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THE INTERNET AS A PLATFORM FOR INTERNATIONAL TRADE

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## P R O C E E D I N G S

MR. MELTZER: Good morning and welcome. Thanks for making it out this morning with slightly inclement weather. Today, we're going to discuss the importance of the Internet as a platform for international trade. This relates to the report on this issue which is available on the table outside. If it's not available there, you can download it from the Brookings web site.

We've got an excellent panel where we're going to discuss a range of issues today. And before I introduce them, I just want to speak briefly about some of the key issues that we're going to be discussing. The idea that the Internet can be a commercial opportunity is clearly not a new one. The dot.com boom of the 1990s saw businesses such as Amazon, which started out as an online bookstore, now become a pre-eminent online company, and also, many failures, of course, during that period. We all remember pets.com, boo.com to name a few.

But since the '90s, certainly, the Internet has grown up, and so has how businesses and consumers use it. And some refer to this now as the Web 2.0, and this captures a number of interesting developments. One of them is the ability to harness the collective import and intelligence of Internet users.

So for instance, think of Wikipedia, an online user generated encyclopedia. Or crowd funding that allows anyone, anywhere with Internet access to fund a good idea. Data is also the new byword of the Internet. It's enabling information to be aggregated in enormous quantities, so-called big data, and with new computing power to analyze it; it's producing a whole range of new insights.

Now, some of these are going to provide new commercial opportunities. For instance, McKinsey estimates that business can use big data to improve their bottom line by up to 60 percent. But there are other opportunities. For instance, in the area of

diagnostics, Google searches for the word “flu” have actually proved most effective at identifying where the virus is actually beginning to manifest itself.

And in the case of natural disasters, for instance, in the Philippines with the recent Haiyan hurricane, there was -- social mapping was used to analyze tweets with certain keywords such as appeals for help or shortage of medical devices. And this provided rescuers with more detail and data driven maps of areas that they needed to respond to.

Another key dynamic of Web 2.0 is the capacity of collaboration, networking and the use of new technologies to develop new businesses. And these factors have turned the Internet into a platform for commerce as well as a crucial business import. It's enabling businesses to access services and improve productivity and increase their productivity, both domestically and also, in overseas markets.

For instance, take access to the cloud where IT services and infrastructure are available at low cost and could be scalable quickly and easily to respond to new business circumstances. Telecom services -- we all are familiar with Skype, which is providing low cost, if not free telecommunications, particularly important for businesses in developing countries who maybe are creating environments with incumbents, and access to high cost telecommunication services.

Now, combine this with the global nature of the Internet now, and we have it as a platform for international trade. And additionally, and as importantly, understanding the Internet as a platform for international trade highlights that this is no longer just an Internet sector opportunity. It's an economy wide opportunity for all sectors from manufacturing through to services.

Significantly, the Internet as a platform for international trade is actually where the opportunity starts. Because the Internet is becoming globally accessible at

increasingly lower costs, it's providing small or medium sized enterprise, firms in developing countries, entities that have traditionally not been part of the global economy to become international traders.

Let me give you one example. Cost of access to strategic information. Something that small and medium sized enterprises constantly cite as one of the key barriers to them for actually selling goods and services overseas. This might include access to laws and regulations, consumer trends, financial market information, information that is now essentially available for free and online.

And with a web site and with tools that allow consumers to verify trust in the vendor, these businesses, SMEs and those in developing countries are able to have a global reach where the potential customer base is now no smaller than from large multi-national corporations.

While the Internet is poised to deliver significant economic barriers, certainly significant economic benefits barriers remain. And these barriers extend along the entire Internet enabled commerce chain. It certainly starts with the Internet access, where in the developing country, only about 30 percent of people have access compared to approximately 80 percent in the developed world.

It's also a question about cost. It's a question about whether it's access to broadband or not, which is becoming increasingly necessary to take advantage of commercial opportunities. There's also barriers across border data flows which are also significant, and market access restriction on the ability to deliver services, which can be done increasingly over the Internet.

There are also traditional barriers to the movement of goods across borders, because a lot of Internet enabled trade is still purchases of goods online that are delivered off line. And so in this context, it also means that access to low cost delivery

services is crucial.

There are also a range of other barriers that arise due to the changing nature of Internet enabled trade. When SMEs, when small and medium sized enterprises use the Internet to engage in international trade, often, what they're increasingly doing is selling low valued goods, which is a new development. And so here, this presents challenges for the current set of trade rules that we have which have been traditionally geared up to respond to the needs of larger companies. So for example, where you have delays at customs, this is a trade cost for all trade, but if you're moving low value goods through customs, then these can make the actual transaction entirely uneconomical.

Dispute settlement is another issue. How do you settle disputes online when the consumer and vendor are located in different jurisdictions? And dispute settlement mechanisms such as the ones that we currently have at the WTO are clearly not set up to deal with these type of circumstances. And these are just some of the barriers to realizing the benefits of the Internet, and these are addressed in significantly more detail in the paper that's available.

So, where do we look to make some progress on these issues? The first place that naturally springs to mind is the World Trade Organization, the key multilateral institution governing world trade. The aim there, obviously, is to seek to reduce barriers to trade and goods and services. There are already commitments on services trade and services delivered online can now actually be covered by particular specific WTO commitments, except the WTO is limited.

The commitments are limited, and partly, this reflects a fact that a lot of these commitments were made and negotiated in the early 1980s and the early 1990s, when the opportunities of the Internet for international trade were just not well understood. So, there's a lack of clarity, essentially, about how current WTO

commitments actually relate to the new opportunities that the Internet is providing.

And certainly, when it comes to developing new rules, until the WTO finishes out the Doha Round and creates some space to look at new rules, then this is not going to be the place to do that. It requires us to look elsewhere.

Now, the recent WTO ministerial in Bali -- there was agreement on trade facilitation, a package which is going to reduce the costs of moving goods through borders. And this is going to be important for trade broadly, but certainly, it's going to have benefits for Internet enabled trade for the reasons I've discussed.

And at that meeting, the WTO did agree to establish a work program on the relationship between e-commerce and international trade. So there is some space there to look at this, and it's important. But the other large free trade agreements, in particular, I think are where the opportunities exist for looking at how do we develop new rules that can actually support and underpin these new developments.

And to name three key FTAs at the moment, the Transpacific Partnership Negotiation's 12 member countries including the United States. The negotiations are looking to conclude this year. And certainly, significant, the AUUS, translated trade investment partnership and negotiations have just started where you would expect the U.S. need to be on a similar page for a lot of these issues, presents a lot of opportunities there.

And the Trade and Services agreement which is comprising 50 representatives with approximately 70 percent of services trade is now an opportunity, and there in particular, China has indicated some interest in joining. And so, that could possibly be a space where you could have a real live trade negotiation with a range of developing countries to address a range of these issues. And of course, there are other forums such as APEC where a lot of work is being done. So, there are places where

progress can certainly be made.

I now want to take this opportunity to introduce the panelists. I'm going to introduce them as they are seated. We have here Deepak Mishra, who is the Lead Economist in the World Bank's Washington office oversees economic policy work for East Asia and the Pacific.

And prior to that, he worked as The World Bank's country economist in a variety of regions including South Asia and East Asia on issues related to economic growth, international trade and currency. He has been published in a range of distinguished journals, and prior to The World Bank, he's worked at the University of Maryland, at the Federal Reserve Board of Governors and at Tata Motors in India.

Robert Atkinson, the next gentleman over, is the founder and president of the Information Technology and Innovation Foundation, a Washington based think tank. He's author of a range of fascinating books which I would highly recommend to you. Before coming to ITIF, he was vice president of the progressive Policy Institute and director of their Technology and You economy project.

He's had a range of experiences prior to that. One of them was as executive director of the Rhode Island Economic Policy Council. He's been project director of the former congressional Office of Technology Assessment. And he was appointed by various presidents to a range of important roles. Under President Clinton, to the Commission on Worker's Communities and Economic Change in the new economy. Under President Bush, he was appointed chair of the congressionally created National Service Transportation and Infrastructure Financing Commission. And under President Obama, he's been appointed the National Innovation and Competitive Strategy Advisory Board.

Now, what I particularly like is that in 2011, *Washingtonian Magazine*

named him a tech titan. And in 2013, *New Republic* named him as one of the three most important thinkers about innovation. The most important, I think, feather in his cap is that he's also a Nonresident Senior Fellow at Brookings.

Commissioner Broadbent was sworn as a member of the International Trade Commission in September, 2012 for a term expiring in 2017. And prior to that, the commissioner held the William Shalt chair in international business at CSIS. And prior to that, she was a trade advisor at the Global Business Dialogue, a multi-national association focusing on international trade and investment issues.

From 2003 to 2008, the commissioner served as assistant USTR industry market access and telecommunications where she led the negotiating team during the Doha round. Earlier on in her career, she was also a professional staff member of the Committee on Ways and Means in the House of Representatives where she was involved in passage of some of the key trade implementing bills, NAFTA and the Uruguay rounds, to mention a few.

Last but certainly not least is Ambassador Allgeier. He was appointed president of the Coalition of Services Industries in September, 2012, which is an association representing international trade and investment interests of the American service economy which represents companies from a broad range of service industries including banking, telecommunications and express delivery services.

Prior to that, in 2009 to 2012, Ambassador was president of CNM International, a trade consultancy firm here in Washington. And prior to that, he was deputy USTR and U.S. ambassador to the WTO in Geneva. Before his appointment as deputy USTR in 2001, he also served in a variety of those senior positions in USTR. In 1988, President Reagan him with the presidential distinguished rank award, and he's also received a variety of other distinguished service awards, such as from WETA and the



Woodrow Wilson alumnus award from Johns Hopkins.

The panelists are now going to make short presentations, and after that, we're going to engage in some Q&A up on stage, and after that, we're going to open it up to the audience.

(Discussion off the record)

MR. ATKINSON: All right, well thank you so much. It's a pleasure to be here, and I think this is a really important topic, because it's an area where, in the U.S. and most developed countries we sort of now generally take the Internet for granted. But in many developing countries, they're 10, 15 years behind us.

So, I was really struck personally by this experience of international trade in the Internet a few years ago when I was asked to visit India by the Confederation of Indian Industry. They wanted me to go around and give several speeches in various cities. And I knew next to nothing about the Indian economy, which didn't seem to bother them too much. So, I figured I should learn something about the Indian economy before I go over there.

So, I go on Amazon and I find several books. They happened to be used books, which is fine, and they're -- you know, Amazon has these affiliate sellers, so I just click on the one-click thing and don't think about it anymore. And you know, maybe six days later, at my door is this sort of strange looking package. It's wrapped in brown paper, and you know, that's very odd, with all this sort of -- a bunch of stamps on it from another country. And I go, what is this?

And it turns out that the books I had bought were actually sold by an Indian bookseller somewhere in some city in India I had never heard of before. So now, this Indian bookseller who I'm sure was -- before the Internet, you know, at best selling some books in his little city in India or her little city, now all of the sudden, had access to

the global market and could sell their books all around the world. I thought that was pretty interesting and emblematic of what the promise is.

So, when you look at the research on this question, there isn't a lot of research on it, but what the research generally shows is that Internet penetration is positively correlated or positively related to increases in exports. One study a few years ago, Freund and Weinhold, found that a 10 percent increase in their net penetration in a foreign country is associated with a 1.7 percent increase in exports and a 1.1 percent increase in imports. So, it's not just about a platform for exports; it's about a platform for two-way dynamic trade.

Another study in 2003 found that the Internet increases increased foreign direct investment. But what's interesting is that a number of studies have found that the benefits of Internet access really, are much more significant for developing countries. And the theory there is, the developed countries already have a robust Internet system. It's the developing countries where, when they get Internet, they see these big gains.

Now, I think a question is, why do we care about that? Why is that an important thing? And sort of the conventional story, or this is an important thing because it's going to help small businesses in these countries and it's going to create jobs. I actually don't think that's the principal reason why that's important.

I think one of the principal reasons why we should care about this is because of the issue of scale. And if you look at many, many developing countries, one of the biggest problems they have is they lack enterprises with any kind of scale or as a share of their economy compared to say, a country where the U.S. -- or in the U.S., you have a significant share of jobs. Over 2/3 of jobs are in large enterprises who are much, much more productive than small enterprises.

I mean, we have this sort of mythology in Washington, which I think is

very misleading that small companies are somehow better than big companies. We did a recent study, a little blog series on this, and big companies have higher productivity. They do more R&D. They do more trade. They pay higher wages. They provide more healthcare.

The only two areas where big companies are worse than small companies is they have less worker disability and they have less worker unemployment insurance. So, in other words, they don't lay their workers off and they don't disable them.

So, when you look at a country like India, for example, India, at least a recent McKinsey study found that Indian retail productivity, so their retail sector -- their retail productivity is 6 percent of U.S. retail productivity. So, why is the U.S. retail productivity so high? A lot of it is about industry structure. A lot of it is because we have big box sellers, Walmart, Best Buy, Amazon, who can get real scale and really drive productivity.

In India, you've got everybody and their grandmother has a little shop, and they compete with one another, and they can't get scale. And one of the things that I think the Internet can do, and it certainly has done this in this country, is it allows firms to get bigger markets to gain scale, and then have a positive feedback where they can get even more scale, lower prices, higher quality and even get more scale. And I think that's sort of a path for a lot of these poor countries, where they just have a lot of informality; a lot of small firms that just cannot generate the productivity gains that these countries need.

I had a debate about a decade ago with a person here in D.C. who follows the Internet, and he was saying he thought that one of the things that was going to happen with the Internet is that it was going to be this incredible blossoming of small

micro companies. And you'd see this big share of small companies grew.

And I said actually, I didn't think that was what was going to happen with the Internet. I thought what was going to happen with the Internet is you could finally get scale, particularly in services industries. So we think about that. Think about, for example, travel agents. We've lost probably -- I can't remember the number. I had in a recent speech, but let's just say 40 to 45 percent of travel agents are gone today, because people are using companies like Expedia or Travelocity.

We've lost an enormous number of bookstores because of Amazon and things like that. Now to me, that's all great. I mean not like the French who have any desire to preserve small booksellers and make Amazon not be able to give discounts. This is a great thing. It lowers prices, increases value for consumers. And largely, that scaling of the services economy in the U.S. is because of the Internet and IT.

And so, I think that's really one of the big things that's going to help with the -- how the Internet can help transform some of these other countries. I'll just close by saying, I think one of the biggest challenges, though, is that many of these countries really have, if not an antipathy towards productivity, at least an indifference towards it. We see this over and over and over again in countries where they just basically do not want higher productivity.

Again, on this trip in India -- not to sort of extrapolate from this one experience, because I've had this experience in many, many countries; I was talking to some CEOs from some big Indian companies at a reception I was at, and I said, you know, this McKinsey study just showed that your productivity is abysmal compared to the U.S. And you really need higher productivity.

And the CEO of one of the largest companies in India said to me, he said, Rob, you don't understand. We can't afford productivity in India. We need the jobs

(Laughter). And I was really taken aback. I can sort of see an activist or a government official thinking this, but for a CEO to think this is really striking, because the evidence shows very, very clearly -- we recently just wrote a study on productivity in jobs or robots in jobs, whatever you want to call it. And we looked at a lot of the data from, for example, ILO and World Bank and others.

And the data are very, very clear. There is no relationship between productivity and unemployment in these countries. None. It's zero correlation. High productivity, high jobs. Low productivity, high jobs. It doesn't make any difference. And yet, these countries have bought into this notion that productivity is going to be working against their very critical goals of job creation.

So, I think that's part of the challenge. When we think about Internet policy in these countries, it's to get the countries to embrace the Internet, not just because they think that oh, they can get a few more exports and trade a few more jobs, but that it's a transformative technology for many, many of their sectors.

MR. MELTZER: Thanks, Rob. Great. Meredith?

MS. BROADBENT: Yes, thank you, Josh. I really appreciate being here. It's a little odd for the ITC to be at a think tank talking about academic papers, but I really appreciated the opportunity, and I'll just sort of put my comments into about three baskets.

The first of the three baskets is my sort of obligatory disclaimer. I just speak for myself. You know, I've got colleagues and future colleagues even in the room here, so I'd like to hear from her, as well. But I'm one of six commissioners. We're bipartisan, three and three. And we do economic reports.

A third of our work is 332 investigations, which we call it at the International Trade Commission. And we have a lot of work that has been requested by

our general clients, which tend to be the Ways and Means Committee and the Senate Finance Committee and USTR that really relate to this study; that sort of try to look at the Internet -- sort of the elephant that's the Internet from a lot of different prisms.

And so, I thought I'd like to mention a couple that would be useful as this debate engages and folks start debating the future trade agenda. But we are able, at the ITC, to do some survey work, some data work and marry that sort of analysis with specific industry expertise. And it allows us to go out and get some micro views from the business community.

We've done, for example, 10 roundtables with small and medium sized exporters throughout the country, just asking them sort of what their barriers are to exporting and creating jobs and so forth. The areas that I would point you to, if you have further interest, would be SME's digital trade in Africa. Our themes of reports that we're doing -- there's about eight major studies concluded or ongoing right now, and on the SME side of things, SMEs have been telling our investigators some of their biggest challenges.

And it's not great new news, but it confirms what I think we're all feeling, which is small businesses trying to export have problems you know, identifying customers, acquiring information in foreign markets, setting up relationships with distributors. This is one thing that they really appreciate the Internet for and it feels like it empowers them to be stronger and export more.

They need information on tariffs and customs procedures and information on regulations; trying to understand them, identify them, figure out what their compliance costs would be if they went into a foreign market. And then, dealing with the barriers that are facing the large companies, like the local content requirements, the quotas, licensing and services sectors.

On the development side of the equation, we have been able to do a couple of studies related to Africa, and we pulled out, in terms of barriers, their domestic barriers to exporting. For example, a study supply of reasonably placed electricity is a big, big requirement for growing your ability to export. And then also, just the access to the Internet, which has been mentioned before -- having additional Internet exchanges in Africa will help these economies. I think at this point, only 60 percent of Africans in developing countries in Africa have access to the Internet.

And African countries face the same barriers that U.S. small and medium size enterprises face; just trying to understand the complexities of the world market. And the Internet helps them there. But we really kind of validated a whole long list of challenges that small and medium sized enterprises are facing, and look into many sectors including, you know, apple exporters, wineries, chemicals, textiles and apparel, medical devices as well as the more high tech services and computer science processes that you would expect.

Another study that we've done has dealt with trade facilitation, cost savings that the Internet brings. Trade facilitation offers a huge opportunity for exporters, according to some of the things that we've been finding. We did a study on trade facilitation in East African communities as an example of a developing regional economy.

Three of the countries in this group, Uganda, Rwanda and Burundi are land-locked, and their trade has to go by rail or truck through Kenya or Tanzania to get to the ports in Kenya and Tanzania which are on the Indian Ocean. So, cutting delays, doing trade facilitation, cutting delays in the supply chain, flower's costs can boost imports, exports and investment.

We looked at Rwanda's electronic single window service, which provides a list of benefits which are very powerful in terms of development impact on that

economy. Transparency has increased. Corruption is reduced. Relevant government agencies are linked to the web portal and traders can receive updates on where their products are in this long supply chain that comes out of East Africa.

Another part of our work is related to -- in addition to the small and medium sized enterprises, and AGOA is looking just at the digital trade economy generally. We've done part one of a study, and part two will be due out in August. And for part two, the commission was asked to identify and quantify elements of digital trade using a survey of U.S. firms and quantitative analytic tools such as economic modeling and econometric analysis.

We'll have case studies in this on the importance of digital trade, and we'll be relying on extensive public input from hearings that we had both here in Washington and then in Silicon Valley, as well. Our staff interviews government officials, industry, academics -- looks very closely at all think tank types of papers in this regard. So it's helpful to have the work ongoing here, and Josh's paper will be important sort of raw material input for our work.

I think I'll stop there, just to give you a flavor of what we're doing. I think that if we can think about sort of this economic force that is the Internet, and of convergence of these multiple services -- information technology, entertainment and digital media can bring about more of a convergence between the policy communities in the U.S. that do trade policy, and the policy communities that are trying to understand development in a globalized economy.

I think that will be an important convergence, as well, and I really applaud Josh for how he's able to spark the discussion in this regard.

MR. MELTZER: Thanks.

(Discussion off the record)



MR. MISHRA: Thank you, Josh. It's a real pleasure and a privilege to be here and to discuss Josh's paper. I think -- let me begin by saying that you know, the paper does a very careful and comprehensive job of documenting both the opportunities of using Internet as a platform for trade, as well as looking at the values and impediments to cross-border trade on Internet based services.

So, I think this is a very important contribution to the literature, because as many of you might have seen, there's not a whole host of work out there to help researchers. And I think it's an important contribution and I appreciate the effort on this part.

I don't know if the work that -- I have noticed that the more and more the Internet knows about us, the users, the less and less we know about the Internet -- the economics of the Internet. It might sound kind of shocking for somebody in Silicon Valley that if you really go and look into serious economic research on the impact of -- economic impact of the Internet, it's not a whole lot.

I mean, you can see Josh has done an excellent job of documenting pretty much anything out there. But if you go back and say what's the GDP contribution of the Internet to the economy, the way we're doing the culture of you know, manufacturing, there's only study as far as I know, and it's a McKinsey study which does the very hard job of trying to do it for 20 countries in the world, and that's with lots of caveats.

So that tells you that frankly, we still are trying to understand better how the Internet actually has economic, socio and political impact. I think for the political and economic there is not -- on the political and socio side, there is more progress than on the economic side. So it's an important field, and still, an under researched field in my view.

So in that context, I thought it would be very good to situate the discussion we are having in a broader context which we understand, which is basically what we call the industry revolution. So, if you think of the Internet along with mobile telephone, computers and increasingly, the big data, the cloud computing, so the whole variation of the IT and ICP versus development -- think of it as the heart of the third phase of the industry revolution, which is very similar to what -- I know people must have struggled to understand the implication of the innovation of electricity and automobiles in the beginning of the 20<sup>th</sup> century, or steamboats -- the introduction of steam power in the 17 and 18<sup>th</sup> century.

And there is a growing literature trying to situate the Internet in that context, so that we can use the standard tools and techniques to understand and talk about how it's impacting everyday life, and how it impacts the welfare with cross-border trade.

And the good news is, if you look at that, and there's a very nice paper by Komen and Hobin which looks at the economic benefits of technology, and they find that over time, the adoption lags, which is the speed with which technology gets penetrated into a country -- actually diffused into a country -- introduced and diffused, is actually falling.

So it took really 120 years for the steam and motor ships, when it was invented in the UK to go into the rest of the world, on average. It took about 60 years for electricity, and it takes 10 to 20 years for PCs, Internet and cell phones. And if you really think of iPads and some of the new generation ones, it will be in single digit numbers.

So there is obviously -- the adoption lags, new innovation is falling and converging over time, which is a great thing. But at the same time, they have a paper which is not yet published by Komen and Ferrer which actually shows that while the

speed with which new technology has been introduced into a countries are falling, the speed with which that same technology is penetrating and being used within the country is actually widening across developing and developed countries. So that's what they call the penetration of trade, and that's the vertical line on what you call the curvature of the diffuse in curve.

And so, you see that with the concave curve. So, over time, when you introduce a technology, you see pretty fast penetration, and then slowly, it peters out. And what do you see? So there's a comparison of U.S. -- introduction of computers in the U.S. versus Vietnam. And you see that Vietnam started using computers 20 years after the U.S., and then it had a very quick catch up, but after a while, but then the penetration tends to remain constant for the last few years.

And what you need is a convergence in the penetration rate for the developing and developed countries who take advantage of this new technology. And the reason it's not happening is I think -- which is what Josh's paper is all about, so I ought to just put it in a broader context, is what I call, to paraphrase Ken's, there are many a slips between the cup and the lips or the lip.

So if you think of goods and services which has been provided over the Internet by business or government to its consumers or citizens, I have this -- I'm not sure how many of you can see it, but so I have divided various values and impediments into two parts. One, what I call the behind the border resource, which are domestic -- this is within your border. And the issues that reach outside your border, which is the cross-border resource.

And the cross-border I put in gray color, and behind the border issues are in blue color. And you can see that there are numerous impediments to a very smooth and efficient functioning of this market, which is about Internet enabled services.

A lot of lies with the domestic government, which I call the government failure and market failure. And I'll give you some examples of some African countries where a lot of the problem is like the example we talked about, Uganda and Rwanda -- some of the land-locked countries. There is a paper in The World Bank which shows that a lot of the land-locked countries are also policy locked, in the sense that they actually have very restrictive policies when it comes to the ICT sector.

So, these are the countries which actually benefit the most by having a more open label ICT policy, because they can actually break the barriers of trade much faster. But they are the ones who are the least open. So, those are some of the government failures.

But along with that, you have cross-border trade, market access restrictions, transport logistics. You know, one that was mentioned was electricity, and even financing sector convertibility, because to have payments across border, you need to -- liberalization on that. Then of course, a whole host of domestic and international regulations on mutual recognition of service providers, disputes and settlement, and very important, the intellectual property rights.

So, the point I'm trying to drive here, and we see this first, is the numerous impediments. And second, these are very complex. And so, we are very cautious and careful in terms of saying how quickly this will be -- these barriers will be overcome, and we can see the fruit and the benefits of this.

But let me give you a positive example of despite all these problems, how things are changing. And this is an example of Ethiopia, which used to be a land-locked -- it's now a land-locked country. It had a coast 20 years ago, but it's one of the poorest countries. And I'm giving an example from one of the small and medium enterprises.

So, this is a lady, Bethlehem Alahone Alemo. In 2004, she started a small enterprise in a poor community outside of Addis Ababa with the investment of \$10,000. What she is doing is, she makes shoes from eco-sustainable products, mostly old tires, natural fibers and handmade fabrics, and made by local people by hand. And the design is inspired by the footwear once worn by Ethiopian rebels. So that's why they call it soleRebels.

This has been a phenomenal success story in Ethiopia, and what's interesting about this is how much this is changing as the Internet comes into Ethiopia. Because Ethiopia is a very interesting case story. This was a country where the entire telecom sector was completely closed and monolithic. So, ETC, the Ethiopian Telecom Corporation manages the landline, the broadband to the Internet, the cell phone, everything.

And the access was low. The prices were exorbitantly high. I used to live in Addis Ababa, and I used to pay \$1,000 for my Internet every month. That's the monthly charge for Internet in 2008. But things have changed. They've liberalized the sector in a sense. They haven't really opened it up, but they've allowed for incumbents to come over and take the management contract.

And what has happened is soleRebels, which currently is doing over \$2 million of trading, wound up going into the Internet in e-commerce. They're projecting 16 million upward in three years or sales in three years. And so, a lot of it is basically their ability to reach out and break the barriers, the traditional barriers that are out there because of the availability of the Internet.

So, the story to me, is a mixed one. And that's why I'm going to end with saying we need a balanced perspective on this story -- on this whole Internet story. One of the interesting parts of the Internet debate has been that there are lots of new

economy skeptics out there, and there are lots of very thoughtful, insightful, you know, smart people in the camp, including Robert Gordon, who is a professor at Northwest University who says the impact of ICT on productivity is still being debated.

And he doesn't find ideally tangible and significant impact of the Internet on ICT or productivity. I don't know. Some of you might know, Robert Solo had this famous line that you can find computers everywhere except in the productive (Inaudible) districts, because again, people can't find it.

Klugman had a very interesting prediction in 1998 that the Internet will be like fax machines in 2005, because how much can really talk. And so, there's a limit to how much people talk. So the Internet will be reduced toward a fax machine. And obviously, so there are lots of people who had these kinds of views on the economy -- on a new economy. Some of them have been proven wrong, but wanted to be careful to oversell the Internet and its benefits, especially on the cross-border trade, given all the values that we mentioned.

So, I wanted to basically -- so there are issues of jobs, income inequality. I think the biggest to me is the growing threat of cyber security. To me, it's a bit like the -- if you think of a comparator to this, is the genetically modified foods. And before the GMO foods actually became popular, the negative connotation of it actually went farther before the positive connotation. Right? And in the process, people became skeptical even before they used it.

So, there is this growing fear that if you can't get the cyber security threat under control, a lot of the people will be a lot more shy in using the benefits and seeing the benefits. So, finally, I want to end by saying -- and we just are corroborating what Josh says in his paper, is you know, ICT, in general and Internet in particular is not a substitute for good policies. Enabling institutions and having leaders will understand

technology and what it can do for the population.

So, one needs to really not say the Internet is a panacea to a lot of the problems in the world. We need to have proper attention to other complementary factors that are necessary for development, either for SMEs or for large corporations. And Josh has done a very good job of documenting a long list of those values that we need to overcome before we start to see these benefits taking growth. Thank you.

MR. MELTZER: Thanks, Deepak. Okay, Peter.

MR. ALLGEIER: Well, thank you very much, Josh, for including me in this very interesting program, or at least been very interesting up until I speak (Laughter). We'll see what happens after that.

Sometimes, we forget, really, how dramatically things have changed over the last 20 years as a result of the Internet and what I would call the digital revolution. And what it has done is, it has allowed businesses to serve their customers; and I'm thinking primarily of services businesses, but not only services businesses -- how they serve their customers, how they operate their own internal operations.

And at the center of this, of course, is the ability and the necessity to move data across borders. And companies do this, whether for their own internal reasons, if they're processing the benefits, the compensation of their employees, or where they're dealing with their clients and the services they can provide and how they provide those services. And you can think of almost any kind of business and you'll see the examples of this.

For example, if you're thinking of insurance companies or accounting firms, they're moving data all the time as they process claims, as they process -- well, claims and whatever else their clients needs, or they're conducting audits and so forth. If you think of companies like Federal Express or UPS, they're constantly having to move

data across borders as they track the packages and the letters that they're moving internationally.

If you think of -- in the retail sector, large companies, let's say like Walmart, they've got to be tracking all of their inventory and their procurement and making sure that the products are getting where they should, and that Rob Atkinson can get his package of books, and so forth.

Healthcare. You talk about tele-medicine, where doctors are consulting with other specialists around the world, transmitting data on their patients and getting a second opinion on a diagnosis. All sorts of examples. The last one I'll give is airlines. And Boeing, for example, is tracking in real time what's happening to the planes that are in the air, not just to determine when they need maintenance, but also as a way of then helping the airlines figure out more efficient ways to fly their planes. All of these examples depend upon the ability to move data across borders.

Now, it's essential therefore, that the international trading rules allow this to happen and support this. But as Josh said, the last time that international rules in the trade sphere were negotiated for services, at least, was 20 years ago. And if you think back, it is a completely different world 20 years ago in terms of how business was conducted and you know, what happened in terms of, especially in the services area, what they could do.

So, there's a strong need, I would say a necessity to update the rules, the trade rules on the movement of data. And it's particularly important, because country's governments increasingly and routinely are starting to put barriers in the way of moving the data across borders. And so, you've got lots of examples of that in the world today that, let's see, Indonesia, China, Brunei, Greece and many, many other countries are starting to put barriers in the way of moving data across borders.



And basically, the barriers take two forms. One is to simply say that you cannot move your data outside of the jurisdiction in which you collect it. And the other is to say, if you're going to conduct business in our country, you have to locate your servers and all your infrastructure in the country. And this has a lot of practical problems.

You know, often, this is done under the rubric of privacy or security. And as a matter of fact, in terms of security, companies are much better able to insure the security, the confidentiality of their data if they have it located in a limited number of places. If you have to have your data located in the 150 countries in which you are operating, you've got 150 security issues that you've got to deal with. If you have it in three places around the world, you're much better able to protect the security of the data and the privacy, frankly.

So, that's one of the big issues right now in trade policy, is what are the restrictions on the movement of data? And there are certain legitimate reasons for having restrictions on the movement of data, and I'll get to those in minute or two in terms of how one can deal with those.

So, these are the principal issues that we're facing in trade policy right now with respect to the movement of data across borders. Another example of the sort of restrictions that are being contemplated or being put into place is Vietnam is considering restrictions on -- well, requiring that any kind of cloud computing and the facilities for that be done within Vietnam.

Well, that kind of undercuts the whole premise of cloud computing. So, all of these measures are being contemplated, and a lot of it is because countries or governments are not sure what they're going to need to do in the future, or what they want to do in the future in terms of the regulatory regimes on data. And so, they are saying, well, want to maintain some flexibility for the future for us to put restrictions on

your movement of data.

So this is, I think for our companies, for services companies, this is really the number one issue that they all face, is ensuring that in the trade agreements that are being negotiated, that there be strong provisions for freedom of cross-border data.

Now, we have three important negotiations going on now. Josh referred to them. There's the TPP, Trans-Pacific partnership. There is the TTIP, the Trans-Atlantic Trade and Investment Partnership, and there are negotiations going on in Geneva called the Trade and Services Agreement, which is totally a services thing. The others are broader free trade agreements that have services covered, and therefore, have cross-border being negotiated.

So, in the absence of a multi-lateral world trade organization negotiation on services and on cross-border data, our best bet for having an effective international regime is that these three negotiations in tandem come up with coherent, high quality agreements on the cross-border data flows. And that is something that is one of the more controversial parts of these negotiations.

But if those three negotiations were to cover essentially same kinds of provisions or provide the same kind of provisions, you would have de facto the international system for cross-border data. Well, what should be those provisions? And actually, it's pretty straightforward.

First of all, there should be a requirement that companies be able to store, to transfer, to access, to process and manage data across borders. That should be the starting premise. It also should -- these agreements should also prohibit governments from requiring establishment or use of local infrastructure as a condition for having their business in that country.

Obviously, there should be a provision for non-discrimination among all

parties, so that any business can establish and operate on the same terms as everybody else, including domestic providers of these services. But there also needs to be provisions which would allow parties to regulate cross-border data flows for legitimate public policy reasons.

Now, then you get into the question of well, under what circumstances would they be allowed to do this? And frankly, there already are standards for these sorts of exceptions, more generally, in the GATS, in the General Agreement on Trade and Services.

And so, it may be worded differently, but there should be some standard which says yes, a government can legitimately regulate, but it should do it in a way that is non-discriminatory, so that you're not treating national providers differently than foreign providers. And it should be done in a way that is the least trade restrictive way possible. These are basically the standards of -- and it should be necessary.

In other words, you need to -- the only way that you could regulate for this legitimate policy reason is the way that you selected. And so, that is another criterion which already exists in the GATS and which should be incorporated in any agreement going forward. So, this is basically where things stand in these negotiations. Now, people are sorting through these issues, and what they agree in these three negotiations is going to be what we live with for at least the next 10, maybe longer -- for at least the next 10 years and maybe longer. So, it's very important that these issues be addressed properly in these negotiations.

MR. MELTZER: Thanks, Peter, and thanks for those presentations. I think one of the points I would like to pick up which I think has come out from a range of the speakers is that there's a broad range of issues here. And some of it is in the trade policy bucket, so to speak. And some of it is probably more in the development space

and probably in other areas.

And I think, Meredith, you mentioned this. And for instance, we can talk about things like when you have Internet access challenges, there is the need for a securer supply of electricity. But you might also get into other issues, such as your language challenges, when a lot of the Internet content is still in English. You might get into issues like IT skills.

And I guess, and I think, Deepak, you were talking a bit about this in terms of having an enabling environment to take full advantage. Are there opportunities here? Do we need to do more in terms of working across these communities, these policy communities to make this happen?

SPEAKER: Are you asking me?

MR. MELTZER: Anyone who wants to answer that.

MR. MISHRA: Let me take a subset of your question, which is actually something I -- when you read your report, there is a mention about language being a barrier for spreading of Internet. One of the shocking parts of data is if you look at how many people are on the Internet today and how many of them speak English or use English as a medium of discussion.

And actually, more than 50 percent are not using English. So, because 35 percent are Chinese. You know? They are the largest user of Internet services. So, what has happened, actually, interestingly if you read some of the things is Ali Baba and some of the Chinese companies are able to actually get a lot more information about the users, the same as the way that Amazon and others are able to get for that one country about the user experience on the net and the kind of demand, and can provide much more pinpointed e-commerce ads to these consumers.

So in a sense, I feel like because a lot of the consumers were on the

Internet and are using e-commerce much more exclusively -- so the Cyber Monday hit \$2 billion in the U.S. The cross winning Cyber Monday in China at 5.7 billion in sales. And so obviously, I think there is a part of the -- there's a need for a lot of the advanced countries or English using producers to actually start having other platforms in terms of getting into other languages, because they are getting shut out of some of the market because of this. So in a sense, the language actually cuts both ways.

As far as the enabling environment and all, I think that's the whole story. I think there is a whole host of -- you know, it's an eco-system. It's a network that has to be developed, and the Internet is just one part of it. And you need to really get the whole system up and running to get the full advantage of it. And we are very far away.

And as we just discussed, it cuts through various sectors from transport, logistics, electricity to the financial sector to actually have a real good experience and get the best out of the Internet's best services. So, I think we are very far away from that situation that we see in the U.S. and other countries.

MR. ATKINSON: So, I think really one of the most interesting questions here is, when you look at these countries around the world, there's a huge variation in sort of the level of sophistication and effectiveness of their digital policies.

We issued a report about a year and a half ago called the Global Innovation Policy Index, where we ranked about 55 countries or so on a number of different measures, including about 20 measures on digital policy, including telecom policy and other things like that. And what's really striking about that is, as you look at the countries that are sort of in the bottom quartile, and you would really have to work really hard to design a set of policies that intentionally mess up your Internet and telecom system. Because that's what they've essentially done.

I mean, they've got the best policies to make it not work (Laughter). It's

astounding. I mean, I don't know -- it's like maybe there's like you know, an anti World Bank that goes out there and then buys this stuff (Laughter). It's like here's how you should do it wrong.

And so, it's suggested -- is it because these people are ignorant of sort of what you should do? And I sort of don't buy that. I think it's much more a political economy factor. You get countries that don't want VOIP competition, because it hurts the incumbent. You get countries that have high tariffs on imported ICT. This is what India is now going to do.

We were just down in Brazil, and Brazil has this sort of 25 percent price preference for ICT for the government. And I was talking to the assistant secretary in charge of this, and I said, you realize that the effect of this is going to raise the prices that Brazilian government has to pay for all of this, and either reduce quality or raise price, and therefore, harm Brazil's capabilities to advance on the Internet.

And he didn't think about that. It had sort of never crossed the person's mind that this was going to be one of these negative effects. So, I think underlying all of this is actually a deeper problem. It's you go and you talk to somebody that's going to -- why do they want a data center localization? It's because oh, we're going to get a lot of jobs from that data center. You know? Nineteen jobs, maybe, if you're lucky (Laughter).

And what they don't think about -- they can only sort of see the first order effects, and they don't think about the second order effects. And I do think that's frankly an area where I do think the World Bank can do more here, and the Inter American Development Bank and AID -- we need to educate these countries that it's the second order effects you should be focused on.

It's the broad scale use of ICT technologies in your economy that you're -  
- that's where you're going to get the benefits. Don't worry about whether you've got an

Intel chip factory or whether you have a, you know, domestic telecom monopoly that's making them a lot of money. Those are sort of irrelevant to your prosperity. And I don't think enough countries have really realized that and thought that through, which is why they do the things that they do.

MR. MELTZER: Thanks. One of the cross cutting issues which I think comes across in this debate is a question of trust. And I think it plays out in a couple of different ways, particularly I think when one thinks of the capacity of the Internet to drive international trade. Because if you're a consumer online, it's one thing to purchase from someone located in the same jurisdiction.

It's another thing to be purchasing from a business that's located somewhere in Africa. And there are a range of challenges there from what are the relevant consumer protection laws? What happens to the good arrives and its defect? What are your redress opportunities?

I think another issue that came out here was -- which has come through also, is this question of the implications of the NSA revelations. I think it's sort of the gorilla in the room when we talk about the Internet at the moment. And I think that also brings out trust issues, because people provide data online all the time in order to engage in commerce.

And I think for better or for worse, whether we agree or not, I think that's affected the trust that people around the world might have in the ability to engage in commerce. And my question is, how significant do you think this issue has been to date in terms of the trust issue, and its impact it might have on the opportunity and the capacity for the Internet to realize these benefits? That's an open question to whoever wants to take that.

SPEAKER: Yeah, well I can tell you, it certainly has made the trade

negotiations a lot more difficult, and particularly on this issue of cross-border data flows. And particularly, it has become difficult because the way in which the government was requiring certain companies to provide data, or at least to access the data. And even if it wasn't access to individual accounts, it certainly has made people very nervous that it would be access to the broad data that is being collected. So, that has made these trade negotiations extremely difficult in all of these countries.

SPEAKER: Yeah, I don't think it's as big a deal as people think. I think if you look at most people, at least in the U.S. are active -- has anybody closed their Yahoo mail account recently or their MSN mail or their Google mails? You know? I think people have a pretty realistic sense that you can engage in a robust e-commerce experience, and you're just not -- the risks are very, very low.

I think the risks are more blown up by sort of some privacy advocates. But I think in reality, most people are actively engaged in this. I think on the cross-border issue, it's not so much privacy as it is, can I trust this counterparty? And that's where I do think that things like some of the Internet seal programs like Trustee and other kinds of things like that -- I haven't looked at them recently, but those things need to scale globally. We need to have a sort of global, if you will, seal that people can trust when they go online.

And that's one part of that. The second part is just sort of user generated things. You know, when you go to a certain seller, you can see their user rank. And you know, 82 percent of the people thought they had a good experience. That's the second part.

I think the third part, though, we haven't talked about, is there is an awful lot of fraud going on, whether that's phishing or malware or counterfeit goods. And we need to basically have a much more robust enforcement regime globally if we're going to



have trust in cross-border. And I think that's an area where the U.S. has not done anywhere near enough, nor has Europe. Partly, it's funding issues.

I think the FTC has a lack of will or the DOJ has a lack of will. I think they have a lack of resources. And I think that's an area where, as we go forward, whether it's through the G20 or services negotiation, we've got to have that enforcement regime really significantly beefed up, because I think that's the thing that scares people, I think, more than anything.

MR. MELTZER: Yeah. Thanks. I think we're going to open it up to some Q&A from the audience. Can you please wait for the microphone to come around, introduce yourself and please end with a question mark? Yes, first here?

MR. CAMERON: Good morning. Very interesting discussion. My name is Kelly Cameron, and I'm a lawyer here in town. I do telecom work, and Ambassador Allgeier, about 20 years ago, I worked with your colleagues at USTR when I was at the FCC on the WTO basic telecom agreement.

Internet is not generally considered to be basic telecom, but there are also value added commitments under the GATS, and there's a whole series of rules including, you know, obviously MFN and national treatment, and the -- I can't think of what it's called -- the telecom annex which was adopted as part of the GATS originally.

And then, as part of the basic telecom agreement, we negotiated a set of regulatory commitments that apply to things like interconnections and non-discrimination rules. Sort of a long way around to saying or asking whether there isn't already at least in part, an established framework under the GATS to allow liberalized trade and services including cross-border data flows?

And then, also as part of a question to more of the trade experts, is it not the case, ironically, that say if Walmart is operating in Europe, and contracts out its cloud

computing to Microsoft or somebody back in the United States, that they might have international trade commitments that would help them? Whereas if they keep that all in-house, it's not really a traded service, and therefore, the GATS might not help them.

So, are there rules in place that could facilitate some of this already?

And does the WTO reference paper provide sort of a blueprint for negotiating international rules that would resolve some of these issues you've highlighted?

MR. ALLGEIER: You ask a very timely question, because they're actually is, especially among lawyers, the debate about if there were a problem on cross-border data, could one use the existing GATS and take it to dispute settlement and win? And basically, I think you'll get people who argue, you could do that.

But most others, at least in the business world, would like to have a bit more security about that. And so, that's why they're seeking to have a more explicit provision on cross-border data or provisions on cross-border data in the trade agreements. You talk about the telecom annex. And it's interesting that the companies that have been regulated or have fallen under those provisions -- they also have changed dramatically, and they have morphed into -- instead of being just telecom companies in the way that we normally think about.

They see themselves as solution companies. And one of the things they're concerned about is, they don't want their brand as a telecom company to require that they be regulated in all the other aspects of their business that they are conducting now. And so, that also is an issue that is being sorted out in these negotiations.

MR. MELTZER: Can I just add to that very quickly? I think that there is a framework in place in the GATS to do this. I think the reference paper which provides a set of essentially pro competitive regulatory principles was a good first start. I think there's gaps in it.

I think the distinction between basic and value added, which you reference, has become increasingly outdated. It's based on the U.S. regulatory distinction domestically, which I think in itself has become outdated. As basically, services converge, I mean, the distinction between providing the Internet and the telecommunications services, a lot of these things are now being provided over similar networks, in a sense.

So, one is, yes, it's a good start. There are gaps that need to be addressed to improve the pro competitive regulatory environment in countries which take on these commitments. And I think in terms of the commitments in the GATS at the moment -- I made this point at the beginning -- is that you've got a lot there, in fact. And there's been some jurist prudence on this, which I think has helped in that it's made clear that essentially for a lot of the delivery of the services, once you've made a market access commitment or a commitment on non-discrimination, it doesn't matter if it's delivered online or not. That still applies.

But there's a lack of clarity there, which I think makes using it for dispute settlement purposes difficult. It's not clear. The categorization of services which was used in the early 1990s doesn't have categories for cloud computing. It doesn't have categories for Internet service providers and the like. So where they fit makes a really big difference, because it matters in terms of what actually are the commitments.

So, I think there's a lot of work that could be done in this space, just simply to clarify what exactly the existing commitments are as they apply to when they're delivered online. Just one over here. Sir?

MR. POLIDO: Hello. My name is Jose Polido. I work for Mitsui and Co. There was a lot of talk about developing countries doing the wrong thing, maybe the most horrible thing for their Internet industry. But what about developing countries doing the

best thing? There's a lot of movement going on in telecom in Mexico, Colombia and Chile. And I'd like to hear what you guys think about it. Thank you.

SPEAKER: Yeah, I mean, there's a wide diversity, there's no question about that, in developing countries. I don't know that I'd hold Mexico out as -- I mean, Mexico is finally doing the right thing after 20 years of doing the exact wrong thing. And you know, you had to go up against Carlos Slim (Laughter) and the power of that, and his enterprise, and the regulators simply weren't able to do that.

And finally, there's sort of beginning to be a log jam. Right? But there's certainly countries that are doing interesting things. And get this. I think one of the more interesting and promising things -- there's this new -- I forget the name of it. Other people may know. There's a new trade agreement within Latin American of Chile --

SPEAKER: Oh, the Pacific Alliance.

SPEAKER: Yeah.

MS. BROADBENT: Yeah.

SPEAKER: Chile or --

SPEAKER: Peru, Chile, Colombia.

SPEAKER: -- Colombia and Mexico.

SPEAKER: Yeah.

SPEAKER: And there's a lot of -- the folks who are doing that are very, very, I think -- we've talked. They're very enlightened and interested about pushing forward ICT reform and Internet. And so, I think there is a lot -- I didn't mean to imply that everybody has got it wrong, but there is a tail, if you will, that has got it wrong, and I think we need to make sure that they move over the other way.

MR. MELTZER: Okay.

MR. MISHRA: And can I just add a --

MR. MELTZER: Okay, yes.

MR. MISHRA: You know, I think nobody said that developing countries as a group are regressing on ICT reform. I don't think they're going back or you know, starting to nationalize or do things. I think the question is, are they doing it fast enough to take advantage of this thing?

And what we find, with the data is that it shows that the penetration trades of this modern technology is not happening at the pace it would have happened, compared to even things like electricity and automobiles. So, there is something that's strong.

Part of it could be, as I said, government failure. Part of it could be market failure. And there are lots of issues there. I mean, the big debate thought we had in the U.S. on the net neutrality and the open Internet, I think the similar debates are happening in a lot of the developing countries, but they don't have a strong regulator to facilitate and you know, break the logs out, and that's why you know, there are some --

So, there's a whole host of domestic issues, and a lot of it we are coming to know as we start to you know, see. So, just opening up the sector is a good thing and a good start. But there's a whole host of other things that you need to do in the value chain to get the full advantage, and that's where the focus has to be now.

MR. MELTZER: Okay. Gentleman at the front?

MR. HERSHEY: Bob Hershey. I'm a consultant. What is being done to get people to work cross-borders and have transparency in agreeing on funding for projects and what they're going to do?

MR. MELTZER: Do you want to take that?

MS. BROADBENT: Bob, I didn't quite hear. I'm sorry. What's being done --

MR. HERSHEY: Many kinds of projects that people would agree on and put in funding from people in various countries and agree on what they're going to do and be able to do things transparently across borders.

MS. BROADBENT: Are you talking about sort of foreign aid or capacity building, or -- I mean, I think it's a pretty interesting question that's sort of come up in the trade facilitation negotiations, which there's been some commitments there and some good numbers that the trade capacity building programs have helped on trade facilitation.

So, I think it's sort of a new area, and how can you link some of the trade obligations with actual development help that will boost countries to the next level.

MR. MELTZER: Okay. Bob?

MR. BASTINE: Thanks very much. Bob Bastine, Georgetown Center for Business and Public Policy.

I think Peter Allgeier has done a really great job, really lucidly, explaining where we should go with the three trade negotiations under way, and I think outlining the principles and also pointing to the basis, the existing basis in international law of the kinds of reasons that companies -- countries can use to regulate data flows.

But I think at the same time, you know, the effort to contain this data nationalism that Rob has documented and spoken about frequently is really being harmed. I mean, I don't think it can be taken casually that the degree, the extent of cyber warfare that's going on -- cyber terrorism, in a sense.

People are really being threatened by it, and governments have reacted. Koreans recently reacted to a breach of consumer information in financial institutions in Korea by closing down for a certain period of time the Internet activities, marketing activities of some U.S. companies there and other foreign companies.

So, it's this huge insecurity and incidences of breach, does, I think affect

global commerce, and certainly the environment in which we might be able to make progress in these trade negotiations. So, two questions, quickly. Rob, I think you mentioned the Geneva Convention?

MR. ATKINSON: Yes.

MR. BASTINE: Could you explain a little bit more about what you mean by that and what that might do? And Peter, in TISA, would it be possible to do what Josh suggested, or I think Josh suggested it, and that is to, yes, tease out, elaborate the sorts of protections for data flows that might exist and that could be put into the current GATS framework which is now skeletal, to say the least.

MR. ALLGEIER: So I guess I should go first. So, we issued a report just a couple of months ago called "The False Promise of Data Nationalism." And in that report, we did a number of scenarios of where data could be. Is it a domestic company? Is it in the country? Is it out of the country? Is it a foreign country?

And we sort of went through about eight different scenarios and looked at the impact on three things -- the privacy, sort of conventional commercial privacy, conventional commercial security and government access. I'll leave government access to the side, just for a second.

There is absolutely zero effect on privacy and security from keeping data in a country. Zero. And I won't go into the logic of that, but that paper does that, and I'm happy to discuss it with anybody else. And it's sort of one of these things, oh, if we keep the data in the country -- I remember there was a case a few years ago in California where one of the California hospitals off shored their data to some Indian contractor who then had a rogue employee.

And there was a big uproar. Oh, we shouldn't let the data go to India. And that's because we have no rogue employees in the U.S. (Laughter). That would

never happen in the U.S. And by the way, you can still sue the hospital. So, you can sue the data owner. These countries forget that. They don't lose jurisdiction over data when the data goes offshore. They don't lose jurisdiction.

The area that's more problematic and troubling is government access to data, and that's Bob's question. So, what we've proposed is this, you know, Geneva convention -- call it whatever name you want. Microsoft recently came out with a similar proposal.

But we need a new global agreement that many or most countries would sign onto about norms and practices and rules around government access to commercial data. And I think until we get that, it's going to give a lot of fuel to the data protectionists around the world, who frankly will use that as an excuse. I mean, Brazil is using this as an excuse. Let's be honest about that. But you still have to confront that.

So, I think we've got to come up -- you know, the administration's recent proposal where they let the companies disclose -- I think we saw that what, two or three days ago? I can't remember. You know, Microsoft and Yahoo, and they disclosed how many -- I think that was an important first step, and that helps. But we've got to do this much more broadly.

MR. ATKINSON: Bob, if I understood the second question, it was whether in the TISA negotiations there should be an effort to define more precisely the terms under which a government could --

MR. BASTINE: No.

MR. ATKINSON: No?

MR. BASTINE: The other way around. In terms of the rights to trade, the rights to remove data.

MR. ATKINSON: Oh, yeah. I mean, certainly that is certainly what we



are trying to promote, and I think that the U.S. government is trying to promote, is to make it clear that there is a right to move data across borders. And then, that obviously does have to be paired with some provisions on the conditions under which a government could regulate.

And my sense is that by the large, people are pretty satisfied with the way it is articulated in the GATS, but that, of course, is done in a vacuum of cases to see whether, in fact -- how those things, how those provisions would be interpreted. I mean, there definitely are countries that would like to have even broader language about the legitimacy of regulation, but I'm going to be surprised if we get very far from where we are right now on that issue in terms of the kinds of expressions that are used in these trade agreements for that kind of flexibility for governments.

MR. MELTZER: Okay. Yes? This gentleman here and then in the back. Just here, yes.

MR. SHONANDER: Thank you. Carl Shonander, Software and Information Industry Association.

Josh, I think you did a great job in your paper in terms of footnoting the studies that are out there. But I was very struck by what Mr. Mishra said about how on the economic side, the effects of the Internet are sort of understudied. There's a lack of high quality economic research in this area.

So, my question is for Mr. Mishra. If you had sort of three topics you would want a study done in a high class by the, you know, best American or international academic economists, what would those studies be about? Thanks.

(Discussion off the record)

SPEAKER: What sort of subtopics within this general area would you prioritize?

MR. MISHRA: Yeah. I mean, I think what I meant was, if you think of -- there's a lot of work on ICT and its impact on development and growth. What you don't see so much is Internet as a technology, and what's the impact of that? So, that's because there has been a lack of availability of data.

So, the way the government puts together the national accounts, they have a very broad data called -- it could be information technology or something. So, you don't have specific data which helps you to tease out the impact of the Internet as a technology and its impact on growth. Similarly, when you look at services data, how much cross-border trade is happening in services?

You don't know whether the services were provided to the Internet or to another medium. So, you don't have those kinds of information to do a very realistic data. So, when McKinsey came out with this number, particularly, they tried to do a very careful study of this, but when they came out with a number, it says you know, Internet as a sector is bigger than agriculture, actually, in the world economy, at least for those 20 countries.

You know, a lot of people were saying you know, how reliable is information. Since you don't those basic foundations to do strong analytical work. But let me tell you what -- the three questions or two questions that I would like to really do. One of the big things is, in the U.S., 40 percent of the capital investments today are related to enterprises, related to technology and around Internet.

So, if 40 percent of the investment by companies are on this, basically we are seeing its impact on the bottom line. So, at the foreign level, you see the impact of the bottom line. So, why can't we see it at the national level? Why is there this big thing that you know, Internet has been there, and all these great minds have come and said that we don't see the impact of this in productivity and growth and innovation.

So, I would say you know, unraveling that mystery would be a very important thing. The second is to understand to me is, as you said, a lot of the impact of this is actually going to happen in the developing countries. And why are we having a very steady progress and the adoption lags? The time it takes from when a technology is introduced in the U.S. and going to Vietnam or to Indonesia. But the penetration of this within the country is not happening as fast. And that's a real mystery to me to understand that.

And then finally, I think there's a big debate about -- you know, Internet is a great leveler. You know, the Tom Friedman book about the flat -- the world is flat and it democratizes information everywhere, its access to it. But at the same time, as you saw, you know, Robert, this view that as you break these barriers, you actually create economies of scale and you get large corporations coming in.

So, it's not like because of the breaking of the barriers, you get everybody empowered, and so you're, you know, more Mom and Pop, so you actually get to economies of scale. And then, there is a view that if you push this further and when information is -- you know, has zero cost, then actually, it would go back to again, everybody becoming more productive.

So in a sense, these are not only new relations between how productivity and Internet transition and the reducing of the transition costs could be. So is this relationship linear? So every time you break this barrier, you just cleared bigger and bigger, larger corporations? Or it's actually non-linear, but eventually, at the time, you will actually have even anybody sitting anywhere can produce and compete with the large corporations. So that would be, to me, it would be an interesting part to look at it.

And just to tell you that we are, in the World Bank -- you know, while we have been advocating a lot of these policies on openness and liberalization of the

sectors, we haven't really done a lot on this particular thing, which is the new one -- the Internet, the mobile telephone, the cloud computing and how this is selling. But we are actually starting some work on this, which is exactly the reason why I want to be part of this discussion. So you'll see more from us.

SPEAKER: Yeah, very quickly on that. I agree that there's a lot more analytics globally on ICT and less on Internet. But I think there is still a fair amount of that. We issued a report about six months before McKinsey called the "Dot.com at 25," where we looked at just the impact of the dot.com domain name system or the business use of the internet around the world.

And we found many, many, many studies. And we were able to aggregate them all up and estimate around a \$2 trillion annual impact on global GDP through higher productivity because of that. So, I agree, there's not as much as there were. We're in the middle of a new study now, updating another study we did called "Digital Prosperity," where we're looking at all the literature on ICT and Internet. And again, there is more than nothing. There still could be more.

I think one of the big things we need is, we need better B to B data at the country level on exactly what they're doing. And just to show you how hard that is, our census bureau doesn't really have very good B to B data. It's adequate, at best. And so, the fact that we don't even have good Internet B to B data suggests that it's harder, you know, in other countries. That's again, partly a funding problem for our census bureau, but I think it points out that even our statistical system hasn't kept up with the new realities as much as it should.

MR. MELTZER: I think that's -- sorry, I think that's all we've got time for today. I just want to thank our panelists for their fascinating presentations and for engaging in a very full and interesting conversation. And I want to thank the audience for participating,

as well. Thank you. (Applause)

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