

Capital Formation: Challenges and Opportunities for the Next Administration

An ACCF CPR Economic Roundtable Discussion

August 2016

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Foreword

Concerns about the low U.S. saving rate and its negative impact on capital formation and economic growth have been a key driver of the American Council for Capital Formation Center for Policy Research's (the Center) agenda for the past four decades. In recent years, in addition to sluggish economic indicators, increased political rhetoric that ignores the value of capital formation has prompted the Center to undertake a program that will communicate the importance of capital formation by going back to basics: What is capital formation? What are the factors that affect its development? Where do we stand vis-a-vis to our major competitors? How can we encourage more capital formation?

In May 2016, we released our first report, [Capital Formation 101](#) that took a closer look at these issues. In conjunction with the release of the report, the Center hosted a teleconference between two widely recognized experts on capital formation: Northwestern Professor Robert J. Gordon and Harvard Professor Dale W. Jorgenson. The Center roundtable, moderated by the Wall Street Journal's chief economics commentator, Greg Ip, delved into the basics of capital formation and productivity, as well as current issues that are hotly discussed by policymakers and economists.

Given current economic trends, the approaching elections, and the imminent unveiling of the candidates' and party economic platforms, we think the panel discussion will broaden the understanding of how these issues will shape the future of the U.S. economy. We believe that the right policy choices can help spur much needed investment and long run economic growth. With this discussion, our hope is to complement our previous research and provide a better understanding of the issues surrounding capital formation, productivity and economic growth.

Dr. Pinar Çebi Wilber
Senior Economist
American Council for Capital Formation
Center for Policy Research*

American Council for Capital Formation Center for Policy Research (the Center) brings together academics, policymakers, business leaders and the media to focus on important new research on economic, tax, energy and regulatory policies. For more information about the Center, please contact the ACCF, 1001 Connecticut Avenue, N.W., Suite 620, Washington D.C. 20036; telephone: 202.293.5811; email: info@accf.org; website: www.accf.org

Panelists Bios



Robert J. Gordon

Robert J. Gordon is Stanley G. Harris Professor in the Social Sciences and Professor of Economics at Northwestern University. He is one of the world's leading experts on inflation, unemployment, and long-term economic growth. His recent work on the rise and fall of American economic growth and the widening of the U. S. income distribution have been widely cited, and in 2013 he was named as one of Bloomberg's top 10 most influential thinkers. Gordon is author of *The Rise and Fall of American Growth: the US Standard of Living Since the Civil War* (published in January 2016 by the Princeton University Press). He is also author of *Macroeconomics*, twelfth edition, and of *The Measurement of Durable Goods Prices*, *The American Business Cycle*, and *The Economics of New Goods*. Gordon is a Distinguished Fellow of the American Economic Association and a Fellow of both the Econometric Society and the American Academy of Arts and Sciences. He is a member of the ACCF CPR Board of Scholars.



Dale W. Jorgenson

Dale W. Jorgenson is the Samuel W. Morris University Professor at Harvard University. He was awarded the prestigious John Bates Clark Medal by the American Economic Association in 1971 and served as the President of the Association in 2000. Jorgenson has done pioneering research on information technology and economic growth, energy and the environment, and tax policy and investment behavior. He is the author of more than three hundred articles in economics, and the author and editor of 37 books. His forthcoming book, *The World Economy: Growth or Stagnation*, will be published by the Cambridge University Press in September. The book shows that growth of the world economy has accelerated over the past two decades, as the balance has shifted from the advanced countries of Asia, Europe, and North America to emerging economies, especially China and India. His most recent book, *Double Dividend: Environmental Taxes and Fiscal Reform in the United States*, published by The MIT Press in 2013, shows that setting a price on carbon and recycling the revenue to reduce other taxes can enhance economic well-being and reduce carbon emissions. He is a leader of research on economic growth, energy utilization, and climate change, in China under the auspices of the newly established Harvard Global Institute. He is a member of the ACCF CPR Board of Scholars.



Greg Ip, Moderator

Greg Ip is chief economics commentator for The Wall Street Journal. He writes about U.S. and global economic developments and policy in the weekly Capital Account column and on Real Time Economics, the Wall Street Journal's economics blog. From 2008 to January, 2015, he was U.S. economics editor for The Economist, based in Washington, D.C. From 1996 to 2008, he was a reporter for The Wall Street Journal in New York and Washington, D.C. Greg comments regularly on television and radio, including CNBC, National Public Radio, and the PBS Newshour. Greg has won or shared in several prizes for journalism. He was part of a team that was awarded a Pulitzer Prize for coverage of the Sept. 11, 2001 terrorist attacks. In 2005 he was recognized by the World Leadership Forum for a series of articles on the legacy of Alan Greenspan. In 2008 he was part of a team recognized by the Scripps Howard Foundation for coverage of the mortgage and housing crisis. In 2016 he was part of a team recognized by the National Press Club for a series of articles on global demographics. He is the author of "The Little Book of Economics: How the Economy Works in the Real World" (Wiley, 2010) and "Foolproof: Why Safety Can Be Dangerous and How Danger Makes Us Safe," (Little, Brown, 2015). A native of Canada, Mr. Ip received a bachelor's degree in economics and journalism from Carleton University in Ottawa, Ontario.

Capital Formation: Basics

GI: Dale and Bob, thanks for joining us today. You both have huge reputations in the field of economic growth. So I'm very pleased that we have you here to discuss these issues.

Let me start with a real basic question. What is capital formation and why does it matter?

DJ: Capital formation is something that has an impact on more than a single year. So, you think equipment, you think about structures, lots of other forms of capital formation that we could mention. They all have this impact over an extended period of time and that's why it's important.

GI: And how does capital formation affect our standard of living over time? What's the mechanism?

DJ: The mechanism is that capital formation is the key driver of productivity growth. Productivity growth contributes a very substantial part of our growth in the standard of living. And so the productivity effect of capital formation is the key to understanding that impact.

GI: Bob, we're used to thinking of capital as being land, structures, and equipment. That's sort of the traditional definition you'll find in a textbook, perhaps your own textbook. Is that definition a fully adequate definition? Or is what we think of capital changing or should it change as our economy evolves over the decades?

RG: Well, we have three categories of non-residential capital formation in the National Accounts. We have traditional structures which consist of everything that you would refer to as a building other than residential. We have equipment of which a major portion is information processing and communications equipment.

And then we have a newer category, which in the National Accounts is called intellectual property products. It consists of software, research and development, and other intellectual creations. So it now is pretty evident that as much is coming from software development and new ways of using computers as the computers themselves in revving up productivity growth through capital formation.

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Dale W. Jorgenson

GI: Has the relative contribution of those different types of capital changed over time?

RG: Yes. I'll refer several times today to the difference between the average of 1999-2000, the peak of the Internet dot com boom, and the last two years, 2014-2015, where we've had no decline at all in gross capital formation in structures. We've had a very small increase in the intellectual property products. The big decline has been in equipment, particularly information processing equipment. And then those all refer to gross capital formation. In addition, we deduct depreciation in order to arrive at the bottom line which is our net capital formation, how much we're adding to the capital with which America's workers are equipped. And that depreciation has been creeping up in part due to the very healthy investment of the late 1990s to 2000s. So net capital formation has declined quite a bit. And again, it is centered in information processing and communications equipment.

GI: That's very interesting. So that takes me to my next question which is the current behavior of investment. So by way of just some background, non-residential business investment has been growing fairly steadily since the recession trough back in 2008 and 2009. In nominal terms, non-residential business investment now is 12.9% of GDP. But that's still below the peak of 13.4% in 2007, which was also below the peak of 14.7% in 2000.

And in fact, Bob, as you were saying for many years the level of capital investment has not actually kept up with replacement needs. And so the capital stock was actually shrinking. The last data I've seen suggested that it is growing in real terms about 1%, but this is historically a very low rate.

So let me put the question to both of you, starting with you, Dale. Does the U.S. have a capital formation problem?

DJ: I think that you need to use the kind of historical perspective that you were suggesting to focus on the fact that the information technology boom at the end of the 1990s was a phenomenon that really doesn't have a counterpart in other parts of the post-war period. That was driven by very rapid developments of technology that came to an end around 2004. So there was a period beginning in the middle of the 1980s all the way through 2004 when we had exceptional incentives, exceptional innovative rates in these key information technology areas. And that produced a rising contribution of net capital to economic output that peaked before the year 2000 and then gradually has declined since then.

So I look at this more as a return to normal. This is something that has produced a long-term trend since 2004 and has been comparable to what it was before 1984 or so. So I think that nothing has changed in the long-run outlook as far as I can see.

RG: I think that's exactly right and we're going to talk about productivity as well in a few minutes. And one can lament the decline in both net capital formation and productivity growth. Or one can point out how unusual the late 1990s and early 2000s were. We had a great temporary revival of productivity growth in that decade ending in 2004. And along with it, we had a big boom in capital formation. I think Dale has the causation exactly right. It was an unusual spurt of innovation. The Internet arrived. The way businesses carried out their everyday operations was utterly changed, going back before 1995, all the way back to the first personal computers and the first spreadsheet and word processing software.

So we're looking back at a very unusual period and we shouldn't feel so bad that things have declined because, as Dale puts it, we're in a sense going back to a normal, more moderate rate of capital formation that was prevalent before 1995.

DJ: And it was sustainable, right? That's the main thing. We can sustain this for a while.

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Robert J. Gordon

Productivity: What has been happening?

GI: So let's bridge from that discussion on capital to productivity. So I get that the period from 1996 to 2004 was a glorious period that we should not expect to be repeated. But that said, non-farm business output per hour has grown, I think, at only around one-half a percent per year for the last five years, which is the weakest stretch in many decades, like the late 1970s and early 1980s. So never mind getting back to the late 1990s, early 2000s rate. We're lagging even below the weaker rate that we saw in the 1980s and mid-2000s.

So there seems to be something very troubling and puzzling going on with productivity right now. This can be attributed to less capital deepening which takes us back to the lower rates of capital formation. But is there something else going on? Why has productivity growth been so weak even relative to post-war norms, never mind that IT sort of boom period?

RG: Let's be careful when you talk about post-war. You really have four eras. You have the early post-war period up through 1973, when productivity growth was very rapid and we had the interstate highway system. We had the evolution of electricity and the internal combustion engine and all of the inventions that had taken place earlier in the 20th century. We're still diffusing into the economy. After 1973, we had two slow decades, the 1970s and 1980s, up to 1995, when productivity growth slowed down from close to 3% down to about 1.5%. And I interpret that as the end of the big impact of the earlier industrial revolution and those innovations I mentioned.

And then we had the temporary revival of the late 1990s and early 2000s. It was centered around information technology and the rapid improvement in computer technology. Moore's Law – which predicts that the number of transistors on a computer chip doubles every two years – actually worked faster than its historical rate in the late 1990s and early 2000s. And it's been running much slower since about 10 years ago. If we look back to 10 years ago, back in 2004 and 2005, pretty much all of the conversion of business operations, including retail stores and everyday office work, had been completed from the contributions of the computer revolution.

As I see it since 2005, we're in a situation of stasis. Your transactions in the retail store are just like they were 10 years ago. Much of what happens in the financial sector is very similar to what happened 10 years ago. Medical care, we've adopted electronic medical records, but otherwise doctors and nurses do pretty much the same as they did. Those of us in the education sector see that there is an ever growing burden of administrative employees without much change in the quality of instruction.

So overall, I see the techniques and methods that are used in the economy increasingly standing still.

DJ: There's where I think we're going to run into a slight difference, Bob. I think that the most research seems to suggest that in 2004, as you suggested, we shifted away from this rapid development of hardware. And things are driven by semiconductor technology, Moore's Law, you mentioned. But what happened as a sequel is something that is the subject of current research.

And I think that what has happened is that there has been a shift in the direction of software, in the direction of Cloud computing services, and then in the direction of computer design. So if you think about those more concretely, you can think about the Cloud as something you can purchase on Amazon even as a retail buyer. But the most important effect of that, of course, is on businesses. That is a service which is not priced properly in the conventional GDP account. So we don't really have an accurate figure in the figures that Greg was recounting from the conventional reporting.

However, current research suggests that that has been a very important positive factor. Software, you can think of Uber. But Uber is just the tip of the iceberg, so to speak. There's all kind of apps. If you look at the other people's computers on the plane, you'll find that they're just loaded with different kinds of apps. Ultimately they'll be replaced by something that's a little bit more automated. But those are not properly priced either. So I think that's an area, software development, where there's a great deal of development that isn't captured by the National Accounts.

All of these things add up to a very substantial trend that is not captured, both in terms of productivity and in terms of the more-specific rates of innovation that drive productivity. And when we measure those properly, I think we get a rather different picture.

GI: So one of the arguments that many people have made for the weakness of business investment is that it's essentially a consequence of overall weak demand. That the most powerful indicator of business investment is essentially consumer demand. That this sort of accelerator model that would underline consumer demand or export demand accelerates, business investment follows. We haven't really had much of an acceleration in other forms of demands. And so that's why business investment has been weaker than expected.

An alternative view would be that the business investment has been depressed because there simply aren't compelling technologies or capital projects available that offer competitive returns on investment, even at today's very low rates of interest. And this is something that is independent of the state of the business cycle.

Bob and Dale, do you have any thoughts on which of these two explanations might be a better explanation for the weakness of business investment?

RG: I look at business investment in the context of record-high shares of corporate profits in GDP over the last two to three years and a set of corporations which have plenty of money to invest if they wanted to. Which instead, have been engaged in massive share buybacks, of buying back their stockholder shares. So what I'm seeing is, as Greg previewed, a lack of incentive for business investments. I think the reason for this is centered in information and communication technology. That's where the drop off is most prominent.

It's also fairly prominent if you look at intellectual property capital formation, which includes the software. It has not grown and in fact, its depreciation has increased, shrinking the residual which is net intellectual property investment.

So to me this says that the ideas that are being developed by the very healthy rate of innovation are just as not compelling to be converted into hardware investment and even software investment as they were 10 years ago.

DJ: Well I think that the story about hardware is certainly true. And it's driven by the developments that we discussed earlier, having to do with the slowdown in the progress in the hardware space.

But when we begin to talk about the Cloud, we're not just looking at intellectual property. We're looking at something that is a totally new product that is growing very rapidly. Think about the reports by Amazon, for example, in the last round of corporate earnings. They're among the highest. The people that are doing the hardware, Intel for example, are among the lowest. So there is a major shift going on here in the direction of again, Cloud computing, design services, and software applications that is not captured in the National Accounts.

So I think it's very important to take these deficiencies of the measurement into account just as it was back when we discovered that information technology had during the 1990s been a very potent force. That's something that came out of a change in measurement that took place after all the developments in the economy had been underway for some time. And the same thing is happening here. The character of technical change has shifted and our National Accounts, as usual, haven't kept up. So I think that we need to take that into account when we think about the effect on capital formation.

Now there is a driver here that we haven't mentioned. And that is that we've just been coming out of a recession. And the recovery of the unemployment rate is impressive, we're down to the target level of say 5% that many people define as full employment. But the fact is that participation rates are still lagging, and in areas where participation has traditionally been fairly high, males, for example, with relatively low levels of education. Somehow these people haven't found their way back into the labor force and into employment.

So I think that's an area that deserves to be carefully scrutinized. And when you look at it carefully, I think it is an important driver of the low rates of capital formation that you've just described.

RG: Let's qualify that, because in the last six months we've had a remarkable resurgence of participation.

DJ: Right. But we're still not back to where we were and we're still well below the trends, even the declining trends that prevailed before the recession. So we've had a big adjustment in the labor market. It's not finished.

Taxes and Capital Formation

GI: There's a lot of discussion, especially in the business community, about the need for tax reform. By this, they usually mean a lower corporate tax rate. I'd like to hear your view on the extent to which the tax system is or is not a factor in some of the issues we've been discussing, lower business investment and productivity growth.

DJ: Business investment is something that is driven in the longer run by the tax treatment of income. And we haven't had a major tax reform since 1986, going all the way back to the Presidency of Ronald Reagan.

So there has been enormous interest in tax reform in the Congress. Both the House Ways and Means Committee and Senate Finance, the two tax writing committees, have been holding hearings to review all of the proposals that are underway in developing legislation. I think we don't see this on the horizon until well after the election. I think 1986 was six years after the election of Ronald Reagan. So it takes a while for something like this to firm up in the Congress and work its way through the legislative process.

"So I think that the stage is now set for a serious debate over tax reform. We've had a lot of very careful testimony presented in literally dozens of different venues in the tax writing committees and the subcommittees. And we are prepared for this. So I think we should look forward to that and the behavior of tax, capital formation, will certainly drive the whole momentum of this."

Dale W. Jorgenson

But some of the major congressional leaders, Paul Ryan, for example, Speaker of the House, are very interested in this issue. And Ron Wyden the ranking minority member of Senate Finance, a Democrat, is very interested in tax reform. So we're now seeing a revival of many of the ideas that have been circulating in the tax policy community for some time. And I think that all of these go in the direction of trying to stimulate capital formation.

Now you might say well how did we get into the situation where people need to change the tax laws? Tax laws, like equipment, depreciate in the sense that they accumulate special provisions called tax expenditures, where income is treated in a way that is specific to a particular class of transactions. Somehow or another that has a way of accumulating. It is very difficult to get rid of these tax expenditures. And the Reagan tax reform was a wholesale rewriting of the tax code to eliminate these tax expenditures and lower rates. And it was driven by a bipartisan majority that involved Bill Bradley, very conspicuously, on the Democratic side.

I can foresee over the next three or four, five years that we're going to have another discussion like that, independently of who becomes President, whether it turns out to be a Republican or a Democrat. So I think that the stage is now set for a serious debate over tax reform. We've had a lot of very careful testimony presented in literally dozens of different venues in the tax writing committees and the subcommittees. And we are prepared for this. So I think we should look forward to that and the behavior of tax, capital formation, will certainly drive the whole momentum of this.

GI: But do you think the absence of tax reform is a factor explaining the weakness of business investment?

DJ: Yes. There's no doubt about it because what it does is reduce the incentives to make the kind of productive investments that, in the presence of a neutral tax structure, would contribute to productivity growth, which is what this is all about.

GI: Bob, what do you think?

RG: Oh, I completely agree. It's not just that the taxes depreciate, it's that other countries have been moving while we have not. The corporate tax rate has been reduced in many foreign countries. We have the issue of the territorial basis of taxes in other countries, but not in the United States. We have \$2 trillion parked overseas by companies that don't want to bring it back to the United States. And so there's widespread agreement that American corporate taxes need to be reduced. And I think there's widespread agreement that the basis of taxation needs to be changed from methods used by the United States to those that are more common in other countries.

I think where you'll find some disagreement is moving from the corporate tax rate to the taxation of dividends and capital gains. Because there you get into the issue of growing inequality and the question of how much you want to tax the roots of investment after the investment that has already taken place.

GI: Well, actually let me go back to one of your premises, which is that the United States has stood still while other countries have reformed their taxes and if the United States were to follow suit, we'd see an improvement in investment. But have we actually seen this?

As you yourself have noted in your own research, the productivity slowdown is universal. It happens in countries that have been very aggressive in terms of reducing their corporate tax rate, like Britain and Canada. And in countries that have not, like ourselves. Is there really any international evidence to suggest that lowering our corporate tax rate will have the hoped for effect on investment and productivity?

RG: You're absolutely right that I'm often asked when I talk about the productivity problems of the United States, what about other countries? The fact is that over the last 20 years, productivity growth has actually been faster in the United States than it has been in the other developed countries, including Western Europe and Japan. And that's despite the fact that their, in some cases, corporate tax rates have been reduced.

I think in comparing with other countries, you have to realize that throughout both Japan and Western Europe their recoveries from the great recession are not nearly as far along as ours. We have 10% higher GDP than we did at the peak of 2007, whereas the Eurozone has just, in the most recent quarter, re-achieved the level that it last saw in 2007. So part of the problem of weak investment and productivity growth in Europe and Japan is due to weak aggregate demand and fiscal prosperity that is forcing central banks to turn to negative interest rates in response.

GI: But in many cases those corporate tax reforms took place in the 1980s or the 1990s or the early 2000s, long before...

DJ: No, no, no. We're talking about changes in the taxes that have taken place very recently. Japan, for example, has been systematically reducing its corporate rate. In tandem, it has been increasing the taxation of consumption. It's shifting the tax structure. And the difficulty as Bob suggested a moment ago, is that the rest of the economy hasn't followed it and Japan is still in the doldrums of the so-called Lost Decades, now going on for something like 25 years. Until we get some kind of economic recovery, I think it's going to be very difficult to answer your question correctly about how the story of tax reform is related to capital expenditures.

And the same story is true for productivity. Productivity is largely driven by capital formation. And that's something that is affected by the same underlying forces. So I think it's very difficult to read anything out of the data. It takes more careful analysis. But we can look at trends in the development of technology. And when we do that with the best available evidence, I think we can see that the trends in technology have really not changed since this slowdown in the year 2004 that affected computer hardware.

We've had a change in the character of these technical trends toward software, toward applications, and toward Cloud computing. And when we capture these, I think we'll get a much better view of how that is affecting productivity growth trends in the aggregate economy. So we're in a situation where it's difficult to make these connections just by looking at two-dimensional graph of capital formation on one hand and tax reform on the other.

GI: Bob, I want to go back to the point you were making at the tail end of your earlier remarks on the potential effects on inequality of tax reform. So, notwithstanding the benefits for investment or productivity of a lower corporate tax rate, the fact of the matter is the distribution of corporate equity holdings are very skewed in this country with the vast majority of corporate equity wealth held by the upper income quintiles.

So it seems inevitable that if we had this type of corporate tax reform that we've talked about, which involves a lower marginal tax rate, it will involve some kind of distributional impact by even more after-tax income and wealth moving toward the upper income deciles than we have now. How concerned should we be? And can tax reform be done in a way that actually neutralizes that effect?

RG: Yes. There are two different directions to go in dealing with rising inequality in terms of the tax system. You can have a reduction in the corporate tax rate. You can have a reduction in what Dale referred to as tax expenditures. Dale's colleague, Martin Feldstein, has been the most articulate advocate of getting rid of tax expenditures referred to as deductions and loopholes. So that direction of tax reform is highly desirable.

When we come to tax rates on individual income, and dividends and capital gains, there you have very substantial rewards for rents for income that was earned in the past, or assets that were accumulated in the past. And in my view, an essential part of achieving more equity in our economy is to end the preferential treatment of carried interest, of dividends and capital gains. Make them taxed at the standard level applicable to all income.

"I think you'd find that there's a lot of agreement about eliminating tax expenditures and using that to lower rates. It's just that that has to be done in a global reform, rather than picking individual provisions for the target of the tax reform proposals. You have to have a case where everybody can see that they're going to be gaining from the overall effect of tax reform."

Dale W. Jorgenson

This goes back to the famous saying of Warren Buffett. Why should Warren Buffet pay lower income taxes than his secretary? And in order to avoid that, I think in the taxation of capital gains and dividends and carried interest, we need to go back toward the tax policies of the early Clinton administration between 1993 and 1997. Those tax policies were completely consistent with having a great investment boom in the late 1990s. And I would be interested in hearing what Dale thinks about that interplay between taxation of dividends and capital gains and results of behaviors of investments.

DJ: I think that you're absolutely right. I'm focusing here around what the Congress is actually thinking about. It turns out that Kevin Brady, Chair of House Ways and Means and a relatively recent arrival on the scene, and Orrin Hatch, the Chair of Senate Finance, who's been there for quite a while, have agreed that there should be a big effort to close loopholes and special interest carve outs. This is language out of the Ways and Means proposal that is now under discussion for the purpose of lowering tax rates, and especially dealing with this issue of the double taxation of savings and investment which involves turning the corporate tax into a revenue collection mechanism. In which, basically, the income would be treated like it is on your individual tax return.

So you have to focus on the fact that the distributional impact of these so-called loop holes and special interest carve-outs is extremely regressive. They are oriented toward protecting the business interests of specific groups and specific industries, even specific technologies and specific products. And this, by and large, affects shareholders. It's not something that has a big effect on the employees. So this is the way toward dealing with this issue of progressivity. And we're talking about Republicans here, Kevin Brady and Orrin Hatch are leaders of the Republican Congress. And for them to focus on this issue as Ronald Reagan did is the correct way to go.

Now as Bob says, this is a bipartisan issue in which there's quite a bit of consensus. In other words, I think you'd find that there's a lot of agreement about eliminating tax expenditures and using that to lower rates. It's just that that has to be done in a global reform, rather than picking individual provisions for the target of the tax reform proposals. You have to have a case where everybody can see that they're going to be gaining from the overall effect of tax reform. While at the same time, they're going to lose their special status for these special types of deductions that also drive the income distribution.

GI: Is it the case that Brady and Hatch are talking about restoring the taxation on dividends and capital gains to the ordinary income tax rates?

DJ: No. What they're considering is the idea of eliminating double taxation of income. In other words, so what they want to do is essentially allow all of the income to show up on the individual's tax return where it would be taxed at the appropriate marginal rates. If it's a relatively wealthy individual, Warren Buffett for example, he will pay the higher progressive rates that are appropriate for him. If it's somebody who has a relatively low amount of income and is somehow collecting property income in the form of retirement provisions or something, the rate would be very low or even zero. So it would build in progressivity through the individual income tax structure.

GI: And in that system what happens to the corporate tax rate? Does it just go away?

DJ: No. The corporate tax rate remains but the idea is that corporate tax is essentially carried over along with the tax liability. The tax liability is set off against your other tax liability and the income is added to your income. So the corporate tax liability essentially disappears.

GI: And every company becomes like an LLC, sort of?

DJ: Yes. It becomes like somebody who is managing a non-corporate business. Right?

GI: I see. Bob, what do you think of that idea?

RG: Sounds fine to me. I am all for simplifying the tax system and going back to a blank page. There's no reason why our tax code has to be so complex. And I certainly favor a reform that would shift the taxation of dividends and capital gains into the same level of progressivity as the overall income tax.

There are proposals coming from Bernie Sanders to raise the tax rates on the very highest incomes, say over \$5 million or over \$10 million. I wouldn't go as far as he does, but I think something in that direction is needed to counteract the very profound effects of rising inequality that has occurred over the last 30 years.

DJ: Still, Greg, I think you've got to focus on the fact that tax expenditures have grown enormously. And it's that gradual accretion that has led to this decay of the efficiency of the tax structure, so that people facing incentives to invest after taxes and after tax expenditures are facing bewildering rates of return to the economy, and impacts on productivity. And it's that forest that we have to try to navigate and we have to try to eliminate all these differences and get back to something that is more closely approximate to a level playing field.

So that is the orientation and all the tax writers agree on that. Level the playing field. Get rid of the tax expenditures. Use that to lower the rates.

"If we're thinking about tax reform, I think we ought to start with the principle of revenue neutrality to keep tax policy separate from the issues of expenditures. And then go into this tax reform with the idea of eliminating all tax expenditures, no matter how desirable they sound on the surface, with a view toward reducing tax rates to where they're competitive with our international partners like the Japanese and the Europeans."

Dale W. Jorgenson

GI: So one of the things that the tax plan reform writers run up against is that when you start with the assumption of "let's lower the rate and broaden the base, so let's eliminate the tax expenditures," then a couple problems crop up. The first is that as you lower the tax rate, the value of the tax expenditures also decreases because deducting something against a 35% tax rate is more valuable than deducting it against a 25% tax rate.

The second problem is that you start hitting the tax expenditures that are actually quite valuable. For example, when President Obama's Treasury Department submitted the outline of corporate tax reform a few years ago in his first term, they sought to get the corporate tax rate down, but the lowest they could get it was 28%. And one of the reasons why is they wanted to preserve a couple of tax expenditures that they thought were quite important. One was the domestic production activities reduced rate and one was the accelerated depreciation rate, which they both thought were valuable for maintaining the competitive position in manufacturing in our economy.

So I'd like the view of both of you on whether first of all, that was an appropriate exception to make to retain those tax expenditures. And if so, how do you get the corporate tax rate down to a meaningful level and still find a way to pay for that while maintaining tax revenue neutrality? It seems to me that arithmetically it's very tough to do it without actually ending up giving up a big chunk of revenue?

DJ: Yes. Again, focused on the fact that tax expenditures have grown. So it turns out there is an enormous variety of these things. And some of them just keep getting bigger and bigger as the economy expands, even at a slow rate. So the fact is there are lots of opportunities here to cut tax expenditures.

But the politics of this works in the following way, that unless people see that everybody is going to be affected by a tax change of this sort, reducing the tax expenditures or eliminating them in order to reduce rates, there's very little incentive for them to join in and be part of the consensus that emerges. And that's what the negotiations over tax reform typically involve – assembling a sufficiently large coalition so that you can eliminate a large part of the accretion of these tax expenditures.

You referred to a moment ago to the famous Moment of Truth. President Obama chose to ignore a National Commission under the direction of Alan Simpson, a Republican, and Erskine Bowles, a Democrat. And remember that the emphasis was totally different. They were very concerned about deficit reduction. And they were not so interested in reducing tax expenditures and lowering the rates. So I think that example is misleading. Another example that led to a proposal with very little effect was the effort under President George W. Bush to reduce federal taxes and tax expenditures. The proposal was revenue neutral, a feature that it shared with the Reagan proposals. I think that is the direction that we ought to go.

If we're thinking about tax reform, I think we ought to start with the principle of revenue neutrality to keep tax policy separate from the issues of expenditures. And then go into this tax reform with the idea of eliminating all tax expenditures, no matter how desirable they sound on the surface, with a view toward reducing tax rates to where they're competitive with our international partners like the Japanese and the Europeans. As Bob pointed out, both of them have reduced their tax rates very, very substantially. We need to do something like that in the American context, eliminating tax expenditures has to be the first priority.

GI: So would you eliminate the domestic production activity tax credit?

DJ: Absolutely. I think that this comes back to the point that Bob was making earlier and that is that the United States is one of only two countries, I guess, that maintain a system of trying to tax income by American entities, corporations principally, that operate in other political jurisdictions, for example, across the Canadian border or in Europe or China or India

So what we have to think about is shifting to a territorial system. As Bob pointed out a moment ago, corporations have – in the anticipation of a move toward a territorial system where only income that is generated within the U.S. territory is taxed – some \$2 trillion of income, generated elsewhere, that they have refused to repatriate. And they have done so in the interest of essentially avoiding this tax that would be applied if they tried to repatriate it. It's precisely those funds that would be a net addition to the amount available to invest that would drive an investment boom in this country if we had a major tax reform.

So it's a very subtle combination here of shifting to a territorial system, where we tax only income generated in the United States, while simultaneously eliminating these other tax expenditures, even though they sound on the surface to be very desirable. That's the only way to get the rates down where we can really begin to think seriously about something that's an incentive to invest.

GI: Thanks, Dale. Just to make one clarification point. The study that I was referring to was not actually the Simpson-Bowles Commission. I was referring to a specific white paper that the Treasury Department had issued. I can't remember whether it was before or after Simpson-Bowles, and is in line with the administration's own priorities. But it was only an outline; it did not actually fill out all the math about how it would get there.

DJ: Yes. But I think it established the foundation, as I recall, for the Bowles-Simpson effort? They took it in a rather different direction, but that's where they started.

Tax Reform and Carbon Tax

GI: I'd like to finish with a question that pulls in an issue of great importance to many people right now, which is the environment and climate change. And one of the ideas put forth by many economists to tackle climate change is a carbon tax or something like that.

Dale, what do you think of the idea of a carbon tax? And can you think of a way to integrate it in a tax reform that is win-win?

DJ: I think that the carbon tax is win-win in the sense that it's going to produce very substantial environmental benefits. But we're some distance from being at a point where we could get the kind of international consensus that would be necessary to drive this. For example, you might think of a carbon tax that would be agreed upon between the United States and China. And you might try to form a broader coalition of other larger emitters, and by that means, gradually end up with a story in which there is a world-wide price on carbon. That would be required in order to make that part of this discussion.

So I'm very strongly in favor of a carbon tax as an approach to the very pressing issue of climate change. But I don't see that as a part of the current debate over tax reform.

RG: I don't think we need to wait on a carbon tax for the rest of tax reform. I think it's something that could be done independently. A carbon tax has all of the desired features that it allows people to make their own choices about how much emission to produce based on the carbon content of different kinds of fuels. I think a carbon tax is a much better way to go than having subsidies to solar power and wind power. It's something that the United States can do all on its own and that we don't have to do in conjunction with other countries. And in fact, other countries have already taken the lead in doing this.

And the revenue that would be produced by a carbon tax provides all sorts of attractive areas of social improvement. For instance, the potential use for infrastructure or for preschool education to take two examples.

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Robert J. Gordon

GI: What about reducing corporate taxes?

RG: Well I think as Dale has pointed out it's possible to reduce corporate taxes in a revenue neutral way by getting rid of all the tax expenditures, loopholes, and carve outs and use the savings from that to reduce the corporate tax rates.

Regulations and Business Investment

GI: On another important topic, do you think that the level or the increase in regulation has been an issue for business investment? And if so, how would you deal with it?

RG: I'm very much in the camp of feeling that we have excessive regulation in the United States. The burden of federal regulations extends to thousands of pages in the Federal Register. I think regulations deter the entry of new business firms, which has become a problem. Economists increasingly refer to the decline in so called business dynamism that is reflected in the shrinking share of all business firms consisting of newly created business firms.

We have absurd requirements for employee licensing that prevent people from entering different occupations and professions. We have land-use planning that makes real estate and housing more expensive in some cities and restricts development. We have a broad range of different kinds of regulations that I'm surprised that the Obama administration has not taken a more aggressive stance in terms of trying to bring the growth of regulations to a halt, much less try to reduce the burden.

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DJ: Well, I agree with Bob on that. And I think that we need to give credit though to the Council of Economic Advisers which has been focusing some attention on this issue. They're also concerned about a related issue, which is that there has been less attention on trying to stimulate competition by removing barriers to entry. And many of these barriers, of course, are put in place by the regulatory structure, and are there to prevent new technologies from replacing the old ones and that, of course, is a process that contributes to this slowdown of productivity growth that we've been discussing.

So I think that that's a separate discussion. It's an interesting one, but I think that it would be a good idea to focus on taxes. And just let the tax writing committees do their work. If you think about the way the administration works, there's no central focus for regulatory reform within the administration and within the Congress. Each of these regulatory areas is subject to separate jurisdictions. Many of the regulations having to do with housing, for example, are local or state matters. So that's a different discussion. I think we should focus on tax reform and deal with this issue of capital formation. And that is a very serious issue as I think we've all agreed.

GI: Thanks very much.