, and I think many of those are informational in the sense that if we give woman information on, A, the long-term effects of damage in utero, but, also, if we let them know earlier that they are pregnant and basically providing information is cheap, so, I think that's where I would start, is accelerating the time at which women realize they're pregnant.

MR. FRYER: And I would put the next dollars into innovations in education. We can do incentives if you like, but there are a lot of other ideas on the table that have the potential to increase achievement and have a positive return investment.

I mean, look, the cost, and I know you've heard this a lot before, but, in this case, it's very, very, true, the cost of doing nothing. If we have 4.5 percent of our eighth graders doing math below proficiency levels, all right, the cost of doing nothing is going to be enormous. We're spending $35,000 a year to incarcerate them and there are other health costs and

unemployment costs that we're bearing. So, I think we invest the money upfront and we'll save it on the backend.

MR. GREENSTONE: Yes, so, I think the first thing I would do is, as I suggested, set up a federal fund that could be used to support local efforts to attract plants, and I think one might wonder why the federal role -- a lot of times the benefits are out far into the future and it can be difficult for local governments to borrow. And I would keep the make sure that the local governments had a lot of (inaudible) in the game. I wouldn't let the cost-sharing be higher than 20 percent or 25 percent.

But I think to your general question, given the current fiscal situation, what each of us have tried to do in some sense is really focus on something where this is a demonstrated payoff. And I think applying that filter to policy going forward is going to be increasingly important.

MS. DYNAN: Yes?

MR. ALMOND: And if I could just jump in on that, in terms of health expenditures in the United States, we obviously spend a great deal in the U.S. on health, but, in particular, towards the end of life, and, so, one way to sort of rephrase this in sort of the reality is, in the current fiscal context, are there are reallocation of just a small part of those expenditures from end of life to early in life. So, not spending any more, but targeting it earlier, could have productivity effects. So, basically, it would pay for itself,

this allocation, but people would become more productive as a result.

MR. GREENSTONE: And I think this is also another common theme across this panel, which I just want to amplify what Doug is saying, is I think it's not just trying to evaluate new expenditure programs, but I think there will have to be a reevaluation of current expenditure programs and focusing the dollars where the payoff is the highest.

I've known about Roland's work on this kind of even before there were any results, and someone said to me well, there's no way that you can pay kids to do anything, and I said well, right now, we're spending in Cambridge, where I live, $20,000 a year per student, and are you telling me that the first dollars spent on incentives isn't worth more than the $20,000 spent on class size or $20,000 spent on whatever it is that Cambridge Public Schools spend their money on? And the answer might be no, but I think kind of re-conceptualizing how we're doing our spending and looking for where the returns are is essential going forward.

MS. DYNAN: So, I agree with you on that point. I think Doug's making an excellent point about -- you're all making excellent points about reallocations. I do think that you're sort of wearing your economist's hat there, and if I ran the world, this is what I would do. I think there are political realities that may get in the way there for some of these ideas. Yes.

MR. GREENSTONE: I couldn't agree more. (Laughter)

MS. DYNAN: Other questions for you guys?

MR.ALMOND: No.

MS. DYNAN: Okay. Well, then, I'd like to thank you very much. Thank you. (Applause)

MR. RUBIN: My assignment is to moderate the second panel. What we're going to do is discuss some broader issues that relate to achieving strong growth, achieving widespread income gains across all levels and increasing economic security for the long term, that is to say, the objectives of the Hamilton Project.

The panelists' resumes are in your materials so I won't repeat them. Let me just remind you once again that our outstanding panel members are Alan Blinder; Gordon S. Rentschler, Memorial Professor of Economics and Public Affairs at Princeton University; the Honorable Sherrod Brown, United States Senator from the Great State of Ohio; Ed Glaeser, the Fred and Eleanor Glimp Professor at Harvard University; and Alice Rivlin, senior fellow at the Brookings Institution and also I believe visiting professor at Georgetown University. And Alan and Alice are also members of the Hamilton Project Advisory Council.

The question very broadly put is what policies are necessary or best to achieve the objectives that I mentioned a moment ago over the long term. We operate on the premise that's in the strategy paper that the

United States has tremendous comparative advantages in our mobility, our (inaudible) other characteristics, so that we really do believe that the United States can do very well in a transforming global economy if -- if -- we rise to meet the great challenges that we face and if we're willing to make hard choices.

Clearly the number-one priority of policymakers today has to be to deal with the terrible toll that I mentioned in my opening remarks that come from the Great Recession, and that is an issue that I'm sure will consume policymakers for quite some time to come. At the same time, we must also focus on the long term, and it is really the long term that is the focus of the Hamilton Project or at least predominantly the focus of the Hamilton Project and the continuation of that discussion is what our second panel will do.

Let me briefly express my views on a few matters that I think are central contextually to a discussion of long-term economic policy. Number one, there are widely varying opinions on the short-term outlook of the United States economy. What happens in the short term at least in my view is also very important with respect to our ability to put in place policies and even over time to address our longer-term challenges. I think there's a pretty broadly held view that the first couple quarters this year are likely to be strong for a whole host of reasons. The question is are those temporary

reasons or will they be ongoing? Once you get beyond that, opinions vary greatly.

There is a strongly held view or widely held view that the momentum of various factors that contributed to the growth in the first two quarters will continue and that we can have robust growth for a substantial period of time and I think that's a possibility, but it also seems to me that we face enormous headwinds with high unemployment, a weakened consumer, the fact that the expansionary effect of the deficit beings to decline in the third quarter although deficits are still very, very high for as far as out into the future you can see, state and local deficits as Ben Bernanke mentioned the other day, and a variety of other factors. So I think there's at least a realistic possibility that we could revert back to a much slower and bumpier growth than any of us would desire and for an extended period of time.

Number two, many of you travel internationally and are familiar with foreign economies. I don't think there's any question that there is an imperative that we act on our long-term challenges driven by the transformative change taking place in the global economy including the growth of China, India and Brazil, many of the Asian countries that are greatly increasing productivity, the massive transfers of wealth to oil-producing and trade-surplus countries, rapid, ongoing and hugely impactful technological development and much else.

Number three, as was discussed some in the first panel, our own country is inadequately addressing K-through-12 education (inaudible) research or energy policy, infrastructure and many other areas that are critical to long-term success and areas in which our competitors are moving rapidly.

Number four, we have unsustainable fiscal deficits for the years and decades ahead. In addition, we have large annual maturities that have (inaudible) funded. These conditions pose multiple risks with varying degrees of severity. They're discussed in the strategy paper and I won't repeat them. Let me just make two observations.

Number one, although the risks or the probability of these risks materializing is obviously greater as you go out in time, the psychology of markets can change unpredictably and rapidly, and I don't think we cannot write off. We cannot discount the possibility at least of some of these risks arising in the shorter term although as I say with much lower probability of that happening.

And secondly, large deficits constrain our ability to engage in public investment and they constrain our ability to react with resilience to geopolitical and economic emergencies.

The next item (inaudible) remain unresolved and critically important. Then the last item that I'll mention is that market-based

economics and government, strong government, to meet the needs that markets by their very nature will not address are often viewed as antithetical. The Hamilton Projects views them as complementary, and one of the observations that President Clinton used to make is that too often those who emphasize one-half of that pair would tend to underestimate the importance of the other.

Now let's turn to the panel. What I'll do is ask each panelist to comment for a bit on a subject that I know is of interest to them or at least I've been told is an interest to them, we'll find out in a moment if I'm wrong and then they'll comment on something else. Whatever they want. At any event, it's a terrific panel. So once they're done, we'll do this a little differently than the first panel did it, we'll go through those comments and then once we do that we'll have a free-flowing discussion amongst ourselves with respect to the issues that they've discussed, and then as I say, we'll deal with questions.

Let us start with our Senator from the Great State of Ohio, Sherrod Brown.

SENATOR BROWN: Bob, thank you. It's a pleasure and honor to be here. Is that working?

MR. RUBIN: Is the mic working?

SENATOR BROWN: Is my mic working. Am I supposed to

turn it on?

MR. RUBIN: No. They should turn it on. It could be a conspiracy to silence senators, but let's hope not.

SENATOR BROWN: Do you want to just switch?

MR. RUBIN: Let's switch. Here we go. There you go.

SENATOR BROWN: I apologize for being a moment late. Actually I have brought in, every year I invite 50 or 60 college presidents from Ohio, 2-year or 4-year schools, private and public. Ohio has either second or third most private four-year schools of higher -- four-year colleges and universities of any state in the country, private schools in addition obviously to an extensive community college and university network. More on that later, but that's obviously a big part of our discussion is what we do in clean energy and aerospace, Ohio in many ways is a leader in both. We have more Airbus investment in our state by far than any state in the nation. We got more jobs in clean energy from the stimulus package than any other state. Toledo, Ohio, believe it or not has more solar energy manufacturing jobs than any city in the country, and I preface to show you that Ohio really is looking forward in a lot of kind of best practices and innovative manufacturing in addition to biomedical and a lot of other things we do.

Let me put the discussion at least from my fifth event or fourth event into a bit of an historical context, that while we absolutely should be

talking about how we in a macro way make this economy work and that's about -- it's about profits and economic growth to be sure, but at the same time we should also put it in the perspective of what this means for workers in our country and for wages. You can look without too much historical context that from 1946 to 1973 we saw the people on the bottom half or the bottom 80 percent see their wages go up and we saw a lot of economy growth during that period; since 1973 less so and especially since 2000. And while putting aside the economic condition we're in today of the last two years, go back to 2006 or 2007, and look at what happened in the decade since 2000 at the beginning of this millennium. We saw economic growth. We saw recovery coming out of a minor recession at the turning of the millennium if you will. We saw good economic growth. We saw good profits for industry, for employers, for companies. And we saw almost terrifically increased productivity from our workforce.

What we didn't see is growth in income for most of America. To me the economy should always be measured with always a focus on what does this mean for 80 percent of our country, not just as important as economic growth and as important as profits are. We need all of those things, of course. But what we have seen, if you chart productivity increases in this country since World War II, you can see pretty much of the time that wages kept up with productivity, particularly from 1946 to 1973, but even

since then until 2000 when as productivity continues to climb, workers' wages did not climb. So economic growth when it's not shared by large numbers of people is certainly worth something to our country, but it's not what it should be and that's where our focus absolutely needs to be. It's not what we talk about much in seminars like this. It's not what we talk about much on Capitol Hill. It's not what the nation's newspapers and the pundits on MSNBC, FOX, or CNN talk about. The focus in my mind should always be how do we get economic growth and how do we see the kind of wage increases for white collar and blue collar alike?

I lay a good bit of that at the feet of what the focus in our economy has been from the sort of macro players, the most influential players in our country's economy in terms of Wall Street, in terms of elected officials, in terms of economic advisers at the White House and in our universities and throughout the system that way. What I would get to is what has been the emphasis on our economy? I'll give you a few statistics without overdoing them. In 1980, manufacturing was about a third of our GDP. Financial services was less than half of that, so less than one-sixth of our GDP. By 2005, that had been flipped so that manufacturing is now I think roughly one-sixth of our GDP, again now meaning before the worst part of the recession hit, manufacturing is about a sixth of GDP, financial services is much more than that.

And while I'm always supportive of innovation in anything if it's done properly, we've put way more emphasis on innovation and financial services than we have in manufacturing. Since 1980 we really have pursued a policy of favoring financial services over manufacturing. This didn't happen by accident. It's trade law, it's tax law, it's who we bail out in difficult situations, whether it was the savings and loans of a couple of decades ago, whether it was the big hedge fund of a decade ago, or whether it's Wall Street most recently. That's where our emphasis has been. It's not been on the right kind of long-term predictable tax credits and energy tax credits and investment tax credits for innovation in manufacturing. It's not been in trade law. It's not helped us. It's really more incentives to outsource than to do production.

I would end with this and this is perhaps the best example. I go back to my state. I voted for the stimulus package and the Recovery Act. It was controversial, but it was what we needed to do. It has clearly been the right thing. It has clearly served our country well. I don't think there is real reasoned debate to say otherwise. But I also have to go back and argue that when we put direct dollars into wind turbines in a West Texas wind turbine field if you will, most of those wind turbines are made in China. I have to go back and explain to my constituents why that's not such a bad thing that their tax dollars are going to be paid to manufacture in a country

that already has almost a billion-dollar-a-day, not quite, trade surplus with the United States. I've been critical of the administration in now they've handled it.

I'm also understanding that we aren't capable, frankly, of building wind turbines today in the United States. We make components parts, a lot of them in Ohio, frankly, but we aren't able to do all we need to do in wind and solar in the state. What does that say about what we've let happen to our industrial base that we can't build wind turbines with American workers in this country and we can't build solar with American workers in this country?

Oberlin College, 20 miles from where I live, has the largest building on any college campus in America fully powered by solar energy. The solar panels were made in Germany. Wind turbine technology was developed, the technology that's used around the world, 15 miles from my house in Sandusky, Ohio. It's a NASA product. In 1980, the Reagan Administration said we're done with that.

They lost their clean energy mission. With it, they lost a whole lot of expertise, not just to innovate, but to innovate and then commercialize that innovation.

If we're going to succeed as a middle-class nation, if we're going to succeed at creating wealth for large swathes of people, and I know

everybody up here agrees that's what we want to do. I think the emphasis isn't always where it ought to be, from any of us frankly, but we've got to pay attention to the kind of innovative, cutting-edge manufacturing in aerospace and biomedical work and clean energy.

I think all of us would agree with you.

We're supposed to go from panelist to panelists and then do our questions, but I'd like to ask you one question if I may.

SEN. BROWN: Sure, sure.

MR. RUBIN: I don't think there's anything that you said that doesn't strike me as absolutely sensible.

If you were king, which in our political system maybe we'd be better off with one than anything, if you were king, what would you do politically? What would you do substantively to try to address the objectives that you have, given the changes in the global environment and the competitiveness that we have from China and India and others, which are not just low cost labor anymore, but now really are highly efficient and highly productive participants in a lot of the areas you're talking about.

SEN. BROWN: Three or four things. I would start with what we do with helping manufacturing companies transition with capital because of the difficulty of obtaining capital for them -- tracking capital into the supply chain of clean energy, for instance. If you can make glass for trucks, you

can make glass for solar panels. If you can make gears for cars, you can make gear boxes for wind turbines. I would have a federal revolving loan program, if you will, to begin to help industry transition that way.

I would enforce trade laws the way President Obama has done. Against the advice of most of Wall Street and almost every newspaper publisher in the country, he enforced in a big way, and eventually not affecting huge numbers of companies, but significant, a Chinese tire issue where it's clear that there was a surge, and breaking trade laws and agreements, and what happened with oil country tubular steel. I won't go into details there.

I think we need longer-term R&D tax credits, to make sure. We're doing that, I think, pretty well in the Senate.

Workforce investment connecting local manufacturers and local service industries with managing and training workforce better than we have. I'd look at a BRAC kind of model that we should use, the base closing model, when a community is devastated. Wilmington, Ohio, a town of 12,000, lost a company called DHL, 7,000 employees. It was the biggest employer in six counties in that region, small counties. That's devastation when that happens, and we need a kind of BRAC, and the President has been very helpful in moving in that direction.

Then an increased emphasis on SBA and Ex-Im Bank to help with exports, and Administrator Mills has moved in the right direction in that way. They need to do larger amounts, larger guarantees for small business loans because manufacturing especially needs more money than a service company.

And the last thing I'd say is unionization. We need to make it easier to organize, so that workers can get a piece of the action. The fact that since 1973 the wages haven't kept up with productivity is a lot of things. It's trade. It's tax law. It's oil. But it's also the fact that there is a significantly lower rate of unionization in this country.

Our best days as a country, where the middle class grew and people can find, get their way, work their way out of poverty was when we had higher unionization rates. I know that that's not the only reason, but that's a big part of the reason.

MR. RUBIN: Senator, I think you've stated one of the great challenges that we face as a country. And the question that you stated, if I understand it correctly, is can we revive manufacturing in this country in ways that make sense and that are competitive and are very different.

SEN. BROWN: We can.

MR. RUBIN: And that's a very constructive set of policies.

Alice, whatever we do, there is a reality that faces us, and that is our fiscal reality, one I know that enormously focused on. So why don't I ask you if you'd comment a bit on that?

And I guess at least two parts of that question might be the Senator has laid out a number of areas in which we could work. Some of them actually not budgetary either.

SEN. BROWN: Yes, a lot of them aren't.

MR. RUBIN: Yes, a lot of them really involve very little budgetary effect. On the other hand, there's an awful lot that we would have to do that would involve budgetary effect.

So how do we deal with our deficit?

How do we deal with the terrible problem we have right now of high unemployment and high deficit? How do we work our way through that?

And how do we make room for public investment?

And also if we're going to commit to the future, with respect to deficit reduction, how do we do that in a way that's credible?

MS. RIVLIN: Is that all?

MR. RUBIN: Well, actually that's the beginning, and then you can launch from there, and you go forward.

MS. RIVLIN: I think that getting on top of our long-run unsustainability in the federal deficit and the federal budget is a

precondition both for a strong, sustained recovery and for a strong growth in the economy, going forward. We can't do that if we have to borrow larger and larger amounts every year in our federal budget.

It will drive interest rates very high. It will provoke at some point a moment at which our creditors -- some of our creditors are in this room, and about half of them are overseas. Our creditors will lose confidence in the U.S. Government as a sustainable enterprise.

Now we don't know when, as you said yourself, Bob, earlier. We don't know when we might have a crisis. Probably, given the faith in the United States as a strong economy, which we all believe in, we can go on borrowing money for a while. We're not Greece, but we don't want to become Greece, and there's a really serious problem of how long we can go on doing this.

The basic problem, as you know, is as you look down the road spending is simply going to rise inevitably under current policies faster than any growth rate that we are thinking about. And revenues don't go up that fast. In any given set of tax rates, they go up about as fast as the economy grows. So you have a growing wedge.

Now that's an old story. That was true five years ago. It was true 10 years ago. But what has happened in the last couple of years is of necessity.

We've had a big recession. We've had to borrow a lot more automatically because that's what recessions do, and to counteract the recession to do the stimulus. And I agree with Senator Brown; we had to do it to rescue our financial system, which I wish we hadn't been forced to do, but we were. That's driven up the debt. So we face difficult long-run problems, but from a much higher point of debt relative to the GDP.

And Michael had a chart earlier, or somebody did, showing how fast that goes up.

Now there are only two ways to attack this. It's higher revenues, and it's bending the curve of future spending. Not spending less, but having it grow less rapidly. We've got to do both.

The President has appointed me, among others, to a bipartisan commission that's supposed to tackle this. We aren't going to have a magic solution. We aren't going to do everything at once, but I hope we can help. It's got to be bipartisan. It's got to be both taxes and spending.

But a natural question is the one that was implied, that you implied: Won't this derail the recovery? I don't think so. I think we will derail the recovery if we don't do it. And we need to enact now -- now being as soon as possible -- measures that will control the long-run deficit.

It won't have to take effect in the recovery period. They couldn't. If you were doing something like fixing Social Security, which would be high

on my priority list, you would phase it in very far in the future. It's not going to affect the recovery.

The Health Bill has already put in place measures that can help reduce the rate of growth of health spending. We need to accelerate and reinforce those, but they aren't going to bend spending very fast.

But we have to reassure our creditors that we're serious, that we're doing this, and we have a plan to do it.

Will making this continued effort to keep the budget sustainable make it harder to grow the economy? It will make it intellectually more difficult because we've got to find more intelligent ways to finance infrastructure, for instance. We've got to find ways that finance skill development, that aren't just throwing money at the educational system on top of what we've already got. At the end of the last panel, we talked about reorienting priorities, and that's really important. It can't just be let's spend some more on top of what we're already spending.

MR. RUBIN: Alice, this is maybe an unfair question.

MS. RIVLIN: There are no unfair questions.

MR. RUBIN: You talk about the recovery period, and I gather your theory of the case would be that your deficit reduction activity would really only begin to take effect after we'd gotten through the recovery.

(Interruption.)

MR. RUBIN: Oh, I'm sorry. Okay now? No?

MS. RIVLIN: Yes, speak directly into it.

MR. RUBIN: How about now? Yes? No? Some?

Here's what we'll do. Danny Webster managed without a microphone.

Let's see if this works. Okay.

I was going to say to Alice that I think, if I understand it correctly, the underlying theory of the case would be that we push for recovery now, but we have a credible longer-term program that takes effect after the recovery is well underway.

MS. RIVLIN: Yes, but it's already law.

MR. RUBIN: What?

MS. RIVLIN: It's already law.

MR. RUBIN: It would already be enacted.

MS. RIVLIN: Yes.

MR. RUBIN: So my question is, and this is sort of an unfair question, how long do you think we're going to need in terms of a recovery period, so we can get to the point where whatever it is that you propose doing can begin to take effect without adversely affecting the momentum of that recovery?

MS. RIVLIN: We don't know, but I think the answer is the recovery will be stronger if we actually put these things in place. And most of what we would naturally be talking about couldn't -- couldn't -- take effect quickly. Fixing Social Security, for instance. Nobody is going to do things that will affect people who are already retired or about to retire. So you're talking quite far in the future.

Tax increases. Suppose, and this is not a recommendation. Suppose we had a value-added tax. I think there are some strong arguments for shifting more toward consumer taxation as long as it's not too regressive. But you couldn't do that in two years or even probably four. You'd have a long entry period.

So I'm not worried that legislation, serious legislation is going to take effect so quickly that it will derail the recovery.

MR. RUBIN: If I may, the thought in that then is that we'll have strong enough recovery over three, four, some years, some period of that sort --

MS. RIVLIN: Yes.

MR. RUBIN: --to enable us to then put into effect the kind of measures you're talking about.

MS. RIVLIN: You bet. And I think we should already have done it. I mean I think it would have been smart of the Obama Administration to

have put some measure, like perhaps Social Security reform, in their first or second budget, not wait.

MR. RUBIN: The reason I pressed you a little bit on that is Eric Mindich, who's here, and I were at dinner last night with a very -- since we're off the record, I won't say who it is, but a world-known columnist. His argument with respect to what's happening in Europe is sort of the same in a way, that if we could buy time, if somehow or other we could get strong enough growth over three, four, five years, then those countries get to be better positioned to absorb what look like inevitably are going to be some very difficult sovereign fiscal adjustments in Europe.

So we're also betting on the same thing, that growth over a two or three or four-year period will be strong enough and then enable us to do the fiscal, and that by enacting something now fiscally we get enough confidence in the market to enable that growth to occur.

MS. RIVLIN: Right. And we don't want to wait so long that we have no choices. Greece waited too long.

(Laughter.)

MR. RUBIN: Greece waited a long time.

Oh, that's good. Let's turn to Alan, I guess.

Alan, in addition to everything else that we discussed, if you would like to comment. My impression is that you have some thoughts on the

very issue that the Senator was so focused on, which is this question of we've had this growth. We've had productivity growth, but income distribution has really not been good; it's been bad. Why don't you take that?

MR. BLINDER: I will. Thank you very much, Bob.

I guess I'd like to preface what I want to say, but very, very briefly, by underscoring what several speakers before me have said, which is that the first order of priorities has to be a rapid return to full employment.

Every one of these long-run issues that we're talking about, and I want to mention two, will be much harder in a weak economy and much easier in a strong economy. I guess I want to emphasize the "much" part. It makes a very, very big difference.

Now having said that, what I want to talk about in my five minutes is two long-run issues that we don't usually think of as budget issues, starting with the inequality issue, which Senator Brown was speaking about, and which quite not incidentally is one of the signature concerns or that has been one of the signature concerns of the Hamilton Project from its inception.

It's kind of a forgotten issue right now. And that's understandable. We're having hard times and people are concerned with lots of other things. But as the senator reminded us, with a few interruptions

-- thank heaven for the interruptions -- inequality has been on the rise in the United States for 30 plus years give or take now. That's a very long time. And it has cumulated to a very large increase in income inequality. I'd like to call that un-American, but since we've been doing it for 30-plus years, I probably can't say that. It's at least unfair and I'm pretty sure it's socially corrosive in a variety of dimensions.

So what to do about it. When you ask economists about the inequality problem, they -– and I include myself in this -- they reflexively think of the tax transfer system. That's why we have a regressive income tax. That's why we have an inheritance tax. On the other end, that's why we have the EITC and PANTH and a whole variety -- Head Start and a whole variety of other things that do without using bow and arrow what Robin Hood did or allegedly did a very long -- centuries ago, which is redistribute income from the top towards the bottom. I want to emphasize that because for this country for quite a long time was redistributing income from the bottom to the top. At very least, we ought to stop doing that. But economists think first, second, third and sometimes only about using the tax transfer system to redistribute income in the downward direction.

Trouble with that right now is that this -- and probably for some years to come since we're not about to get back to a 4.5 percent unemployment rate anytime soon, is that this is pretty unpopular right now,

politically and in every other respect. And the point I want to emphasize, which keys off what Alice was just saying, is that if we think now about raising taxes, say, on upper income groups -- which obviously we are thinking about; it was part of the health reform, for example -- we desperately need that revenue for other things. In that case it was to pay for the health reform, and the next round is going to be for deficit reduction. So this Robin Hood method of raising upper bracket taxes to pay for transfers doesn't look very viable going forward.

So I reached the unhappy conclusion that we need to tackle this problem in other ways, and the problem is, what are those other ways? It's just not -- there's a reason that economists reflexively think of the tax transfer system. That's the obvious way to do it. It's easy to say, but hard to do, that we need some sort of a change in the social contract. I think a lot of us observed, over the last generation plus, a change in the social contract that was very hostile to working Americans. Part of that was the decline in unionization that Senator Brown mentioned before. But there are other parts.

And so I just think that -- and I also think that it's very unlikely that this is going to be done entirely through legislation in Washington. There are a whole of people in society, in businesses and unions and in education that we need to get involved in this. And it's going to require

some of the kind of new thinking that I think and I hope the Hamilton Project stands for.

The other thing, if I can just take two minutes. I got five, right?

MR. RUBIN: You got --

MR. BLINDER: Is I want to say something in sort of a similar vein about an unrelated problem, which is climate change. Again, speaking as an economist, I think almost all of us economists think that you can have as much hortatory language as you want, but until we get the prices of fossil fuels higher, nothing's really going to work. It's nice to talk about green technologies. And we ought to be the center of green technology and I agree with that completely. But I think the first, second, third, fourth, fifth most important ways to do that is to make fossil fuels more expensive in the United States. Then let the private sector go to work because they will find 15,000 ways to do this that none of us up here, none of the congressmen in Washington would ever think about. But they need the incentives that market systems create.

So what does that mean. It means a tax carbon or its first cousin a cap and trade system. And I would emphasize, and this again keys off what Alice was saying a moment ago, that it's very clear what the right solution here is, putting politics aside. Which is whether it's going to be a tax or whether it's going to be through -- whether it's going to be through a rising

tax or a tightening cap and trade system, the whole idea is to make this painless in the short run and increasingly painful as you go out. So that businesses can plan on an ever rising cost of fossil fuels and start building the kind of plant and equipment, motor vehicles, houses, buildings, etcetera, that will economize on the use of fossil fuels.

That's just very obvious economically, and I just wish the political system -- I wish, but I -- I wish the political system could be that rational and farsighted, but I know that it won't be. I mean, you could blame this on James Madison who went to Princeton in the 1760s. It's not going to happen politically.

And finally, to tie this back, finally to, again, to what Alice was saying, whether you look at this as an economic problem, a problem of economic efficiency, which is the way economists like to look at it, or look at it as a political problem as I was just suggesting, that problem is a whole lot easier if you can, say, raise a carbon tax and give back the revenue in other forms. You could cut payroll taxes. You could cut corporate taxes. You could cut income taxes. And that's the way economists have been thinking about this for three generations or something. But I come now back to what Alice was reminding us of. We're now in the rotten position where as we have to think about raising taxes on energy, say, we're almost certainly going to have to devote most of the revenue to deficit reduction. And that

just makes it much, much stickier.

MR. RUBIN: Alan, could you expand? I know we're supposed to move from person to person, but you raised the provocative question of if you don't take the traditional economists' what you sort of call reflexive reaction to distribution accomplishment, what alternatives are there?

MR. BLINDER: Well, I mean, as I was saying, I think it's really hard. I mean, that's what I'd like the Hamilton Project to work on.

But I'll give you one concrete example that the Senator alluded to before. The increasing unionization through card check, which a lot of us supported even with reservations, is one way to pick away at this deterioration of the social contract towards capital and away from labor. There was another -- a couple of allusions have been made to the relative size of the financial sector versus other things. Which I think probably we're going to get some natural -- the economy's doing that naturally right now with very harsh --

MS. RIVLIN: Methods, yeah.

MR. BLINDER: In a very harsh way. As I said before, it's high time, and I think we've now done it with this -- we've clearly done it with this administration as opposed to the previous and to the Reagan years, that we stopped the piling on by the state. What we've had for most of the last 30,

35 years is the market system turning ferociously against people with less education, less skilled, etcetera, and then the government piling on with a tax system that was exacerbating the problem rather than ameliorating it. So I think we've stopped that. I hope it's not just temporarily. But it's only an amelioration. It's not getting down for the fundamental (inaudible).

MR. RUBIN: Microphone.

MR. BLINDER: And finally, I wish I knew how to make the education system work better for the underprivileged. But I was completely taken with $2 a book. I said to Roland before, I'm willing to pitch in. You know, count me down for a 1,000 books at $2. I mean, I think it's a fantastic use of money.

SENATOR BROWN: Could I -- I know Ed's next, but could I just put a human face on something he just said about unionization and card check, because it's not going to be card check. If we move it at all, it will be an accelerated election, an accelerated arbitration, if necessary be an accelerated negotiation process. That's minutia maybe you don't care about much.

But I was in Cincinnati, most conservative part of my state, about two years ago, speaking at a dinner. The front table -- it was a -- I think it was an AFL-CIO dinner, I can't remember exactly, but at the front table were 10 mostly -- I think 1 man, 9 women, roughly, I think, and African

American and immigrants. And they had just signed their first union contract. They were representing 1,200 janitors in Cincinnati. And I went and I sat down at their table with them to talk to them about it meant. They had just signed the agreement literally two hours earlier.

And one woman said to me, this will be the -- she said we signed this agreement. We have health care. Not particularly good health care, I would assume. Not very high wages. But she said this will be the first week -- this is the first time in my life I will have a week's vacation. I will have a paid week's vacation as a result of this unionization of this agreement.

These people weren't going to get rich. They were janitors in all of the downtown office buildings. They're probably making $13 or $14 an hour, but they get a paid week's vacation. My guess is everybody in this room that dresses like this has had paid vacations. And, you know, it's not necessarily a human right, but it's sort of what we stand for in this country. You get a decent wage, you get health care, you get some kind of a pension, and you get a week's or two week's vacation that you earned. And why can't we do that in this country?

MR. RUBIN: We'll turn to Ed in just one sec.

Could I ask you a question, Senator?

SENATOR BROWN: Sure.

MR. RUBIN: And maybe somebody -- Alan, you may know the answer, or Ed. I remember a similar panel once and there was some discussion with respect to this very same question of unionization. The observation, I remember who made the observation, but I won't say the name just because if I misrepresent it, I don't want to have somebody else being misrepresented. The thought was that it might be more readily doable to promote unionization, because I would share your view that -- you know, Galbraith wrote about the need to have equal power on both sides of the labor table.

If we could also move in the direction of Scandinavia, which this economist claimed had a union movement that was much more directed at wage negotiations, and didn't get terribly involved in work rules and was actually supportive of productivity.

Now, I don't know if that's an accurate description of what happened in Scandinavia or not. But if so, then the unions actually became part of -- almost a partner with business, at least with respect to productivity.

Alan is shaking his head yes.

And then they would negotiate over wages. How do you split the pie?

MR. BLINDER: Go ahead.

SENATOR BROWN: Well, I was going to say I think that's

happening more and more in the workplace in this country. Unions understand that the success of their company is a success for them. I go to a lot of plants in my state, a lot of businesses, manufacturing, not union, non-union. And union plants now almost always union and management meet me together and talk about their cooperation. And I don't see the tension I might have seen between them that I saw a decade or particularly two decades ago.

So the answer to that is yes, we need to do more of that. I think the organized labor understands that.

MR. BLINDER: Right, I think -- I've been writing about this for more than 20 years, on and off. But I think it's exactly the tradeoff: better wages for less restrictive work rules.

Now, having said that, Alice said we're not Greece. We're not Sweden either. This is a big country with people geographically dispersed doing all sorts of things, hundreds of millions of people, not a handful of millions of people. The key difference in the Scandinavian union negotiations compared to America has been always been their centralization. Once you get it centralized, you're negotiating with one labor confederation instead of lord knows how many different unions and non-unions. It's easier to focus on national priorities, like what's better for our country. And while that would be very nice to dream about, we're just never

going to do that in a country of 310 million people.

MS. RIVLIN: No.

MR. RUBIN: But there’s still an issue, Michael, that for the point of view of the Hamilton Project might really be worth giving some thought to and see if we can make some contributions. Perhaps the Senator could help us as well.

SENATOR BROWN: Good. Love to.

MR. RUBIN: Ed, you’re interested in housing, and I think have some interesting ideas on housing, and I think they relate to capital reallocation. And then if you had a moment or two in addition, the financing of infrastructure is something you’ve given some thought to. And we’d appreciate hearing that as well.

MR. GLAESER: Yeah. Thank you.

America has just experienced an extraordinary housing convulsion. Between 2001, 2006, the Case-Shiller 20-City Index increased by 53 percent in real terms. For every dollar that a city saw its prices rise over that period, it then saw its prices fall by .75 cents over the next 3 years as housing prices throughout the nation declined by 33 percent.

There is, of course, a direct parallel between that price event and the construction event that also occurred. America was producing 1.9 million units per year in both 2005 and 2006. And now, of course, we’re

down under 800,000 units being produced last year.

This has been an extraordinary gyration. And the sad truth is we actually don't understand it very well. It would be comforting, it would be nice to believe that we can explain this event just with easy money, just with low interest rates or with aggressive approval rates on the parts of banks, but hard statistical work on this stuff tends to find that we can actually explain very, very little of the boom, no more than a third with low interest rates or with aggressive approvals or with high loan-to-value value ratios. We just don't understand the full set of the psychology and the full set of the dynamics that then created that boom, but that doesn't mean that we can't draw lessons from this and it doesn't mean that we can't think seriously about reforming the policies that even if they did not create the boom. They certainly abetted it. And I think, first and foremost, among those policies are those that artificially subsidize Americans to borrow as much as they possibly can to bet on the vicissitudes of the housing market. I think, you know, in the wake of this event, I hope that no one yet again sees subsidizing homeownership as an unfettered way to create an ownership society where everyone gets rich. It's also a great way to make sure you have a whole lot of defaults and a whole lot of people who owe a huge amount of money.

In the current situation, in a crisis, in a downturn, there are two

rival, contradictory impulses that come forward in government policy, one of those can be, you know, blandly overviewed as recovery, stasis, doing something to stanch the horror, right, and that pushes towards the status quo. That pushes towards more of the same, that push towards the homebuyer's tax credit, that push towards, look, housing prices have fallen, but let's do everything we possibly can to stop them from falling further. That's a completely understandable motivation, but it stands at complete odds with the necessary long run move for reform, which actually asks about looking at those policies and actually asks whether or not we can actually make longer term changes that would then wean America off subsidized credit coming both through the home mortgage interest reduction and through the implicit subsidy that works within government sponsored exercises.

I believe we're at a point of stability in housing markets, at least in terms of prices, where we can actually contemplate reform rather than just recovery, where we can actually think about putting in place in a gradual, sensible fashion, those reforms that will actually move America towards a more sensible approach towards its housing markets.

Our prices have stayed stable for many months, the core economics in markets like Phoenix and Las Vegas suggest that we are about where we should end up in terms of long run prices. Florida may still

have a bit to go, but at least in prices we seem relatively stable. In quantities we're still enormously low, but we will remain enormously low until the rate of new household formation picks up. We overbilled about 2 million units during the boom and until new household formation sops up that housing glut we're never going to be back up at 1.3, 1.5 million units a year.

So, I think that the big long run reform, the big thing that we really need to think about is this sacred cow of the home mortgage interest reduction which is in need of a good stockyard. The policy -- let's just count its sins, right, so the first sin is that it subsidizes Americans, it bribes Americans, to borrow as much as possible to bet on housing. It also, of course, is an implicit subsidy towards the banking system and as we think about, you know, channeling America's activities towards other enterprises, other industries, we should think about that as well. But how in the world can it make sense after experiencing this convulsion, that we want to bribe Americans to bet as much as possible on where housing prices in Las Vegas will be a year from now? How can that possibly make sense?

The second odd force of this subsidy is that it encourages Americans to build as big and as much as possible. It privileges the housing sector over other forms of investment, and it encourages Americans to buy as big a house as they possibly can. Already, poor Americans live in houses that are roughly the size of the average Frenchman or the average

Englishman. How in the world in an age of global warming, when carbon emissions rise roughly one-for-one with the size of a house, can it possibly make sense for the government to be encouraging people to build bigger houses?

Third, we have for decades subsidized people to leave our cities, our precious urban areas which are the engines of our economic enterprises where people get smarter by being around other smart people. We have engaged in a series of policies among the home mortgage interest deduction which has pushed people to live cities, there's almost a one-to-one relationship between structure type and ownership type.

More than 85 percent of single family detached houses are owner occupied. More than 85 percent of multi-family dwellings with five or more units, are rented. When we bribe people to live in owner-occupied units, we're telling them to leave apartment buildings and leave the cities that comes -- that are houses to those apartment buildings.

Fourth, as everyone here knows, we've just had a lot of talk about income inequality. The home mortgage interest deduction is wildly regressive. The average benefits from the deduction for people earning more than $250,000 -- for families earning more than $250,000 a year, are 10 times the benefits that accrue to households earning between 40- and $75,000 a year. And those are just home owning households. That ignores

the whole side of the world that actually doesn't own homes which is actually substantially poorer.

Accompanying that regressivity is the fact that this is a very poorly targeted policy if we actually want it to encourage home ownership. The relatively wealthy people who get the bulk of the benefits are going to be homeowners anyway. By focusing the home mortgage interest deduction in a way that channels benefits to that group, you're making sure that they're not being targeted to the people lower down on the income level who are genuinely on the margin between owning and renting.

So, what should one do, what could one do? I think, you know, this is not an out-of-the-blue thing. Economists have been talking about reforming the home mortgage interest deduction for years, in fact, President Bush's tax reform panel talked about what I think is the most sensible gradualist approach, which is lowering the cap on the home mortgage interest deduction. We already have a cap at $1 million. It could be brought down $100,000 per year over the next 7 years. It's unlikely that this relatively incremental change would actually have a large impact on housing prices in the short run. In the long run, it could move us to a world in which we both raised more revenue and made the system less fair and less distortionary.

I think, though, in the longer run we should also think about

replacing, not augment as was done in the recovery, but replacing the home mortgage interest deduction with just a straight homeowner's tax credit, with just a straight benefit that does not scale up with the size of your house and does not scale up with the amount of debt that you borrow. If we actually feel that this country really wants to subsidize home owning, I think that in and of itself is a debate worth having, but if we're confident that we should do it, we should have just a straight tax credit that privileges home owning rather than something that is an encouragement to borrow and bet and build.

So, I'll stop there.

MR. RUBIN: Okay.

MR. GLAESER: I didn't get to the infrastructure.

MR. RUBIN: No, no, but your proposal isn't going to pass in the Congress tomorrow anyway. (Laughter) I'm not licensed to practice politics, but I just have an instinct. (Laughter)

Give us one minute on infrastructure financing? Is there some -- look, Alice has already gone through this. We have this enormous fiscal -- understandable fiscal situation for as far as you can see and many people think it's worse than it's said to be. In addition you've got to fund the rollover every year or the maturities every year of very large amounts of debt. Is there some way to get at this infrastructure that doesn't go on the budget?

MR. GLAESER: You know, I think like all economists I'm a fan of user fees, right, in so far as they're possible and collectible. I think it's hard not to think that we want to actually charge people for the social cost of their action and that certainly includes using infrastructure.

I think there's a real challenge facing our infrastructure needs and it seems apparent to everyone that this country has significant infrastructure needs and yet we are incredibly bad at directing our funding to the places that need it most.

One of the things, the graphs, that I'm fondest of is the relationship between recovery act per capita spending, which is mostly infrastructure, and the unemployment rate. Of course that relationship is negative. We spend the most in the places that have the lowest unemployment rates and we spend the most in those places that had lower unemployment as of December 2009. That follows -- sorry, from December 2008 -- that follows from the way that we allocate transportation spending. Primarily we give money to places that have a lot of roads relative to people and as a result, the great plain states and Alaska end up with a great deal of infrastructure spending. I think it's hard not to think that we need to rethink that. We need to rethink the infrastructure spending which has also been a part of the anti-urban trifecta of public policy over the last 60 years and I think it really does make sense to think about a more sensible infrastructure

policy that starts with user fees.

MR. RUBIN: Okay. We have questions from all of you all. Let me start with this one. We have 1, 2, 3 -- three economists on the panel and one of the questions is -- recognizing that we have a lot of excess capacity right now, but, hopefully, we work our way through that, although that in itself is a very big question, but assuming that we get back to something that is relatively full employment, what do you think the long run full employment rate of growth in the United States is likely to be? In the context of a highly more competitive global economy?

MR. BLINDER: I'm an optimist on this. I'm looking at recent productivity performance in very difficult times, when it usually deteriorates badly and I cannot reconcile that kind of performance with a deterioration in the long run productivity trend. So, I'm on the high side of 3, maybe 3.25 -- 3, 3.25, that kind of a number for the long run growth of which about 75 basis points is going to come out of population and the rest is coming from productivity.

MR. RUBIN: Alice?

MS. RIVLIN: I'd agree with that. I think the productivity increases, really since the mid-'90s, through thick and thin, have been mysteriously high, but that's terrific.

MR. RUBIN: Could I ask -- well, Ed, I actually have a follow-

up question.

MR. GLAESER: I'll pass it to you.

MR. RUBIN: You'll pass?

MR. GLAESER: I don't do macro forecasts.

MR. RUBIN: Okay. Well, I'm a retread lawyer, so for the two of you, given that answer, if you look at high-speed rail where China now has better technology than we have, you look at the various areas that the senator raised where we're importing panel glass if I remember correctly?

SPEAKER: Yeah, mostly.

MR. RUBIN: And a lot of other technologies are now being developed as effectively in substantially lower wage countries that have become -- managed to educate at least some elite very effectively so that they can be productive at what seem to be considerably lower costs than we have. How do we get to the levels of growth that you're talking about given the constraints that the fiscal situation provides with respect to public investment?

MS. RIVLIN: Well, I'd go with Ed on some of the public investment, the infrastructure. I think we really have to finance it in a way that will give us a more efficient system. I think that means, with respect to transportation, it means forget the gas tax. We might have a carbon tax for other reasons, but the gas tax is diminishing as our vehicles get more

efficient, as they should, we need to do road use pricing, charge everybody for the use of the roads and more for congested times, and use that to aggressively improve our transportation infrastructure.

MR. BLINDER: I have long thought that we are woefully undersupplied with public infrastructure. However, realistically it's private investments that are going to drive this productivity. So, more public investment will help someplace out in the decimal point, but it's fundamentally private investment, and the truth is, we're quite good at that in America, at investing private resources productively. We have our lapses, we've just had a whopper of a lapse, but generally we're pretty good at it and that's where it's coming from.

MR. RUBIN: We only have time for about -- I think we have four more minutes before we have to adjourn because the senator has to leave and also the Vice President is coming, but if you think about private investment, Alan, what is most likely -- and then I'm going to ask the senator a final question -- what is most likely to give rise to higher levels of private investment? Is it the sort of thing Roland Fryer was talking about before, or --

MR. BLINDER: To some extent the more productive -- look, you either have to lower the costs or increase the returns, so I was talking about, for example, increasing the returns to green innovation and green

technology, but raising the price of fossil fuels, a better educated work force is a resource, the tax system matters also, and our corporate income tax is a mess.

It's a whole -- I think it's a whole variety of little -- well, not so little -- a whole variety of things of that nature.

MS. RIVLIN: I don't see any evidence that we ran out of any ideas. What happened here was a financial crisis that threw a pretty well-functioning economy into total disarray. It wasn't running out of ideas.

MR. RUBIN: Senator, you are there every day with your colleagues focusing on the public policies of the country. You've now been kind enough to join us for an hour of discussion and contributed enormously and thoughtfully to -- thoughts about where we need to go, where our public agenda needs to go.

Is our political system going to be able to deliver what our policy people say our public agenda needs?

SENATOR BROWN: I think it is. You know, we all think this is a more partisan time than any time in our lifetimes. We think the Senate, probably, and the Congress is more dysfunctional. I can tell one real quick story. In the 1950s when the Senate couldn't pass Civil Rights even though the House wanted it, the President -- President Eisenhower wanted it, and the country wanted to move forward in civil rights in the 1950s. A New York

Times reporter, really talking about the segregationist Southern Senators said that the United States Senate is the South's unending revenge for Gettysburg. And, you know, I think that -- I think it's important to put all this into historical context, whether you look at what happened with Medicare, how hard it was to pass Medicare -- we don't think that today, how hard it was to pass healthcare, they have the Tea Party today, they had the John Birch Society then.

After Medicare passed in 1965, several Southern senators tried to block its implementation because they knew one thing Medicare would mean, it would mean integration of Southern hospitals. And Lyndon Johnson summoned the right people to the White House and said, if you want any tax dollars for your doctors or hospitals, you're going to integrate, and that was the same year, as I said, Civil Rights passed.

So, I do think -- yes, I think that we find a way to rise to the challenge and I think -- well, and I would close with this. Now, my mother and father, actually, during World War II, my dad was back from Persia and they met at this hotel, the Mayflower, so I always like coming here. But -- and my mother taught me never to be rude to your host, but I pick up this water bottle, and this water bottle, my understanding is that this water bottle was made in China, the plastic was made in China. It was then -- the bottles were then shipped to Fiji, filled with -- at least they say it's filled with water

from Fiji, and then shipped here. And I guess I don't understand how our trade policy and our tax policy makes this -- not to mention our climate change policy -- makes this an intelligent thing to do. (Applause)

Nonetheless, I still drank it. So, I guess I ought to stand to some principle.

MR. RUBIN: Senator, I think that's a very good note to end our discussion on because, as you said, there's some peculiarities in the sensibleness of that.

We thank you, Senator, we thank all of you for being with us, and you've given us a lot to think about. (Applause)

MR. ALTMAN: Hi, everyone. I'm Roger Altman. Thank you very much for being here. It's my distinct privilege to introduce the Vice President of the United States. All of us involved with the Hamilton Project are grateful to the Vice President for joining us today.

From our perspective it's especially fitting that he is our keynote speaker as we kick off this next phase of the Hamilton Project's work. In particular, he is the chair of the administration's Middle Class Task Force whose goal, of course, is to raise the living standards of America's middle class families. To quote the Vice President, "A strong middle class equals a strong America. We can't have one without the other."

The main goals of his effort there include expanding

education, solidifying family incomes, protecting retirement security. I might add that those were some of the goals, some of the key goals, which he pursued over the very distinguished and very long career, of course, which he had in the Senate before ascending to the vice presidency. But these also are the core values of the Hamilton Project as you've seen in our past work and you'll see going forward.

In addition, the Vice President is responsible for implementing the American Recovery and Reinvestment Act and, in particular, overseeing its investments in education, infrastructure, and clean energy. Again, one of our own cornerstone themes is the importance of investment in America and especially in human capital as they lay the foundation strong employment and strong living standards for the future.

So you can see how much that the Hamilton Project identifies with the Vice President and with his career achievements and with his current priorities. And that's why it's a very special privilege for me to introduce to you Vice President Biden. (Applause)

VICE PRESIDENT BIDEN: Thank you. Roger, thank you very much. And let me thank everyone who participated in the program this morning and for those putting on this program. It's an honor to be here.

You know, were I standing before you one year ago today,

we'd be discussing the first quarter in which the economy had hemorrhaged over 2 million jobs, 750,000 per month. As we meet here today, the economy is clearly on the mend. In the first quarter of this year, we added 54,000 jobs per month. Now, I know, and we all know, that that rate of job growth is too slow to bring down the unemployment rate, and the continued weakness in the job creation remains a major challenge, one the President and the whole administration is committed to meeting, and a very difficult challenge.

But the arrival of net job creation in three out of the last five months represents an important swing in the right direction. Independent analysts, including some of the very people in this room, confirmed that our policies thus far have helped. The Recovery Act, which was credited widely with creating about 2-1/2 million jobs so far, and in the most recent quarter, most analysts acknowledge that it lifted the real GDP by as much as 3 percent.

And with Tax Day just behind us, I should note that nearly $100 billion of Recovery Act tax cuts are doing double duty. They help families make ends meet through their multiplier effects. They're also boosting economic activity throughout the economy.

We all know how important it is to learn from the past in order to step steadily into the future. But I want to make it clear I'm not

here to look backwards. I'm here today to look toward tomorrow. I'm well aware that economists are arguing about just where we are in the business cycle, but I think it's fair to say that most believe we're generally turning the corner and moving from contraction to expansion.

I know it's a very important debate, but I must say when the President and I talk about the state of the economy, recession dating is not what motivates us most. The goals that we set when we ran and took office were not fixed dates on a calendar; they were instead markers for real progress for real American families. Most Americans, at least in the neighborhoods I grew up in, don't feel GDP growth. They don't sit around the table if they've lost their jobs and talk about how the NASDAQ is climbing. We're far more interested -- we're far more interested in -- when growth is going to reach, which it has not yet, the broad middle class and those who aspire to join it.

In the view of our administration, an economic expansion is absolutely necessary, but it's not sufficient to meet our economic goals. If the next expansion fails to lift the middle class, if it bubbles and bursts, if it gives a high five to Wall Street while stiff-arming Main Street, then it will be an expansion that we will not be proud of and it will not be the expansion that the President and I believe this nation so badly needs.

If on the other hand the next expansion is characterized by

prosperity that is broadly shared by new economic opportunities for the middle class, by finally tearing down the barriers to health care and education, by starting us down a path toward energy independence, then we'll be building the America we need in order to compete, in our view, and lead in the 21st century. That's the kind of expansion we need, and I suspect everyone here would agree with that. But how to achieve that expansion is what I'd like to talk about with you today.

Let's begin by recognizing that the choices we made at the beginning of the expansion -- of an expansion are going to determine where we're going to end up, assuming the expansion takes place and continues. Think back to the last time the nation's economy was poised for expansion in the early 2000s. Consider the choices that we made then and their ultimate consequences. Tough economic inequity already was highly elevated, yet we made it a lot worse by massive, unpaid-for tax cuts primarily for the wealthy. Anti-regulatory zeal and the belief that markets would self-regulate led to an oversight failure in fiscal markets and dire consequences that I would argue are still reverberating today.

An anti-union stance dramatically weakened the ability of rank and file workers to share in the wealth they were helping create as a consequence of increased productivity. The belief that deficits don't matter and the death of PAYGO led to the decisions not to pay for

expensive -- very expensive initiatives, including two major wars, the aforementioned tax cuts, and an expensive and expansive prescription drug program, which in turn led to a huge swing from surplus to deficit.

The decision to continue ignoring the unsustainable path of health care not only had clear negative fiscal implications causing our deficits to soar, it also meant an erosion of health coverage for millions, not just those who were the least advantaged, but for the broad middle class as well. And consider the impact of this path on the living standard of working families.

The 2000s saw the worst job creation of any recovery on record. And relatedly, the first recovery on record were middle-income homes, actually incomes actually remained stagnant. The economy was moving forward and the middle class was running in place, running as hard as it ever had, but, quite frankly, getting nowhere. All of this planted the seeds of the deepest recession since the Great Depression, and the terrible costs that have come with that.

So let me be extremely clear on this point. When you're at the beginning of an economic expansion, as I believe we are, when you're standing and starting from a place where you have to make choices, they make a great deal of difference on the ultimate character of that expansion, how robust it will be, who it reaches, whether it truly advances

the American standard of living.

Now, I know you know there's -- maybe you don't know this, but there's an old Irish saying. I only quote Irish sayings because they're the best, that's not because I'm Irish. (Laughter) But there's an old Irish saying my grandpop would use, he said, "You've got to do your own growing no matter how tall your grandfather was." You've got to do your own growing no matter how tall your grandfather was.

Well, folks, ladies and gentlemen, we can't just rely on America's past to build America's future. Past recoveries can serve as lessons, but this recovery ultimately belongs to us. And we have an opportunity to do our own growing, and we plan on seizing that.

And so our administration is plotting a very different path than the one plotted the last time this country found itself with such an important set of choices to make about our economic future. To us the choices are clear, commonsense rules and regulations in financial markets that protect consumers, taxpayers, and, I might add, the overall economy. New, forward-looking investments that would create new domestic markets here, export markets abroad, and lasting opportunities for the middle class in areas like clean energy, the smart grid, high-speed rail, and high-technology changes will take place.

True health care security, which I believe we accomplished

by passing the health care reform that expands coverage and, equally as important, controls costs over the long haul. A level playing field for those who would pursue collective bargaining in the workplace. A primary education system that metes out and, I would add, meets the needs of and the aspirations of American families so each child can overcome the barriers that keep them from achieving their potential. An aggressive focus on college access, which all of you know is the only ticket to the middle class in the 21st century. A fiscal plan that meets the short-term needs of a troubled economy and then moves quickly toward a path of fiscal sustainability by paying for what we spend.

Folks, ultimately, we believe that this is the right path, the path that will lead us to a robust economic recovery, one that fuels broadly shared prosperity, driven by hardworking people filling good jobs, not by speculators inflating bubbles and financial shell games. You might be saying, yeah, it's true, I got that. We all agree that we have to have a -- we need a different path. But good luck in getting it done.

So let me talk about some of the specific steps along the path that the President and I think we have to take and discuss how I think we're going to get it done. Looking forward, one of the most important legislative tasks that we face is now before Congress: the reform of the financial markets. Our goals are well known: an independent consumer

agency that is not beholden to the banks; new rules for derivatives that bring the light of day into that shadowy risky market; leverage requirements to create the necessary capital buffers against destabilizing systemic risk; and when such risks do find their way into the system, the ability to unwind interconnected banks without dragging down the market or the taxpayers once again.

The President and I are committed to fully, quickly, and forcefully taking these steps to reform this system; that even as we speak, after all what has happened, still protects the gains of the privileged while assigning the losses to the rest of us.

Every day we see developments that remind us of the overriding imperative here, the need to restore trust and credibility in America's financial markets. Too many market participants themselves, through shortsighted greed, have squandered that credibility, and I would argue to their own detriment long term. Wall Street reform must put a stop to this.

In order to restore that credibility, we have to end the practice of hiding opaque derivatives in invisible accounts antiseptically labeled "Structured Investment Vehicles," so investors in markets can once again receive clear transparent price signals they need in order to function efficiently.

It must block banks from steering clients toward a pit of toxic investments with one hand while betting against those very investments with the other hand. It must prevent underwriting practices that inflated the housing bubble that ultimately deflated the economy.

The President and I will not support any reform that fails to address these fundamental problems. Powerful, political lobbying, the cynical tactics of opponents, opponents of reform, are not going to stop us from getting this right.

Of course, choosing the right path means not only preventing disaster, it also means generating opportunity. Even before we took office, the President, myself, and our economic team planned to use part of what we even knew then was a need for a Recovery Act to make investments that would both create good jobs today while planting the seeds of great industries for tomorrow with clean energy being at the heart of those investments.

With around $80 billion in clean energy investments, the Recovery Act doubles America's capacity to generate renewable energy. If it were a standalone bill, it would have been the largest energy bill in the history of the United States of America.

Now, look, I recognize -- and in my own shop, as well -- there are some folks here who study the issue who may question whether

these energy investments create enough jobs to actually make a real difference. But we believe they will.

But let me put it in another way. Let me ask you this. Do any of you believe that we can fully recover and lead the world in the 21st century with the same energy policy that we've had in the last century? Do any of you believe we can reduce the dependence on foreign oil without investing in alternative sources of energy, renewable energy? And do any of you believe we can gain a political consensus for doing that without growing clean energy industries here in America?

Even if you're right about the economic impact, let me suggest to you that the entire energy policy will fail for lack of a political consensus. The world is already transitioning to a new energy economy, and we've got a long way to go to catch up. Wouldn't it be ironic if we freed ourselves of the dependence on foreign oil simply to become dependent on foreign sources of clean energy and technologies?

That's what a lot of my former colleagues up on Capitol Hill are looking at now, almost independent of how many jobs such investments will create. We want true energy independence, and we need a political consensus to arrive at it.

That's why I think one of the tax credits from the Recovery Act is so important and should be expanded. I know you heard from

Senator Sherrod Brown, who spoke earlier, who feels just as strongly about this as I do. The advanced energy manufacturing tax credit, known in the Code as 48C, supports investments in advanced energy technology, from wind turbines and solar panels that create energy from renewable resources to batteries and smart grid systems that store and transmit that energy, to technologies like advanced lighting that helped conserve that energy. We need it all. Historically, we've used incentives to encourage generation and the use of clean energy, but we've never before taken the extra step to incentivize the actual manufacturing of that equipment used to generate energy here in the United States. And I know there are barriers sitting in the chairs out there to doing that. But you're politically, at a minimum, mistaken and I think you're mistaken economically.

With programs like 48C that leverage private capital by a factor of three to one thus far, we're going to make sure that we don't just build the same old economy on top of the one that just collapsed. Instead, we want to remake what we do, what we build, what we manufacture, what we design, what we produce, all with an eye toward bringing the middle class back and moving America forward.

Another step we must take, one that I know is clear to the Brookings Institution, is moving towards sustainable federal spending. When the President and I got here, we were immediately confronted with

two fiscal realities: first, a $1.3 trillion deficit and projected deficits of $8 trillion over the next 10 years; second, we were staring down the barrel of the deepest recession short of a depression this country has seen. Government spending had to ramp up, as you all suggested and we believed, had to ramp up to offset the contraction of the private sector spending as well as demand, which, by the way, was a difficult concept to translate and transmit to the American people.

Now, you'll all recall that back in 2000, the budget was in surplus to the tune of more than $200 billion. I think Secretary Rubin might remember that. But the surplus was squandered as the bills for two wars, tax cuts, and the drug benefit went unpaid. In the short run, we had to add to that long-term debt figure in order to stimulate the economy and keep us from moving into a depression.

And one of the first things we did, as I've referenced earlier, was pass the Recovery Act, which created or preserved millions of jobs while boosting GDP in ways that also helped generate needed revenue. And even as we did that, we also began to put in place the mechanisms to take hold once the economy was back on the track to turn our fiscal ship around. It wasn't like all of a sudden we realized, well, now that we did this stimulus we better now go look at what we do about deficits. We did it simultaneously.

But they could not be done at the same time, to state the obvious. So what we put in place was a modest first proposal, including freezing non-security discretionary spending. Then reinstating statutory PAYGO. And then beginning to deal with the long-term deficit reduction by dealing with our entitlements. Most importantly, the entitlement that was skyrocketing the most was health care. We always talk about -- particularly Democrats, we talk about health care in terms of the moral imperative. Well, it was a fiscal imperative we deal with health care.

And lastly, over the objection of some in my own party when I suggested -- when we suggested it, was by -- establishing by Executive Order a bipartisan commission to gain control of our deficits with the requirement of bringing down the deficit to 3 percent of GDP by 2015 to create some backfire to force these increasingly and still remaining difficult decisions. We're serious about this. We're serious about it.

As I said at the outset, the one thing about policy choices at the beginning of an economic expansion is that the stakes are really, really high. If we start down the wrong path, we're clearly going to end up at the wrong destination. And with this in mind, we won't simply be back in a recession after the next bubble bursts. We'll have failed to take advantage of the precious opportunities that are staring us in the face. We'll have confirmed our middle -- excuse me, we will have confined our

middle class to another decade of running faster just to stay in place.

I know you all know this, but history doesn't belong to any political party. It belongs to each of us individually and all of us collectively. And it's our choice -- it's our choice right now -- what kind of economic history we want to begin to write.

And so the current moment also poses a challenge to folks like you, who work so hard to give advice to policymakers, especially at times like this. And I have one question. I have one challenge to you all. What policy steps will once again link productivity growth and middle-class incomes? Let me say it again. What are the policy objectives we need to put in place that will once again, as existed in the '50s, link productivity growth and middle-class incomes? For I do not believe we can politically sustain the path we had been on, watching as market outcomes -- what folks in this room call primary distribution income -- grow increasingly unequal and hope to address these vast inequities through tax policy and transfers that politically cannot be sustained, in my view.

So I came with a question. I hope, collectively, we can find an answer. The middle class needs to get its fair share again. It sounds like a trite political slogan, but, folks, the system is not going to work if they do not believe they're getting a fair share commensurate with the effort they put in.

You know, I can think of no greater minds than the ones in this room, and I mean that sincerely, to address the question; one that if answered successfully will shape the expansion we need in an era in American history that follows and that will allow us to lead the world in the 21st century. That sounds like hyperbole, but I mean it literally.

It was Oliver Wendell Holmes who said, "The great thing in the world is not so much where we stand as in what direction we're moving." It's our choice now to move us in a direction worthy of our rich history and worthy of the bold new future we seek together. And as I said, I can't think of a brighter group of people to ask for help in shaping that history.

So I thank you all. May God bless you and may God protect our troops. Thank you very much. (Applause)

MR. ALTMAN: On behalf of everyone involved in the Hamilton Project, I want to extend my deep gratitude to the Vice President for gracing us with this presence today and for those remarks. I also want to assure him really most seriously that we take his question on linking productivity and middle-class incomes very seriously. In some respects, that's really at the heart of the Hamilton Project and its goals.

I'd also like to remind you all of our conference 10 days from today, April 30th, apropos of the Vice President's comments it focuses -- it's

the first of two on the future of the American worker. We're doing it in connection with the -- in partnership with the Center for American Progress. I hope I'll see all of you there.

And once again, thank you very much to Vice President Biden.

VICE PRESIDENT BIDEN: Thank you all.

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I, Carleton J. Anderson, III do hereby certify that the forgoing electronic file when originally transmitted was reduced to text at my direction; that said transcript is a true record of the proceedings therein referenced; that I am neither counsel for, related to, nor employed by any of the parties to the action in which these proceedings were taken; and, furthermore, that I am neither a relative or employee of any attorney or counsel employed by the parties hereto, nor financially or otherwise interested in the outcome of this action.

/s/Carleton J. Anderson, III

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