# America's Economic Opportunity in a World of Services

**Speakers:**
Michael D. Capellas, The Virtual Computing Environment Company
Bradford Jensen, McDonough School of Business at Georgetown University
Miriam Sapiro, Office of the USTR

**Moderator:**
Zoë Baird, Markle Foundation

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**Kirkpatrick:** The next session, which will be chaired by Zoë Baird, who is the President of Markle Foundation and an increasing close partner of Techonomy's, is going to look at the issue in context of services and a global economy.

Great to have you on stage, Zoë. And I just want to say that the work that Zoë is beginning to do around this is something that I and we very much support. And I'm super eager to hear what happens with this session. So thank you all for being here.

**Baird:** Thank you. And David has been a real provocateur on our thinking about this issue. You know, we all appreciate, I think, that the central challenge that we face as a country is how to revitalize the economy. And many of us, probably most of the people in this room, feel that technology offers great promise in contributing to that, but the more difficult challenge is how do we do that in a way that broadly benefits Americans—it includes people who aren't at the top economically or don't have advanced degrees.

This is the first economic recovery sense World War II in which the 70 percent of Americans—and note that number—the 70 percent of Americans who don't have college degrees actually faced a decline in real wages.

So the impact of this recovery has been felt very differently. And as you've heard, know yourself, we really have a jobs and wage crisis that's rather persistent. And a lot of those jobs have been lost to technology.

The other factor, of course, that frames what we're talking about today is the global growth in GDP. And this obviously follows well on the presentation you just heard from James, who is one of the great thinkers on all these issues. But we are today, in America, part of a world where GDP growth is faster outside our own borders, where China, India, and Brazil together are in excess of 20 percent of global GDP.

And so we need to understand how we might expand our economic growth at home in this environment of global GDP growth. Is there a way that we can reverse the pipe, if you will? And instead of exporting jobs through outsourcing, is it possible for us to export services that will create jobs here at home?

So we have an amazing panel. I'm not going to speak any longer. The question in front of us is can we scale our exports, particularly our exports of services? And we will lead off with Brad Jensen, who is a professor at Georgetown in the business school and with the Peterson Institute and has written a great book on this topic, and he's going to ground us in some reality before we get into our opinions.

**Jensen:** Thanks, Zoë. So, yeah, I'd like to persuade you in the next three minutes that we're missing a big opportunity for growth through exports of services, specifically business services. And while I think most people will acknowledge that the U.S. is a service economy, services account for, depending on what you classify as services, between 50 and 80 percent of employment in the United States.

When you talk about the service sector, people immediately go to Walmart and McDonald's. So what I'd like to do is focus instead on a group of service activities that I'll call business services. And these are industries that the government statisticians put in the 50s of the North American Industrial Classification System.

So this is the information sector, which includes publishing, importantly software publishing. It includes the media industries. It includes telecommunications, Internet, a lot of the industries that are focused here today. It includes finance and insurance. It includes professional, scientific, and technical industries, so think accountants, attorneys, engineers, architects. And it includes administrative support activities.

So that may sound like cherry picking, you know, that I'm going after a small portion of the United States economy. But that business service sector accounts for 25 percent of employment in the United States. That's two and a half times the size of the manufacturing sector in terms of employment.

In addition, the typical rap on these jobs is that they're crummy jobs, they are low-wage jobs. The average wage in the business service sector is 20 percent higher than the average wage in the manufacturing sector. As James told us a couple of minutes ago, the manufacturing sector in terms of employment shrank 20 percent in the decade prior to the financial crisis, in stark contrast business services employment expanded almost 30 percent.

Okay. Just to put a sharp point on it, just to kind of get your head around this, I don't think people walk around with the right picture of the U.S. economy in their head. In this campaign we heard a lot about the automobile industry, how important it was. So automobile and parts employs about 910,000 people in the United States. Engineering services makes 541330 [NAICS code], a really detailed segment. Engineering services, who the hell has heard of that, right? It employs 980,000 people, more people than the entire automobile sector, more than twice the aerospace sector, and at average wages that are higher than both.

Okay. So I'd encourage you to broaden your perspective about how you think about the United States economy. These business services are important.

In addition, they are tradable. Lots of these activities, more than half of the activity, of the economic activity in this business service sector, is tradable. Okay. And the tradable part of business services is qualitatively different than either the manufacturing sector or the non-tradable part of business services. Workers in that tradable part are twice as likely to have a college degree and more than twice as likely to have an advanced degree.

This is really skill-intensive stuff, and because the U.S. is still a skill-abundant place, we have comparative advantage in these activities. We run a trade surplus, a persistent trade surplus, in services exports. Okay. And that surplus has tripled, I think, over the last 15 years.

Okay. So we have comparative advantage in this activity, we have a trade surplus, yet if you look at service businesses, they are far less globally engaged than manufacturing firms. Okay. If you look at the share of output from the tradable business service sector that it's exported, it's less than 5 percent. Contrast in manufacturing we export about 20 percent of our output. Okay. So the global engagement of the service sector is far too low. We're missing a big opportunity.

What's the problem? Well, I think policy impediments are a big part of it. The BRICs that Zoë mentioned where there's a lot of growth, they have significantly higher trade barriers to services, by some estimates, six, seven times the barriers that the U.S. imposes. So I think that that's where there's a big opportunity to export U.S. services to these fast-growing economies.

So just to put, again, a sharp point on it, there's a huge infrastructure boom under way. By some estimates $40 trillion will be spent over the next two decades, most of that in the BRICs. You know, think about the water, sewer, highways, airports,

harbors, commercial/residential real estate—going to require an Army of architects, engineers, project managers, financiers, insurers, all the kinds of tradable services where U.S. businesses have comparative advantage.

This is an enormous opportunity, and I look forward to hearing from Ambassador Sapiro about what's happening.

**Baird:** Thank you. And one of the things that I would like to underscore in the context of what Brad just talked about is that with the development of technologies from the Internet, to cloud computing, to the kinds of things that many of you were doing, a lot of the jobs to provide these services can be performed in the U.S. And we'll come back to that when we talk further.

But a lot of these support services, as well as the more sophisticated services for these business services that Brad's talking about do not need to be performed by armies of Americans moving overseas.

So with that, I'm going to turn to our next terrific panelist, Ambassador Miriam Sapiro, who's the Deputy U.S. Trade Representative, and in that role is responsible for all our trade negotiations involving technology and services.

So, Miriam.

**Sapiro:** Thank you very much, Zoë. I want to give a little bit of context to this discussion and then talk about some of the challenges that we're facing as well as some of the solutions that I think make sense here.

First, in terms of context, during the previous administration, we were shedding jobs at an alarming rate. In the last couple of years we have been able to now see positive growth in terms of private sector employment. We've even seen another 500,000 jobs added in the manufacturing sector. The unemployment rate is trending down, but it's still unacceptably high. So we have a lot more work to do, but I think it is important to keep in mind that—those positive developments.

In terms of services, we have, as Brad said, an incredible comparative advantage. Services are about 70 percent of our GDP and support about three out of four jobs in America today.

Services are also a critical component of the global economy. I think of services as the gears and the grease in a well-oiled machine. So ICT services, for example, critical. Financial services, banking, especially. Energy services, logistics, delivery, transportation—these are all absolutely essential for the growth of the global economy and the kind of supply chains that we have seen emerging.

Domestically, last year our services exports exceeded $600 billion, and we do enjoy a surplus of $200 billion. We are the largest services exporter in the world. So I think there is much to be proud of here. At the same time we all feel that there's more we can do. And so we want to see just how services can become more competitive and expand internationally so that we can meet the goal of doubling all of our exports by the end of 2014, which isn't so far off. It's a five-year plan. And also creating 2 million additional jobs.

So what are some of the challenges that we face? Well, there are trade barriers that are discriminatory. And that's what my team and I try to address by negotiating agreements with foreign countries to lower those barriers. And then, of course, to make sure that they're actually enforced, otherwise they're not worth the paper that they're written on.

Some of the kinds of challenges include, for example, countries that are requiring service providers to have a local data center. Obviously we talk about the great potential of cloud computing, that model does not work if every country or a number of countries that are going to require the providers to have servers in their jurisdiction.

We also are working hard to promote the concept of free data flow so that we can transfer information more easily among providers and among customers around the world, notwithstanding, of course, legitimate privacy concerns. But we don't want to see those concerns used as trade barriers.

We also face caps in some countries on U.S. films and television shows. And so dealing with those caps—we do in our trade agreements—if we try to transfer instead U.S. content digitally, as we do often, we then face problems with intellectual property rights protection and enforcement.

So these are some of the challenges that we are very much engaged with, and I'll say a few words how. But it's also important to remember when we talk about the services sector, Zoë and I were talking about this last night, a lot of our domestic component is composed of barbers, waiters, waitresses, dentists. These are all services that are provided domestically that are not the kinds of services necessarily that we can export.

So services are the backbone of our economy, but not all of the services are the kinds of professions that do readily transport overseas. I think Brad touched on some that do, engineering, architecture, law. And there we sometimes face discriminatory requirements in terms of licensing or an architecture firm having to set up a local office. Those are the kinds of trade barriers that we can try to work. But we do have to recognize the nature of the domestic services industry and how it is somewhat different.

Now, when a Canadian crosses the border for a haircut, that does count as a U.S. export, believe it or not. When foreign students come here to study, that is an export of educational services. In fact, last year we exported more educational services than we did hard goods industrial machinery.

So just to give you a sense of context for what we're talking about.

Now I'll just be very brief and say a few words about how we're dealing with the trade challenges. We are negotiating bilaterally, regionally, and multilaterally to deal with these challenges.

Bilaterally, three important free-trade agreements just came into force in this past year. First Korea, which has a $580 billion services market; then Colombia; and most recently, last month, Panama entered in force, which because of the canal and because of the nature of Panamanian industry also has a very vibrant services economy, as does Colombia.

So these countries and our other trade partners can no longer discriminate against U.S. companies. They have to treat them the same as they do their domestic companies in terms of both goods—for the most part, the tariffs are down to zero, although some goods have transition periods—and in terms of services, no longer can they discriminate.

Regionally, you've hopefully heard of the Trans-Pacific Partnership, which is a very exciting initiative that we're negotiating with partners that range from Australia, to New Zealand, to Singapore, Brunei, Vietnam, Malaysia. Recently Mexico and Canada have now joined as well. And we're seeking very high standards in terms of some of the issues that I mentioned with respect to data flows, with respect to a prohibition on location and with respect to very strong intellectual property rights protections.

We're also in the process of discussing with the European Union the possibility of a free-trade agreement. If we make a decision to go forward, that will also be a very high-standard agreement that will promote our services economy and theirs as well.

And finally, on the multilateral front, in Geneva we're working with like-minded partners on an international services agreement that would be very broad-based and update the now 18-year-old GATS, which is the current services regime that governs our relations with our non-trade partners.

So these are very exciting developments. We're also expanding the information technology agreement that deals with goods, but the extent that we can lower tariffs around the world on IT goods, that also helps improve access and then creates more of a demand market for our service providers in terms of the kinds of products that we offer.

**Baird:** Great. Thank you very much. Our final panelist, and then we'll get into a bit of a discussion in the time we have left, is someone you know well, Mike Capellas, a real leader in the industry, who is the CEO of Compaq, the President of HP, is a real expert on cloud computing. Michael.

**Capellas:** Thank you very much. So first one is, I always kind of like to put this in a frame of sort of what the agenda is. And as we've talked about some of the numbers, while I think the export service is a critical component, one of the first questions we almost want to ask ourselves is why in the world do we have a trade deficit to start with? Here's a country with unbelievable natural resources, a trained workforce. So if I read the numbers, 2011 we had a $560 billion trade deficit, of which $350 billion was energy, and we had a $200 billion surplus in services. And so why I'm incredibly optimistic right now is that I think we have the potential over the next 5 to 10 years to rethink—under which technology is going to be a critical component—actually eliminating the entire trade deficit. For example, front page of the "Wall Street Journal" this morning, within the next 5 to 10 years, we certainly have the technology to do horizontal drilling by taking different kinds of data flows, extracting natural gas, become the largest producer, becoming self-sufficient. And by the application—and I understand there are environmental issues to be addressed.

So one is I do believe that the application of technology isn't the creation of technology. But what the U.S. does so well is it thinks about it entirely differently. I no longer know what a service is or a product is because the service is embedded in the product.

The U.S. way of thinking about things is we tend to look and we say there is a market need. We do market analysis. We then understand that. We build a physical product. We drive it to its lowest components, and sometimes that becomes commoditized. But what the real value creation is, we then say what is the customer experience? We wrap services around it. We then will be able to do global distribution, and we have this wonderful thing called social networking which then allows us to get a closed-loop feedback system.

Nowhere in the world do people innovate in this method. And so examples that we can all think of. If you think about, you know, everybody owns a smartphone. Well, the device is kind of interesting, but that's not what you buy. You buy the service of delivering iTunes for music with apps to be able to connect, to do video conferencing. The value was not in the creation of the product. The value was in the service. And for every iPad, iPod, or smartphone of choice you sell, the service component has got to be 3 or 4X.

So, you know, what I would encourage is that the innovation that we can actually do to differentiate is the ability to take services embedded in the product. And if the componentry goes to the lowest cost, the value creation and job creation is the ability to wrap services around them. And there's an extraordinary opportunity.

In technology, if you go back, you know, probably forever, you have five or six years of research and development followed by an extremely rapid 18-month adoption period.

Think about the Internet. Seven years in development, 18 months in development. The middle of the decade with networking, IP networks five to seven years in development, 18 months before we had smartphones.

So why I'm encouraged is we are in the midst of changing the entire IT delivery business. There is a mixture of products and services of which the U.S. should define the service component. Cloud computing, which is, you know, this sort of mystical thing, but basically says you no longer need a physical device. I can put in a set of capabilities that allows me to buy IT when I need it and as I need it.

I just finished, you know, a project co-chairing for the federal government, 71 companies to determine that could the U.S. actually be a cloud. And every component is U.S. led. And by the way, international data flows was the barrier.

Second thing that happens outside of cloud is a lot of talk about big data. What does the U.S. do better than anywhere? We analyze data. We get the data. We attract it. All big data says is that you structure and unstructure data to be able to interpret consumer behavior. Who else besides the U.S. can interpret consumer behavior in these rapidly growing markets?

And the final one is, you know, the U.S. development really invented application development. We then spend five years shipping it overseas. Guess what. It's happening today. The creation in the U.S. of cloud-based application development tools that allows you to actually write applications through reuse, we will reinvent it again and have the potential.

So I'm actually incredibly encouraged. I think if we set a national agenda not just to export services, but to say, you know, we should eliminate the trade deficit, we use technology in practical applications and we change the game of not just product and services, but how do you deliver an end-to-end customer service—I don't think anybody can do that. I just am incredibly encouraged.

I would say the barriers are not technological. We still lead on every front technologically. I do think we have some real barriers around, you know, how we create the wheel and some very complicated national policy questions.

**Baird:** That's great. Thank you. I'm going to come to the audience for questions in a minute or two, so please think about what you might want to ask.

But the one question I'd like to ask this panel is, we think of large companies as multinationals, as able to function globally—Hal Varian of Google is one of the people who believes in an emerging micro-national, that small businesses and medium-sized businesses—which is where most people are employed in this country—actually have the potential to participate in the kind of global trade that you're talking about. And I wonder if one of you would like to comment on that.

**Sapiro:** Yeah. I'd be happy to, Zoë. We're putting a particular focus on small, medium enterprises as we work very hard to meet the NEI, National Export Initiative, goal of doubling exports that I mentioned earlier. SMEs are the backbone of our economy, but only about 1 percent currently export.

And so whether it's goods or services, we are very focused on making sure that they have the tools that are necessary to compete. And one of the things we have discovered is if we talk to our trading partners around the world, whether they be in the Middle East, Europe, South America, Asia, they find they have a similar situation and that SMEs are also a critical piece of their economy, but they are not necessarily exporting.

So with some of our partners, we're starting to set up databases where we can link our SMEs so that they can use the digital technology that they have or they can acquire to try to find new customers, again, whether it's goods or services.

We also make sure they have the financing tools that are necessary for some of the smaller ones especially to try to expand and compete effectively.

**Baird:** Thanks. Brad, maybe each of you want to comment on this. Brad.

**Jensen:** Yes. So what we see—so I have done a lot of work looking at manufacturing exporters. And what we see in goods trade is that it's the biggest firms that do the vast majority of the trading. And this poses a challenge in the service sector because while there are some very large service firms, there is a much greater preponderance of small and medium-sized firms in the service sector than in the manufacturing sector.

So getting these firms to be able to clear the hurdle to engage globally is a big challenge. And I think that the types of services that have been talked about at this conference—you know, software-as-a-service that enable companies to reach new consumers, to outsource a lot of their back office processes. These are the kinds of things that will allow the small and medium-sized firms to clear those barriers to engage globally. And I think that that's an exciting prospect, one that offers a lot of hope.

We need to clear some of the policy undergrowth and then kind of link it up with the enabling technology to allow small and medium-sized firms to export.

**Capellas:** I think at a practical level, the opportunity is as great as it's ever been because what small businesses cannot do is create the infrastructure. And, you know, what you have now at some of the development of these cloud infrastructures is I can go out and develop the capacity to have big computing centers on just what he needs and a portion—you know, I can buy one slice of pizza instead of having to build an entire pizza oven. So the enabling technology is in there.

And secondarily, those technologies because of the global reach of social networking allow you to have a feedback loop. So it's actually a shortage of good ideas more than a shortage of infrastructure. This is an extraordinary time for that to be able to do that.

Quite frankly, there is capital available. So if you look at the necessary components, we have the infrastructure. We have it readily available. We have the feedback loops and we have capital. So it should happen.

The other thing I'm encouraged about, I mean if you look at the hard numbers is the job creation has come from the big companies. And generally, after a company becomes public, it starts job creation.

What I continue to be, though, encouraged about is we're starting to see big companies develop some alternate models that make them look small. They will create a division to attack emerging markets. They will create a joint venture to integrate a product.

So a quick story here. I just came off of two years of developing—between Intel, Cisco and AMC, a joint venture which started with 16 people and one coffeepot to develop a cloud-based computing.

As of last week, we're at a billion dollar run rate in less than two years with 1,200 people, almost all engineers all in the U.S.

So it's interesting that even big companies are starting to say now let me have a faster, quicker, alternate model. So this is all enabled by technology.

**Baird:** That is huge. Let's take a question from the audience in the very limited time we have left. Why don't you go ahead? I'm sorry. Oh did you—go ahead over here. That's all right. I apologize. They have a system I wasn't aware of.

**Sprague:** So Steven Sprague, Wave Systems. It strikes me that one of the core technologies we under-leverage today in the ability to export service and the ability to bypass some of the existing regulatory environments that are out there is the real solid application of security. Not for the perspective of how do I hide things, but for the perspective of how do I enable content perceived to be, for example, in France, but is really being stored, for example, in the U.S.

The application of, how do I manage my authentication and my service relationship for confidentiality and integrity is a really important piece of this, yet very much under-discussed in this context. And it's probably one of the most powerful weapons that we have in that whole sphere of exporting the model.

**Baird:** Let Mike maybe comment on that briefly and then maybe we'll be able to fit in another question.

**Capellas:** The difficulty with this one is that the incredible difference of opinion—this might be almost like last night's political conversation—is it's privacy versus security. I can secure anything if I give up the right to a certain amount of privacy. And the world has different views of where those boundaries lie. And there is a philosophical underpinning.

Technologically, we can secure almost anything if you have—that's point one. So that is a huge issue, just philosophically getting that, and that gap is enormous.

So the secondary question is the mistrust of the U.S. relative to international data flows. When we end this big project about trying to do global clouds, I had no idea that the Patriot Act would be a huge barrier in the minds of people like the Germans or even the Canadians about why they don't want to do it.

So this is not a technical question. This is a philosophical question of where to draw the lines. Very difficult issue.

**Baird:** Thank you. We have time for another question. I'm sorry. Why don't you both ask a question quickly? We're almost out of time, but we'll try to have time to answer it, too.

**Sundararajan:** Could I go first?

**Baird:** Please, you go first and then Andy.

**Sundararajan:** All right. Arun Sundararajan, New York University. So I don't have robust data to support my question. With that caveat, you know, I personally seem to see a lot of growth in my domestic consumption of services, for services that are locally based, that are not really exportable, you know, accommodation, transport, you know, household.

On the other hand, I seem to be a greater importer of services that are importable or exportable, like administrative services, travel services, medical services.

So beyond cloud computing and software-as-a-service, which I agree are exportable, I mean where do you see the growth coming in the services that are exportable, that are actually going to close that trade deficit? Like growing us from $200 billion to, you know, sort of closing that $500 billion.

**Baird:** Thank you. That's great. Andy, if you ask your question real quickly. Brad, you can take his.

**McAfee:** Andy McAfee, MIT. One of the things we hear from people about why we should be worried about trade deficits, either in services or in manufacturing, is that they are evidence of weakness in our economy and, in particular, evidence of our weakness to innovate.

But as I'm hearing you all talk, you're talking how we're in the lead in almost all the important technologies that are important, either from manufacturing or for services.

So could I ask you to comment on if we are running these deficits, is it evidence of weakness? Is it evidence of innovative weakness? And if not, what's it evidence of? And should we be worried about it?

**Jensen:** Yeah, it's evidence that the United States is a great place to invest. That's why we run a trade deficit—is because the rest of the world wants to invest in the United States. So we export assets. We export treasury bonds. We export—you know, we sell real estate. We export stock. Okay. And in exchange, the rest of the world sends us stuff. And that's the way to think about the trade balance. The trade balance is not an indication of weakness. It can be. It can be an indication that your economy is uncompetitive. But more likely, it's an indication that there's an imbalance between savings and investment.

There are lots of great investment opportunities in this country, yet we're not great savers. So we import savings from the rest of the world by exporting assets. So that's how to think about the trade deficit. In terms of the services, we run a surplus in services exports. Services exports are growing rapidly, services imports are going rapidly, yet the trade surplus and services is expanding.

So I'm not fearful. Yes, we will import low-end services. What I want to see happen is the policy framework so that we can export as many high-end services as we're capable of exporting. It's engineering. It's financial services. It's software. Software is a service. It's lots of design services. It's lots of research and development services. Certification services.

This whole package of—as Miriam said, kind of the grease that allows the goods economy to work, logistics. So these are all the kinds of things we're really good at.

**Baird:** I really want to thank this panel and I thank the audience. We are way over time. And David is really mad at me. So thank you very much.

**Kirkpatrick:** I was actually going to say you could take more from Guibert who is from Argentina.

**Baird:** Oh, fine. Okay.

**Kirkpatrick:** I thought he might have an interesting point of view. Sorry.

**Baird:** You're going to let us.

**Kirkpatrick:** You had two economists in a row. I thought a practitioner maybe would be interesting. Because he has a multi-thousand person company in Buenos Aires.

**Englebienne:** Well, yeah. No. I am Guibert from Globant in Argentina. I would like just to share my point of view with Zoë particularly because you seem to be worried about the export of jobs.

And I agree with Michael in the surplus, you know. Just to tell you a short story, this morning I opened up Google apps, download my email, connected through LinkedIn, checked my how the sales was doing on Salesforce and then checked my balance on my U.S. bank that operates down in Argentina.

So none of these could have been possible unless we have the job down there. I wouldn't be consuming all this. And at the same time, all the talent that globally we are exporting from Argentina to allow these wonderful companies to create their products wouldn't be that possible.

So at one point, I'm very optimistic about what we can do and, as a whole, breaking the boundaries and start seeing the emerging market level up and then start seeing all this innovation growing from the U.S. you know.

We don't have a Facebook. We don't have a Google down there. You are importing a lot of entrepreneurs. America is a great country. And I am very thankful for all these opportunities that are coming.

**Baird:** Thank you. And I think that it is important to keep in mind that what we're talking about is creating a more vibrant U.S. participation in a global economy. But we need to create a more vibrant U.S. participation because we have tremendous opportunity, but we're not capitalizing on it adequately and not creating enough jobs at home, but we can.

I think, as you've seen from this panel, we can do a lot here. And I hope this has been useful to you in your own endeavors, too. Thank you. Thanks, David.