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21ST CENTURY TRADE BARRIERS: PROTECTIONIST CROSS BORDER DATA FLOW POLICIES IMPACT ON U.S. JOBS

THURSDAY, OCTOBER 12, 2017

House of Representatives,

Subcommittee on Digital Commerce and Consumer Protection,

Committee on Energy and Commerce,

Washington, D.C.

The subcommittee met, pursuant to call, at 10:17 a.m., in Room 2322, Rayburn House Office Building, Hon. Robert Latta, [chairman of the subcommittee] presiding.

Present: Representatives Harper, Burgess, Lance, Guthrie, Bilirakis, Mullin, Walters, Costello, Schakowsky, Clarke, Dingell, Matsui, Welch, Kennedy, Green, and Latta.

Staff Present: Zachary Dareshori, Staff Assistant; Melissa Froelich, Chief Counsel, Digital Commerce and Consumer Protection;

Adam Fromm, Director of Outreach and Coalitions; Ali Fulling, Legislative Clerk, Oversight and Investigations, Digital Commerce and Consumer Protection; Theresa Gambo, Human Resources/Office Administrator; Elena Hernandez, Press Secretary; Paul Jackson, Professional Staff, Digital Commerce and Consumer Protection; Bijan Koohmaraie, Counsel, Digital Commerce and Consumer Protection; Madeline Vey, Policy Coordinator, Digital Commerce and Consumer Protection; Greg Zerzan, Counsel, Digital Commerce and Consumer Protection; Michelle Ash, Minority Chief Counsel, Digital Commerce and Consumer Protection; Lisa Goldman, Minority Counsel; and Caroline Paris-Behr, Minority Policy Analyst.

Mr. Latta. Well, good morning. And I would like to call the Subcommittee on Digital Commerce and Consumer Protection to order. And the chair now recognizes himself for 5 minutes for an opening statement.

And good morning again. I appreciate our witnesses for being with us today for this important hearing on digital trade and international data flows and the impact on U.S. industry. The free transmission of data across borders contributes to a seamless exchange of information, goods, and services. Digital trade has been a significant benefit to the U.S. economy, contributing an estimated 2.4 million new jobs, raising real U.S. GDP, and exceeding the economic trade value of traditional goods and services.

Today, we will hear from our witnesses about the current state of digital economy and its positive impact on U.S. competition, job creation, and economic growth. I hope that this hearing will be a jumping off point for a closer examination of these and other nontariff trade matters in the months to come.

What is digital trade? It happens in each and every one of our daily lives when we use our personal laptops, tablets, smartphones, or when companies work to complete projects for customers. While this might seem broad and difficult to define, one of our witnesses today, Mr. Garfield, puts forward a clean definition: Digital trade is simply an economic activity involving the movement of digital information across borders.

At the enterprise level, companies might be using services and

applications like cloud computing, data processing, and predictive analytics. Uses can include processing payroll or designing products that are easy to manufacture at the highest quality possible for the lowest price.

Through our work already this year, this committee has heard from many companies using the power of data flows to improve public policy goals like improving passenger safety and mobility, access through self-driving car technology. The internet, data, and digital trade now support economic growth in all sectors of the U.S. economy. U.S. industry around the country, whether in manufacturing, retail, and energy, and healthcare rely on cross-border data flows to run their businesses. This technological phenomenon also supports local businesses and smaller enterprises, including entrepreneurs and app developers.

According to a study by eBay, over 90 percent of eBay U.S. businesses trade across borders with more than 80 percent reaching five or more international markets. These small to medium-size companies touch all States and congressional districts.

In my home State of Ohio, the software industry directly employs over 72,000 people and was responsible for $11 billion in direct value-added GDP in 2014. In my district, there are over 38,000 high-tech workers in exports of digital goods and services totaling over $690 million in 2014.

While these numbers are a few years old, in my visits to businesses around my district, I have certainly seen the impact of high-skilled

workers in the manufacturing industries. Despite the many benefits of cross-border data flows, many trading partners have considered or adopted nontariff barriers, such as restrictions on cross-border data flows or requirements to localize data, production, or facilities.

If the internet is characterized by openness, then data localization and other data flow restrictions create conflict either intentionally as a protectionist measure or unintentionally. The witnesses here today can speak about the data localization measures in force and the potential spread of additional restrictions. I am very pleased to hear about how the impact of these policies on businesses in my district are affected and around the country.

Last year, the European Union and the United States put into place the EU-U.S. Privacy Shield. And last month, the European Commission began its first review of the Privacy Shield. In 1 year, the Privacy Shield has been embraced by over 2,500 U.S. companies of all sizes and business models to allow for the free flow of data between the EU and the United States.

Finally, there are multiple trade negotiation dialogues that are expected to set the stage for digital trade and data flow policy moving forward. Current trade agreements were written before the advent of the internet as we know it today. Going forward, there is a tremendous potential for the digital economy as we consider cross-border data flow policies and robust enforcement measures.

We are living in an extraordinary time of growth in today's digitally integrated global economy. The impact of digital trade and

cross-border data flows will reach far and wide, and I believe Congress can play a significant role in supporting the people and businesses that depend on the free and open flow of data. I look forward to hearing from our witnesses today on this very timely matter.

And at this time, I would like to recognize the ranking member of the subcommittee, the gentlelady from Illinois, for 5 minutes for an opening statement.

[The prepared statement of Mr. Latta follows:]

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Ms. Schakowsky. Thank you, Chairman Latta.

The internet has made our world dramatically more connected than ever before. It facilitates the exchange of ideas, keeps families connected, and creates new opportunities for global commerce. Over 2.3 billion people have access to the internet, and this is expected to grow to 5 billion by 2020.

Digital commerce comprises a growing share of the global economy, and, in fact, a McKinsey report claims that, quote, soaring cross-border data flows now generate more economic value than traditional flows of traded goods. Cross-border data flows allow for quick communication, whether it is a personal message or a customer order. It also introduces additional risks to consumers, privacy, and data security.

Global digital commerce has become a necessity in the United States economy. Although the internet is global, the rules governing data are not. Differences among countries can create challenges for businesses and consumers. Countries should not be dissuaded from protecting their citizens' privacy and security. But some of the policies we see across the world today are counterproductive to data security and privacy. Requiring local servers can create new security risks. The U.S. should also not empower regimes that monitor or restrict flow of data as a limit on their citizens' rights to free speech and expression.

We need to distinguish between policies that truly represent an unnecessary or harmful barrier to digital trade and those policies

designed to protect privacy and security. When it comes to data privacy and security, current U.S. law is lacking. We heard a clear example of that last week when former Equifax CEO Richard Smith testified in front of our committee. By failing to patch a known vulnerability, Equifax allowed the data of 145.5 million Americans to be compromised. I still have a lot of questions about this breach. Today, my Democratic colleagues and I are sending a letter to the majority requesting additional hearings to get answers that Americans deserve.

The Equifax breach impacted, not only Americans, but also consumers outside the United States. So you can understand if consumers and governments abroad have their doubts about the data practices of American companies. This is yet another reason why we need to act in Congress to improve data security. And last week, I introduced the Secure and Protect Americans' Data Act to ensure that companies take sufficient steps to protect consumers' data and promptly notify law enforcement and consumers if a data breach occurs and provide meaningful relief to breach victims.

Digital trade partners are also concerned about U.S. surveillance practices. Section 702 expires at the end of this year, and we should take this opportunity to better protect privacy, while still providing for our Nation's security.

So as we strengthen our own laws, we need to continue engaging with partners, such as the European Union, on ways to facilitate cross-border data flows, while ensuring that consumers here and abroad

enjoy the privacy and security they expect. The United States benefits greatly from digital trade, and we should work to keep data flowing across borders. That requires improving our own laws and engaging with other Nations on how to keep consumers' data and rights protected. I look forward to hearing from our witnesses and getting our perspective on this complex issue.

I yield back.

[The prepared statement of Ms. Schakowsky follows:]

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Mr. Latta. Well, thank you very much. The gentlelady yields back.

And the chairman of the full committee is not here, but the gentleman from Texas would like to claim his time.

Mr. Burgess. Thank you, Mr. Chairman, and thanks for holding the hearing. Thanks to our witnesses for being with us this morning.

In 2015, the European Court of Justice invalidated the United States-European Union Safe Harbor Framework. This subcommittee held hearings to evaluate the effect that this would have on trade, the risks to technological advancements, and the economic impact of this ruling. In the absence of an agreement, small and medium-sized businesses were certain to suffer, leading to decreased output and job losses. Almost a year later, the United States and the European Union approved the Privacy Shield Framework to replace the Safe Harbor and allow compliance with European Union data protection requirements.

Even though the Privacy Shield was approved, the United States is again facing restrictions that will decrease cross-border data flows and may even lead to actual data theft or theft of intellectual property or increased control of information flows. The free flow of data improves trade relations. It actually enhances technologies like blockchain and artificial intelligence that rely on large datasets and improve security by increasing awareness of foreign activity, as well as providing redundancy for data through disaggregation.

In our interconnected world, it is imperative that concerns over privacy do not become protectionist. I certainly look forward to what

our witnesses have to share with us today about how to safely and securely continue the advancements afforded by cross-data border flows.

And, again, Mr. Chairman, thank you for convening this hearing, and thanks again to our witnesses. And I will yield back my time.

[The prepared statement of Mr. Burgess follows:]

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Mr. Latta. Well, thank you very much. The gentleman yields back.

And at this time, we will now move to our witnesses. We are concluding our members' statements. And pursuant to committee rules, all members will have their opening statements made part of the record.

And, again, I want to thank our witnesses for being with us today and taking time to testify before the subcommittee. And today's witnesses will have the opportunity to give a 5-minute opening statement, followed by a round of questions from our members.

Our witness panel today, for today's hearing, will include Ms. Victoria Espinel, the president and CEO of BSA, The Software Alliance; Mr. Dean Garfield, president and CEO of Information Technology Industry Council; Mr. Morgan Reed, president of ACT-The App Association; and Ms. Jennifer Daskal, the associate professor of law at American University Washington College of Law.

So I appreciate your being with us today.

And, Ms. Espinel, we will begin with you today. And just pull that mike up close and just turn the mike on. And we look forward to your testimony today. Thank you.

STATEMENTS OF VICTORIA A. ESPINEL, PRESIDENT AND CEO, BSA-THE SOFTWARE ALLIANCE; DEAN C. GARFIELD, PRESIDENT AND CEO, INFORMATION TECHNOLOGY INDUSTRY COUNCIL; MORGAN REED, PRESIDENT, ACT-THE APP ASSOCIATION; AND JENNIFER DASKAL, ASSOCIATE PROFESSOR OF LAW, AMERICAN UNIVERSITY WASHINGTON COLLEGE OF LAW

STATEMENT OF VICTORIA A. ESPINEL

Ms. Espinel. Thank you so much.

Good morning, Chairman Latta, Ranking Member Schakowsky, and members of the subcommittee. My name is Victoria Espinel, and I thank you for the opportunity to testify here today on behalf of BSA-The Software Alliance.

BSA members provide software-based services that have a significant positive impact on the U.S. economy and the global economy. Those services, such as cloud computing, data analytics, artificial intelligence, depend on the ability to transfer data freely across borders. As a result, eliminating barriers to cross-border data flows is an important priority for BSA and for our members, and I am very pleased that it is a priority for this committee as well.

When I testified before this committee 2 years ago, the U.S.-EU Safe Harbor agreement had just been invalidated by the European Court of Justice. The Safe Harbor agreement was a critical mechanism that allowed data to move back and forth between the United States and

Europe, and, without it, transatlantic digital trade and the growth and job creation that go with it, on both sides of the Atlantic, would have been in jeopardy.

The bipartisan letter that was signed by the chairman and ranking member of the full committee and the subcommittee, and many other members of the committee, instilled much-needed confidence into the process, and the United States and the European Union were able to come to a conclusion of a new agreement, which has been called the Privacy Shield. And I thank the members of the committee for your leadership at that time. But I thank you as well for keeping continued focus on this issue, because we are continuing to see concerns around the world.

Our economy today is rooted in digital data. Across every industry sector cloud computing and data analysis have made businesses more agile, more responsive to their customer needs, and more competitive around the world. And all of these technologies depend on the ability to move data across borders.

So as an example, human resources is an important element of every company that exists. If you are a company that has employees across the United States, but also employees around the world, if you lack the ability to transfer that data about your employees back and forth, it will make it, among other things, much harder and much slower to hire and much harder and much slower to be able to reward your employees as you should. For U.S.-based companies, that also means that they will have less jobs in the United States because they will have to source and resource those functions overseas.

In cancer treatments, we are seeing great advances in artificial intelligence, allowing doctors to be able to make diagnoses more quickly and more accurately. And that is very dependent on the ability for doctors to be able to access as much data as possible about patients around the world.

In manufacturing, data around the world are allowing manufacturers to be much more responsive to their customer needs more quickly. And for small manufacturers in particular, that feedback loop to be able to get information from their customers and then be able to redesign their products to be more responsive to their customer needs is extremely important.

And what makes all of those examples work is the ability for data to move across borders. This is about real jobs and economic growth in the United States.

Last month, software.org, the BSA Foundation, released a study that we conducted with data from the Economist Intelligence Unit that shows that the software industry alone supports over 10 million jobs in the United States and significant jobs in every one of the 50 States of the United States. For example, since 2014, the number of software jobs has increased by nearly 10 percent in Ohio and by 14.4 percent in Illinois. Nationwide, softwares contributed $1.14 trillion to the U.S. GDP and has grown at three times the speed of the overall economy.

U.S. leadership on digital trade will help ensure that this growth continues. We see three clear opportunities for Congress and the administration to act.

The first is to modernize the digital trade agenda. And, at the moment, NAFTA presents an opportunity for us to do that. When NAFTA was negotiated, the commercial internet essentially did not exist, digital trade was in its infancy, and, as a result, the agreement, understandably, does not address digital issues. So there is a clear opportunity. We were encouraged to see that the administration included digital trade and cross-border data flows in this negotiating -- negotiating the objectives. And we are very pleased that Congress has also included those in the objectives that they have set out for the administration to meet.

Second, ensure the continued success of the Privacy Shield. I alluded a moment ago to this committee's important role and the conclusion of the Privacy Shield. The Privacy Shield just had, last month, its first review. There are 2,500 companies that have already certified under it, as the chairman noted. And continuing to impart to both the U.S. administration and to the Europeans the importance of the Privacy Shield continuing is extremely important.

And the third thing I would suggest is to continue to encourage like-minded trading partners to promote rules that support the movement of data across borders, whether that is in formal trade negotiations or outside of formal trade negotiations. The U.S. is the leader in the technology that drives economic growth and depends on the ability for data to move across borders. We need the United States Government to also show leadership on this issue if we are to remain dominant in this area. And we know that if we do not, there are other countries

that would be happy to move into that position.

So, with that, I will conclude my remarks. And thank you very much for continuing to focus on this issue.

[The prepared statement of Ms. Espinel follows:]

******** INSERT 1-1 ********

Mr. Latta. Well, thank you very much for your testimony.

And, Mr. Garfield, you are recognized for 5 minutes. Thank you.

STATEMENT OF DEAN C. GARFIELD

Mr. Garfield. Thank you, Chairman Latta, Ranking Member Schakowsky, members of the committee. On behalf of 62 of the world's most dynamic and innovative companies, as well as my colleagues at ITI, I thank you for the opportunity to present at this hearing and for your efforts to spotlight this important issue.

This hearing arrives at an opportune time. We submitted my testimony for the record. So rather than repeat it, what I will do is highlight three things. One, why this issue is so important. Two, our sense of the state of play. And then, three, where we see gaps where your efforts in American leadership could be particularly valuable.

On the first, this issue is so important because, in many respects, digital trade and cross-border data flows are the air that sustains 21st century commerce. Moreover, the United States has a comparative advantage that will be unfairly undermined without vigilance and our intervention.

It is hard to think of anything that we do today that doesn't involve cross-border data flows in digital trade. Just my day today reflects that. When I got up this morning, I decided to go on a run and to download some music. Because the cloud servers that Ms. Espinel

mentioned, and content-distribution networks are distributed all around the world, the music that I downloaded resulted in cross-border data flows. When I got in my car and drove here, and stopped at the grocery store, my car, the farming equipment for the food that I bought, as well as the delivery truck, have sensors to ensure safety that involve cross-border data flows and digital trade. I flew back from California yesterday. And while I was on my flight, my airplane has sensors that are making sure that the flight gets there safely, and if there is a problem when we get to the ground, that the ground crew is prepared to deal with any problems that may exist. Cross-border data flows, digital trade.

I could go on and on, but I think you get the point. While cross-border data flows and digital trade involve technology, it is not a technology issue. It is an all-of-America economic issue. In fact, America has a significant economic comparative advantage in digital trade and cross-border data flows. Ms. Espinel mentioned cloud servers. Seventeen of the top 20 cloud companies in the world are based here in the United States.

What is the state of play? Most countries around the world see that comparative advantage and are unwilling to sit by and watch it continue to exist. In China, for example, we face a tapestry of rules that are aimed at undermining that comparative advantage, whether it is forced localization or check and IP transfer, source code transfers, we see that catching fire. So markets like Indonesia and Vietnam are doing the same.

In other markets, including in some of our allies like Europe, we see some of the same. While the motivation may be quite distinct, the end result is the same, which is undermining the competitive advantage and comparative advantage of U.S. companies, and, from our perspective, doing damage to their own economy.

What can Congress do about it and what should it do? I endorse all of the things that Victoria mentioned, and would add two more. One is that Congress, in passing the bipartisan Trade Prioritization and Accountability Act, TPA, made the point that digital trade should be a point of emphasis. While we have a number of trade agreements that are progressing today, where the opportunity exists to advance digital trade, whether that is in NAFTA, which we strongly support and hope the administration will as well, or in the efforts around the KORUS Agreement, and upgrading that agreement as well, which we also view as incredibly important, the opportunity exists to make sure that we continue to advance our competitive advantage in American interests in a way that is fair.

The second is that acting in America's interests means, in this instance, working with the rest of the world. And so, second, we have an opportunity here to provide global leadership on what the rules of the road should be on digital trade and cross-border data flows. The President has announced that he is heading to China in November. That is an opportunity to work with the Chinese to bring them onboard to following global rules around digital trade.

We are hopeful that in working with Congress and working with the

administration, we can ensure that this issue, which is so fundamental to America's leadership in the world, is prioritized but also acted on appropriately.

Thank you for the time.

[The prepared statement of Mr. Garfield follows:]

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Mr. Latta. And thank you very much for your testimony.

And, Ms. Daskal, you are recognized for 5 minutes. Thanks again.

STATEMENT OF JENNIFER DASKAL

Ms. Daskal. Thank you. Chairman, ranking member, and members of the committee, thank you for inviting me to testify here today.

The free movement of data, as we have heard, is critical to economic growth, has benefits for data security, and promotes privacy, speech, and associational rights. Yet increasingly, States are adopting a range of measures that restrict data flows to the United States and elsewhere and adopting costly data localization requirements pursuant to which companies must store data locally.

Many of these restrictions are directed specifically at the United States or adopted in direct response to concerns about U.S. policies and market power. The motivating factors are multiple, including fears about the scope of U.S.-foreign intelligence surveillance, concerns about the adequacy of U.S. consumer privacy protections, a desire by foreign governments to ensure access to data that they seek for law enforcement investigations, and sheer protectionism.

There is, as a result, no single, all-encompassing solution. But there are also, nonetheless, important steps that the United States can and should take to address some of these motivating factors and

promote a free and open internet. Specifically, I identify four key areas for reform.

First, improvements to key foreign intelligence surveillance rules so as to better promote both privacy and the free flow of data, while also continuing to protect national security. Second, the adoption of enhanced consumer privacy protections. Third, reforms to U.S. law to better facilitate law enforcement access to data across border, consistent with baseline substantive and procedural protections. And, fourth, the use of trade policy has been discussed already to preclude data localization mandates and impose penalties on those who engage in digital protectionism.

In my written testimony, I go into detail in all of these areas. But given my limited time here, I am going to focus on two: surveillance policy and law enforcement access to data across border.

As we have already heard, in 2015, the European Court of Justice sent shockwaves to the business community by striking down the then-in-place Safe Harbor Framework given, primarily, concerns about U.S. foreign intelligence surveillance. The Framework had been relied on by close to 5,000 companies to support the transfer of data from the EU to the United States.

The Safe Harbor Framework, as we have also heard, has now been replaced by Privacy Shield, which just underwent its first review. But both Privacy Shield, and an alternative basis for allowing such transfers of data from the EU, what is known as standard contractual clauses, are now subject to legal challenge. And, in fact, just

2 weeks ago, the Irish High Court referred one of those challenges back up to the European Court of Justice based on, quote, "well-founded," unquote, concerns about the scope of U.S. surveillance and accountability mechanisms. If these bases for transferring data from the EU to the United States are struck down, it would be devastating to the free flow of data and to United States' businesses.

There are, however, reforms that Congress can and should push that would help respond to these concerns. In fact, the House Judiciary Committee's USA Liberty Act, introduced earlier this week, includes several such important reforms. Importantly, it codifies an already implemented restriction on so-called about communications pursuant to which communications that are about a foreign target and not just to or from the foreign target can be acquired. This kind of about collection yields large quantities of incidental collection on those that wouldn't be otherwise legitimate targets and is, thus, a source of concern.

The bill also sets up new transparency and accountability mechanisms, and, importantly, it includes improvements to the Privacy and Civil Liberties Oversight Board, which would allow it to better function. This board plays an important role in overseeing surveillance, policies, and, importantly, from a European perspective, reviewing complaints made by EU citizens regarding U.S. national security surveillance. It is now down to one member, so it can't currently function. So Congress also should push the administration to move forward the other four nominees needed to fill this board.

Secondly, Congress should also respond to the legitimate concerns of foreign law enforcement officers that find themselves subject to lengthy delays in accessing emails and other communication content of their own nationals in the investigation of local crime based simply on the fact that some of the data is U.S. held. Notably, the Obama administration, and again the Trump administration, have sent up legislation to Congress that would ease some of those restrictions and facilitate access to cross-border data for law enforcement investigations, subject to important baseline substantive and procedural protections. This is something that should be supported.

Collectively, these reforms are important to help ensure the free flow of data, to promote the U.S. in the global economy, and to protect data security and data privacy.

Thank you.

[The prepared statement of Ms. Daskal follows:]

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Mr. Latta. Well, thank you very much for your testimony.

And, Mr. Reed, you are recognized for 5 minutes.

Thank you.

STATEMENT OF MORGAN REED

Mr. Reed. Thank you.

Chairman Latta, Ranking Member Schakowsky, and distinguished members of the committee, my name is Morgan Reed, and I serve as the president of The App Association, which represents 5,000 small business app makers and connected-device companies across the globe. Our members leverage the connectivity of devices from cars, to phones, to refrigerators, to produce innovation that enhances our lives.

The app ecosystem is now valued at roughly $143 billion and represents the front end for $8 trillion of international trade. Impressively, the big numbers produced by this powerful engine are actually driven by small businesses. Our members range from one-person shops with a few hundred people at the most. Yet virtually all of our members are global businesses with customers and users around the world. And small business in America is busy creating 64 percent of new private sector jobs.

The United States leads in world digital innovation. Why? Because American companies are at the forefront of using data to improve the lives of our customers. With over 7 million tech sector jobs, as you have heard from all of us on this panel, and a growth rate of

3 percent, the policy environment of the U.S. has produced successful tech industry, and countries all over the world are working to expand their tech sectors as well.

We must take steps to ensure continued job growth in the industry, and we see three key barriers. Nontariff digital trade barriers result from domestic policies rooted in privacy, some that require data localization; conflicts between U.S. law enforcement agencies' access to data stored overseas, which can and should be addressed with the passage of the International Communications Privacy Act, or ICPA. And I want to recognize Vice Chairman Harper as one of the cosponsors of that bill as well as full committee Chairman Walden, who is not here. And I want to thank you for your support on that important bill. We are looking to get Chairman Latta to support it as well.

And then, finally, any actions that weaken IP protections either through arbitrary enforcement of the law or through domestic sourcing preferences.

Everyone in the room understands the way data is a key aspect of how we use and benefit from the internet. We heard about the billions of dollars flowing across the border in terms of general commerce. But I would like to discuss some aspects of cross-border data that you might not have considered.

The future of medicine is in data that helps doctors make the right decisions. Think of it this way. You go to a physician, and a successful physician might have seen 25,000 patients by the time that they see you. But they have only seen about 500 with your genotype,

age, gender, comorbidity, racial history, et cetera, et cetera. Now, imagine that the doctor can use data to know that, for example, a woman of Irish descent responds better to one medication and South Asian males under the age of 30 respond better to another. But we can only provide that kind of leap forward if we have data, including global data, about treatment and effectiveness.

And this isn't a pipe dream. In your district, Congressman Harper, the University of Mississippi Medical Center is relying on remote patient monitoring and digital data collection to provide tens of thousands of underserved in the State, and they rely entirely on technologies developed by our members and platforms.

Chairman Latta, in your district you have NAMSA, a leading medical research organization, and they rely on the Privacy Shield to interact with data from researchers around the world.

And an issue that I know Congresswoman Dingell knows well, the next advances in car safety technology will rely on access to data. Self-driving cars will run on data to tell the difference between a tree and a bicycle. And yet if we have foreign governments or our own government interfering with that cross-border data flow, we will block that key resource, which will harm our ability to save lives.

And, you know, it isn't all about life saving. Sometimes we just do it to make our lives easier. In Congressman Schakowsky's district, we have Paylocity, which helps manage software on the web for international clients to handle HR, payroll, and more.

Congressman Guthrie, in your district we have Hitcents, which is

an innovative mobile apps and games company. And yet they are a global player with global customers.

Congresswoman Clarke, we have got Brooklyn Software Dev that does web development applications and mobile applications. Again, it is a global company in your district with five people.

Congresswoman Matsui, you have got Health Rescue in your district. They are looking to expand internationally, and yet worries about cross-border data flow are harming their ability to get bigger, stronger, and do a better job for their patients.

In order to keep all of this going, we need Congress to act, and we need them to focus on the three key elements that you have heard from all of us today. We need to resolve the questions about law enforcement access. We need to resolve the questions about how we deal with intentional or other digital barriers to trade that serve as protectionists. And then, finally, we need to remember that my members' most valuable resource is often the intellectual property that is the engine behind their products.

I look forward to your questions, and thank you very much for this hearing.

[The prepared statement of Mr. Reed follows:]

******** INSERT 1-4 ********

Mr. Latta. Well, thank you very much. And as the gentlelady from California said to me, you did your homework on us. Thank you very much for your testimony today.

And, Mr. Garfield, if I could start my questions with you. How do the restrictions on cross-border data flows not only impact industries like yours in the technology sector but others like manufacturing, retail, energy, and healthcare?

Mr. Garfield. Thank you for the question. As all of the witnesses have shared, cross-border data flows, digital trade, is a broad economic issue. And so whether you are in farming or pharmaceuticals, you rely on cross-border data flows for your companies to function.

Moreover, it is no longer a big company versus small company issue. As Mr. Reed pointed out, there are small companies in all of your districts that rely on this. And so it is, in fact, in our economic interest to make sure that there aren't restrictions that limit the growth of those companies.

Mr. Latta. Thank you.

Ms. Espinel, can you discuss how big data cloud computing, artificial intelligence, and other emerging technologies like blockchain are changing how business is done, and why cross-border data flows are important for these disruptive technologies and future innovation?

Ms. Espinel. I would be happy to. So artificial intelligence, by its nature, typically demands large amounts of data in order to learn

from that data and help whoever is using it, whether it is a doctor or a farmer or a manufacturer, be able to make better decisions based on that data. Artificial intelligence, in most circumstances, doesn't really work unless there is a large amount data. And if you are trying to discern patterns or the best outcome, having as much data from as many places in the world is very helpful. And I will give a specific example of that.

But first you mentioned data analytics. Data analytics is often a little bit like looking for a needle in a haystack. So you have, typically, very large, unstructured datasets. And what data analytics is letting you do is discern meaningful patterns that will then, again, help you make better decisions that would be virtually impossible, or literally impossible, for human beings to do on their own. But artificial intelligence, data analytics, are two examples of things that really don't work, unless you have very large amounts of data and the computing power to be able to process and analyze it coming from various places around the world.

To make that a little bit more concrete, I would turn to agriculture as one of the many, many, many examples of sectors that are using it. So many farms now have sensors in the soil. Those sensors, among other things, are determining the levels of moisture that are in the soils. And farmers can take the data that they are getting from the sensors that they are planting in their own farms and they can compare it to historical weather patterns around the world. And they can then use that to make decisions about when is the best

time to plant, how best to irrigate, when is the best time to harvest. Their ability to do that is totally dependent on the ability to gather historical data on weather patterns across the world. It doesn't work, it doesn't give them the same advantage, unless they have the ability to do that.

I will mention one other example, which I think is very much on people's minds today, which is cybersecurity. Cybersecurity and companies' ability to be able to protect themselves from threats is -- I am trying not to be overly superlative because that is not in my nature. But it is incredibly enhanced, shall we say, by the ability to be able to detect patterns of threat that are moving around the world in realtime. And you cannot do that unless you have access to the data from around the world.

It also allows companies internally to be able to look at their network analytics and how they are using technology inside their own companies, and then, again, compare that to threat data that they are collecting from around the world. That is, again, quite literally not possible, unless you have the ability to collect data from around the world and to do it in realtime, which means you need to be able to do it with as little friction as possible.

I think myself and every member of this panel could give you examples in manufacturing and agriculture and healthcare and financial services. And I will -- so I will yield back my time to others if they want to. But the examples are plentiful. And I think what is really exciting is that, as plentiful as they are, we are also clearly at the

beginning of what is possible. We talk a lot about data revolution and how that is transforming business and transforming the economy. But we sometimes forget that that itself is very nascent, and I think the advances that we are going to see over the next 5, 10, 20 years are going to dwarf the advances that we have already seen so far, as long as the ability to transfer data across borders remains.

Mr. Latta. Thank you.

Mr. Reed, in my remaining time, again, you pointed out a lot of the small businesses that you represent. And one of the other major concerns for the small business is small, medium enterprises that do not have the resources to localize this data production or facilities in a country abroad. How do they go about it?

Mr. Reed. Well, I think as you have heard from all of us, the revolution of data often is primarily aided by the concept of cloud computing. We all know that the term "cloud computing" is a bit of a marketing term, but the idea that data can be anywhere and everywhere all at the same time is absolutely critical to a small business.

So data localization laws that go into effect in other parts of the world, which limit two aspects: One is data localization laws that say any data collected on a citizen of that country must be on a server and only be on a server in that country. That is terrible. It is almost impossible to grow in that kind of an environment as an American company.

And the second is one that you have heard all of us talk about, is the future of what this can do to improve lives. Now, imagine that

I can't take that data out or I can't use it. I can't bring it back to the United States to analyze it. I have to set up a whole series of different cybersecurity mechanisms based on the State or national laws in those other countries. And all of a sudden, if I am a small business, and I am looking in my pocketbook and thinking, do I hire a developer to work on a product here in the States or do I roll the dice and spend a fortune to do something in a country where I don't speak the language, I no longer can depend on the cloud, and I no longer have the resources in place to grow, then they are going to opt out of that global opportunity. And when they opt out of the global opportunity, they opt out of creating more jobs here domestically.

Mr. Latta. Well, thank you very much. And my time has expired.

And I would like to recognize the gentlelady from California for 5 minutes.

Ms. Matsui. Thank you very much, Mr. Chairman. And thank you very much for calling this very important hearing today. And I want to thank the witnesses for joining us today. This has been a very interesting discussion.

Dr. Daskal, it is clear that while many data flow policies across the world are blatantly protectionist, countries also have real privacy issues to address. How can we distinguish between policies that are purely protectionist and those that address a legitimate need.

Ms. Daskal. So thank you, and thank you for the question.

As I said in my testimony, I think that the factors motivating data localization are multiple, and it is not always possible to parse

out what is the motivating factor. And it highlights, I think, the need to work on the various different areas that identify both dealing with trade policy and concerns about the digital efforts to be protectionist.

At the same time, there are a number of data localization mandates and data localization rules that derive from concerns about U.S. privacy protections, both consumer privacy protections and also concerns about the scope of U.S.-foreign intelligence surveillance. And addressing those, I think, is also critical, particularly with respect to preserving the flow of data from the EU to the United States.

As we have talked about, the Safe Harbor Framework that was in place was struck down primarily because of concerns about the scope of foreign intelligence surveillance. And there are now a number of court cases, including one that was just referred back to the European Court of Justice, that raises those same set of concerns based on a record and a finding by the Irish High Court that said we have a lot of concerns about the scope of U.S.-borne intelligence surveillance and the sufficiency of remedies for EU citizens whose data is collected.

Ms. Matsui. Okay. Mr. Garfield, in your testimony, you say that even when governments have the right motivations, like protecting public safety and privacy, they often pursue the wrong policies that result in data flow barriers. What do you see as the right privacy and public safety policies that will not impede data flows?

Mr. Garfield. I think a part of what is needed here is actually U.S. leadership in bringing the world along in developing definitions.

And so I could sit here today and give you my sense of what the appropriate security -- data security or privacy regime should look like. But I think the U.S. has an opportunity to build on the Privacy Shield in a way that is globally necessary and encouraging. And so that is what I would actually encourage.

Ms. Matsui. Okay.

Mr. Garfield. It is bilateral in the sense that it is with the EU and all of the countries of the EU. But we have an opportunity to build upon that with the rest of the world. And the way that data moves today, it is absolutely necessary to do that on a global basis.

Ms. Matsui. All right. Okay.

Just yesterday, the President suggested he could support breaking up NAFTA into separate, bilateral trade agreements.

Dr. Daskal, do you think breaking up NAFTA or other multilateral agreements will have any impact on our efforts to ensure the global-free flow of data? If so, how?

Ms. Daskal. So I would be concerned about an effort to break up NAFTA. I think we have heard from other panelists the importance of NAFTA and the importance of using NAFTA as an opportunity to promote a digital-free trade agenda. And I hope that the administration follows the recommendations of all of those who support that quite strongly.

Ms. Matsui. Okay. And I have been very concerned about the forced transfer of technology as a condition for foreign market access, especially as it pertains to encryption and intellectual property.

Can any of our witnesses provide examples of these forced transfers? And do you have any suggestions of how we might address this issue? Any of you?

Mr. Reed, do you want to comment or --

Mr. Garfield. Do you want to -- you are --

Mr. Reed. We are all going --

Ms. Matsui. All of you can comment.

Ms. Espinel. So, yes, I think there are specific countries around the world where we have seen either our members not be able to access the market or have their access severely limited. And among those are Russia, Indonesia, Brazil, China, Vietnam. Mr. Garfield noted many of these as well. And we have concerns that the litigation that Ms. Daskal and I believe other of the panelists have referred to several times, the litigation that is happening right now in the European Union, is also going to end up limiting data flows between the United States and Europe. So this is a live issue in many parts of the world.

I think in terms of what can be done, I think a part of that is Congress continuing to encourage the administration to tackle this issue head-on. I do think, you know, at least in our interactions with the Department of Commerce and with USTR, they realize how important digital trade is to the United States and to the global economy, but it is not an easy issue. So I think continuing to make clear to them that this is also a priority issue for this committee is very important.

And I think -- you know, we live in a world right now where we

don't have any international consensus on what the right set of rules would be. You have heard many of us talk about NAFTA. A big part of the reason that we are interested in NAFTA is because it gives an opportunity to start setting that precedent, and that is really where we need to go to collectively. We need to have, at least among the major economies, an international consensus on what the right sets of rules around free movement of data should be. And that does not exist right now.

Mr. Garfield. If I may just suggest one recent report. The Information Technology and Innovation Foundation is doing an annual report on cross-border data flows and the limitations to that. In that report, they identified 37 countries that now have these principles in place or limitations in place. And so we can make that report available for the committee as well.

Ms. Matsui. Okay. Well, thank you very much.

And Mr. Chairman has been very generous with me. So I need to yield back. Thank you.

Mr. Latta. Well, thank you very much. The gentlelady yields back.

The chair now recognizes the gentleman from Mississippi, the vice chairman of the subcommittee, for 5 minutes.

Mr. Harper. Thank you, Mr. Chairman. And thanks to each of you for being here.

This is just -- it is mind boggling when you think of where we are today and with the opportunities that we have. And think back

10 years ago, you know, I don't know that we could have envisioned we would be on the -- with such opportunities. And the challenges really are opportunities for us.

And so I want to thank you each. You bring so much expertise to the table to help us as we go forward to make sure that we do things that do improve people's lives, that we do things that don't block that cross-border flow. And we want to make sure that we get it right. And, certainly, there are those opportunities we are going to grasp and go forward.

So, Ms. Espinel, you know, you mentioned in your testimony that you indicated how digital trade can improve lives. Explain to me how that works. When I go back to my home State of Mississippi, what should I tell them?

Ms. Espinel. So I think Mississippi, as we have already heard today, is a leader in healthcare and in personalized healthcare. And I think that is an area that is well worth emphasizing. So I am going to tell a story that is a little bit personal to me because it is borne out from my personal experience, actually in a couple of areas, where artificial intelligence and the ability to assess data from around the world is making an impact.

The first I will start with is Alzheimer's. So my mother suffers from Alzheimer's. It is -- researchers in the United States and Japan and Europe are now working together using technology developed by IBM Watson to use the medical patterns of Alzheimer's patients from around the world to hopefully be able to find, if not a treatment to

Alzheimer's, increase risk factors for Alzheimer's. And that is an issue that is personal to my family. I know it is an issue to many families around the world. So everything -- I think anything we can do to advance there is well worth it. And, again, that is an area where it is -- if you are restricted to your ability to use data from a specific population set, that is going to make it much, much slower to be able to see the kind of advances that we would like.

Another example that is also -- resonates with me because of my own personal experience relates to doctors in Canada. So doctors in Canada started monitoring newborn babies, prematurely newborn babies for signs of risk. And one of the things that they found is that right before a premature baby has a crash, goes into a serious risk incident, their vital signs stabilize, which is actually sort of intuitively very strange, right. So, in fact, the medical practice up to that point had been if they saw the vital signs stabilize, they would lessen the monitoring of that particular baby because the assumption was that the baby was going into recovery. What they actually found using cross-border data flows and data analytics, was that, in fact, that is a risk factor for a baby going into crisis. And that has completely changed the treatment and the monitoring of premature babies that are in the NICU and has saved lives.

As a mother who, happily for me, very briefly had a child in the NICU, that is an example that resonates --

Mr. Harper. Sure.

Ms. Espinel. -- with me very strongly. But it is another

example of an advance that would have been literally impossible without the ability for doctors to be able to compare datasets from around the world.

Mr. Harper. That is great.

Ms. Espinel. So Mississippi is a leader in healthcare. There are so many great examples there, and I think anything that we can do to try to keep the data within -- while respecting privacy, to keep medical data flowing around the world to try to help researchers and doctors treat their patients is tremendous.

Mr. Harper. Thank you very much.

Mr. Reed, we discussed a few moments before the hearing began, you know, University of Mississippi Medical Center selected last week as a Telehealth Center of Excellence. And that just didn't happen because they went around to pick that. Tell us how that information is -- following up on that has helped.

Mr. Reed. The reality is for University of Mississippi Medical Center -- and I think there is something important. The ability to save lives is a critical aspect of this. But also, let's not undervalue the fact that the University of Mississippi is also looking for the students that are coming out of there, and the school itself, to create jobs, to create opportunities, and to break the place that they are now and find something that they can do. They can hire 10 people, 20 people, 30 people. And you start to look at the fact that, from UMMC, when they are looking to do spinoffs and those students are looking to build the next product that comes out of there, they are going to

rely on data from all across the world to find that next solution. The example I gave you, if I have got to figure out what drug works better on this group of people versus this group of people, then I need the data to do so.

And so it is important that we find a way to solve the health problems that we have raised, but let's not undervalue the fact that part of what we are also doing is looking to promote entrepreneurship. And entrepreneurship comes from information. All of us in the business case, we talk about asymmetry, information asymmetry. We lose out when we have with information asymmetry. The more information they have, the better the product they can make, the more jobs that they can build. And I think we should remember that part of this is using data to spur entrepreneurship as well as life saving.

Mr. Harper. Great. Thank you, Mr. Reed.

My time has expired, Mr. Chairman.

Mr. Latta. Well, thank you.

The chair recognizes the gentleman from Vermont for 5 minutes.

Mr. Welch. Thank you very much. I thank the panel of witnesses. We are on pretty good bipartisan terms here. And the reason is because what we are talking about, the data flow, is so important to the economy, independent of where you are from or even what your enterprise is.

And the two issues that I guess I want to ask about are, number one, what are some of the issues we have to deal with with respect to European actions that are intended either to protect privacy as they see it, somewhat different than ours, and the collateral consequences

of the Snowden incident? And, number two, some of the anticompetitive steps they may take disguised as privacy steps for their people.

So I will start with you, Ms. Espinel. Can you address that?

Ms. Espinel. So I will mention at least two things. One is there is a regulation called the GDPR that is in the process of being implemented throughout Europe. And part of what the GDPR does is puts into place stronger privacy rules.

I will say, based on the experience at least of my companies, what we have found is, in terms of implementing that, U.S. companies are often far ahead of where the European companies are. So I think our companies, and certainly my members and their commitment to privacy, is unparalleled.

However, I think we do have concerns about some potential regulations or litigation challenges that are happening in Europe. So two I will highlight is there is an e-privacy regulation that is being discussed in Europe right now, and we do have concerns that that is going to make it very difficult to operate in Europe, while not actually advancing the cause of privacy very much. So that is one that I would flag.

The second I would flag is one that we have mentioned a couple of times on the panel, but I think it bears repeating because the threat of it is so serious. While the Privacy Shield is in place, as you know -- and we were happy to see the United States and Europe come to an agreement and conclusion, and we are happy that it remains in place -- the Privacy Shield is only one of the mechanisms that companies

use for moving data back and forth and around the world. And the other challenge -- there are other mechanisms called standard contractual clauses that are right now also being challenged in Europe, as Ms. Daskal referred to. Those have been very recently referred up to the European Court of Justice. Potentially, the impact of those being overturned could be even broader than the impact when the Safe Harbor was revoked. So that is -- we are watching that with great interest. And I think that goes to the discussion that we need to have collectively between the United States and Europe about what a long-term solution is.

Mr. Welch. Okay. Thank you.

Go ahead, Mr. Reed, and then Ms. Daskal.

Mr. Reed. I think that one of the key elements that is on the forefront is finding a way to solve the question about law enforcement access. Right now, the International Communications Privacy Act, H.R. 3718 -- got the number right this time -- is going to be critical. Because we are staring right in the face of a decision by a court that will essentially say that U.S. law enforcement can take data from anywhere, regardless on who it is on, regardless of what country it is stored on. And while that may be the right decision, the impact that that will have on our ability to do cross-border data flow with Europe will be significant. Because if we say that, then you have to assume that the European nations are going to say the same thing.

And then, without a comity agreement, without some kind of ability for companies to adequately provide for the security of that data, you

are facing a world where U.S. companies are either going to have to obey the law of the United States and find themselves in violation of laws overseas or violate the law overseas -- violate the law in the United States to serve their European customers. And nothing will do as much damage to our positive relationship with Europe than the idea that I can no longer do business there without breaking a law in one place instead of the other.

Mr. Welch. Ms. Daskal, I have only got about a minute, a little less. Thank you.

Ms. Daskal. So I fully agree that the issue of law enforcement access to data across borders is important. And the converse of what Mr. Reed was just talking about is foreign governments' inability to access emails, communications, content, that happens to be U.S. held, even when they are investigating a local crime involving a local perpetrator and a local victim based on kind of outmoded rules from the 1980's Stored Communications Act.

As I said in my testimony, first the Obama administration, now again the Trump administration, have sent up legislation to the Hill that would begin to ease those restrictions. And I think it is something that Congress should take up to at least alleviate one of the pressures in favor of data localization.

Mr. Garfield. If I may, very quickly.

We are in -- all of that is absolutely correct, but we are in an untenable position if the United States has to continually change its laws in order to respond to shifting court rules and dynamic in Europe.

And so you asked about solutions. I think what is absolutely necessary here is American leadership in working with the rest of the world, not just Europe, to come up with rules of the road in this area. Because in the same way that the Privacy Shield can now be undermined by Schrems II, it will be Schrems III and IV a year from now.

Mr. Welch. Uh-huh.

Mr. Garfield. And so that is why our leadership in developing rules of the road in this area is so critically important.

Mr. Welch. Thank you. I thank the panel.

Thank you, Mr. Chairman.

RPTR ALLDRIDGE

EDTR ZAMORA

[11:12 a.m.]

Mr. Latta. Thank you very much. The gentleman's time has expired.

And the chair now recognizes the gentleman from Kentucky for 5 -- I am sorry. Mr. Lance is here. I am sorry. The gentleman from New Jersey for 5 minutes.

Mr. Lance. Thank you very much. Kentucky is a great State, however, and very beautiful.

I want to thank the panel for joining us today to discuss this important topic.

The congressional district I serve is heavily involved in this field. Almost 60,000 constituents are employed in the high-tech sector. That is nearly 2-1/2 times greater than the average in a congressional district which, as I understand it, is 24,000. It is a driving force in our local economy and will continue to be as business and society become ever more reliant on advanced technologies.

Ms. Espinel, can you please explain how the free flow of data around the world supports emerging technology in machine learning and algorithms, for example, and the impact it has on businesses today?

Ms. Espinel. I would be happy to.

So machine learning is one aspect of artificial intelligence, and algorithms are the parameters or rules that let all kinds of artificial

intelligence work. But artificial intelligence and the ability to be able to discern patterns and then help human beings make better decisions doesn't work in most circumstances unless you have fairly massive amounts of data. And when you are looking at trying -- if you are a farmer looking at it trying to understand what is likely to happen in terms of weather conditions and, therefore, how you should be planting your fields and when you should we harvesting, if you are a manufacturer trying to understand what the consumer demand is around the world, if you are in cybersecurity and trying to track threats as they move across the world very rapidly, unless you -- you can use artificial intelligence and data analytics to do a much, much better job of assessing what the outcomes will be in making decisions, but you can't unless you have large amounts of data to be able to do the data analytics and the artificial intelligence.

And in all of those areas I just mentioned, having international data is going to be very important. If you only have the ability to assess the weather patterns that are hanging right over the State of New Jersey or even just the United States, that is going to very much limit your ability to determine what is actually going to happen in terms of weather.

At the same time, if you are a manufacturer hoping to expand overseas and you can only get customer feedback from inside the United States, that is going to limit your ability to be able to best serve the largest amount of customers that you want to have. In cybersecurity, if you are limited to information that is in the United

States, it will be virtually impossible to be able to detect patterns, because they move around the world so quickly.

So artificial intelligence depends on large amounts of data. But in many, many areas it also depends on having datasets that are coming from around the world with as little friction as possible in order to make them useful.

Mr. Lance. Thank you very much.

Mr. Reed, are there any digital trade issues that are important to your members, small tech companies, that may be different from the priorities of larger companies?

Mr. Reed. I think the issue of scale generally ends up being one of scarce resources. The reality is everyone here at this table has the same concerns when it comes to cross-border data flow. But let's consider it from a company in your district who has got, let's say, 20 employees. When they are looking at their CapEx expenditure, how much can they spend to build a data center or to source something overseas? If they have got 20 employees, I have got to decide do I hire the 21st employee to deal with a contract I have for a company in New Jersey or do I try to spend that money to build a data center overseas?

So our primary issue that you are going to see the differentiation here is, for the larger companies, it is a cost but doable. For our folks, it becomes a barrier in which they cannot pass. And what becomes really disappointing about that outcome is, oftentimes, our companies are the one that drive forward the innovation. We get acquired by the

big guys. We look forward to that opportunity to either beat them in the marketplace or get acquired and build another better product.

So the real differences that you are going to see in this space are where they say it is a cost, we say we can't go. And there is where we end up with the more significant painful and, frankly, anti-innovation damage that is done by trade barriers.

Mr. Lance. Thank you.

Would anyone else on the panel like to comment?

Yes, Mr. Garfield.

Mr. Garfield. Well, I was going to give a concrete example. So we met with a company 2 weeks ago that is 4,000 people. And in order to comply with GDPR, they are putting 34 engineers against it. So GDPR is moving forward for legitimate reasons. But it speaks to the point that Mr. Reed made which is, for some companies, they can afford to assign 34 engineers. For others, they simply can't and so won't operate.

Mr. Lance. Thank you. My time has expired.

Thank you, Mr. Chairman.

Mr. Latta. Thank you very much. The gentleman yields back.

And now the chair recognizes the gentleman from Kentucky for 5 minutes.

Mr. Guthrie. Too bad he went first. He asked some of my questions, so I appreciate it very much.

But, no, it has actually been a fascinating panel, and you have all done such an excellent job. The things that I was going to ask

you, really -- I was going to talk about NAFTA. We have talked about how you localize -- I wasn't going to say Mississippi. I was going to say Kentucky. But the same question that seems to be the same kind of answer, so I appreciate it.

Hintcents was actually -- I guess it is probably about 20 years now, but it was twin brothers who were in high school when they founded Hintcents, and they now have a very successful company -- still in Bowling Green? Doing business in Bowling Green, so it is a great, great business.

I guess the one thing -- and I guess, Ms. Espinel, I was -- if you look at -- there was a European Centre for International Political Economy that examined the consequences of GDP in countries that have cross-border restrictions, and under the sum of it is for safety and security, or there are a few of what is private. But in doing it for economics -- I mean, why would it -- it says it decreases GDP in these countries that have these cross-border restrictions. So why would these countries do that?

Ms. Espinel. So I would certainly argue that it is not in the long-term economic interest of countries to put in data localization policies, although I can imagine that some may view it as being at least in their short-term economic interest because of a view that, if it is harder for U.S. companies to be operating inside of their borders, it will allow them to boost their domestic industry. I think longterm, that is not going to be the case. And I think it also is a real harm to their companies.

One of the things we have been talking about here, but I want to emphasize the point is, you know, we are -- some of us are larger tech companies, some of us are smaller tech companies. What is really important here, I think, is the customers of our companies. And the customers of our companies are in every industry sector that exists. And that is true in the United States. That is true overseas as well.

So when governments put data localization policies in place, not only are they, in my view, hurting their own long-term economic interests in terms of building their tech industry, they are hurting the immediate economic interests of companies across their healthcare and manufacturing, transportation, other sectors, because they are denying them access to the latest innovation.

Mr. Garfield. The other thing is that businesses are so integrated today, both large and small, domestic and international; we represent companies all over the world. And they are codependent. And so when you put these rules in place, you do damage to your local businesses and customers.

Mr. Guthrie. We do a lot of stuff here when the States are doing -- State legislatures make -- in the Commerce Clause, we have to kind of look at our role.

So I am going to go off the topic a minute; it is why you are here, Mr. Garfield. I met this morning with Secretary Acosta, Labor Secretary. Everywhere I go, people are talking about jobs, the right skills, the right skills for jobs. People are hiring, but people don't have the skills to move forward. And I am of a manufacturing

background, so a lot of repetitive work has gone to automation. And some of your companies are involved in that, obviously. But as it goes to automation, the requirement to have somebody to be able to maintain that automation has raised, instead of being a $14, $15 person to the $25, $30, $35 person an hour.

So your member companies are kind of driving this. What things are you guys doing --

Mr. Garfield. Yeah.

Mr. Guthrie. -- to help develop the workforce? And what can Congress do to help, is the question?

Mr. Garfield. It is completely on topic. I think one of the things you can do is what you are doing right now, you know. So one of the examples you mentioned, I think banking, which is when ATMs came into the marketplace, most people assumed that there would be fewer people needed in banks. Well, that has been -- the opposite is true. We have more ATMs around the world, but we have more people working in banks because there are more bank branches.

Part of the disconnect, there are 6 million open jobs in the country today and about 7 million people looking for work, that the challenge is that the skills of the people looking to work don't always match up with the jobs that exist. And so one of the things that we are putting a lot of energy behind, actually collectively, is making sure that we are reskilling the workforce such that those skills do align.

I think where Congress can help is by putting resources behind

those efforts, but making sure that they are well coordinated so that we are -- there is closer connection between the private sector and the public sector. The job training programs should be rooted in the needs of the world today, not the needs of the world 20 years ago.

Mr. Guthrie. Yeah. As we look at global -- it is also localized. I am on another committee that did the Workforce Investment and Innovation Act, WIOA, whatever the -- they all stand for. And one of our main premises of changing it was make sure there was a business majority on the local boards and it is localized, because even though it is a global economy, there are certain things that happen in certain -- people -- they are clusters, and people become experts in their clusters.

Ms. Espinel. And if could just add to that briefly. I think the issue of reskilling and making sure that young people and people on their career paths have the skills that we need is a very important one, and I would echo everything that Dean just said. I think it is -- I think we also need to do a better job in terms of matching. So where people do have the skills and there is employee demand for those, making sure that the employees that have those needs are in touch with the people that have those skills. And I know there are training programs now that are being very intentional about making sure that, once you go through the training programs, there is also a clear path into a company that has a job. I think that is a very important part that we need to make sure is infused throughout our training programs to the extent possible.

I think this is a great area, though, for the industry, which is very focused on this and for Congress to be working together.

Mr. Reed. I know we are out of time, but I think one of the issues that I want to differentiate from -- a little bit from what we just discussed is, even though we are the software industry and we know what the salary is, I come from a background of working with machinery as well. And one of the things that is fascinating to me is not everybody needs to be a programmer. If you were in the machine -- you were in the manufacturing side of the world. Well, you know what a toolmaker is, you know what a patternmaker is. The same skill set that required you to be good with a file and good doing patternmaking, you transfer that same knowledge of a three-dimensional shape to a CAD program.

So when somebody says, well, you know, I am a patternmaker, I don't know how to live in this precision manufacturing world, my sense is that is a failure on us, because the skill set, the idea, how does this fit together, where does this fit in the machinery, how do I make a better widget that goes better with this product, it is exactly the same as holding a file in one hand and a piece of metal in another or just putting the keyboard in between. And that, to a certain degree, is something we need to do to change the language about how we talk about reskilling and that we look at it from the standpoint of tools we are making to accomplish the same job are different, but the outcome is the same.

Mr. Guthrie. Thank you. My time has expired.

Mr. Latta. Well, thank you very much.

And the chair now recognizes the gentlelady from California for 5 minutes.

Mrs. Walters. Thank you, Mr. Chairman.

Mr. Garfield, you state that data localization is the primary type of digital trade barrier. Can you describe which regions or countries have proposed or enacted nontariff measures like data localization or transfer of data restrictions?

Mr. Garfield. Yes, certainly. It is actually a long and growing list, unfortunately, so -- there is a recent report from the Information Technology and Innovation Foundation that identifies 37 different countries. Their market is certainly like China, Indonesia, Vietnam, a number of South American markets that are now doing the same that is highly problematic. The thing that we have noted is that the motivations may be distinct in some of those markets. The drivers in Europe, for example, may be rooted in human rights and constitutional principles. But the end result is pernicious both for their local market and for global companies. And so there is a better approach to achieving the goals they have in mind.

Mrs. Walters. Okay. Thanks. And have you recognized patterns in which certain regions or similarly situated countries justify nontariff measures based on a particular reasoning? For example, do you recognize that developing countries justify these barriers based on protectionism or whether GO political rivals to the U.S. justify their barriers on national security?

Mr. Garfield. I think the pattern that we see most often is that

national security is the preeminent concern that is identified and articulated. The irony of it all is that national security is often undermined by localization requirements, because you are not getting patterns, as Victoria has pointed out or Mr. Reed has pointed out, from around the world. You are also closing yourself off from access to the best technologies that would actually support security.

And so part of this is addressing the legitimate security concerns while making sure they are not acting in a protectionist fashion.

Mrs. Walters. Okay. The next question is for the entire panel. The testimony we have received for this hearing makes clear that the flow of data is really about the flow of ideas. Recently, some have advocated for the United States to implement a more protectionist trade policy. Are foreign countries reacting to this debate by moving toward additional policies to restrict data flows?

Ms. Espinel. Well, I will start because, actually, I think that is a nice follow-on from the question you just asked. And Dean talked about patterns. And I would agree that I think national security concerns is a pattern that we are seeing governments raise around the world. But another pattern that we are seeing is that governments are involved in -- governments that are not the United States are involved in trade or other bilateral discussions with governments around the world, and they are encouraging their vision of data or, in some cases, their lack of vision on data. And that is a troubling trend. And that is one of the reasons I think we and others have encouraged the United States to continue to show leadership on this issue.

The United States is using its trade negotiations, such as NAFTA, as sort of an immediate example or other bilateral discussions it is having to push for cross-border data flows. That is going to be very helpful in no small part because other governments are out saying that trade agreements or bilateral discussions either should not have rules on data flows or should have rules that would localize data. So I think that is an important aspect of this.

Mr. Garfield. It is not just theoretical, not to rehash TPP. But the Chinese model for data flows is almost 180 degree from ours. But their influence in that region post-TPP is pronounced. I have spent a lot of time there in the last few months traveling between Japan, South Korea, and other markets in the region, and you can see the impact of that, particularly around data flows.

Ms. Espinel. And to give another example, the Japanese and the European Union are engaged in trade discussions right now. The Japanese are aligned with the United States, and they have been big promoters of cross-border data flows. Obviously, global innovation is a big part of their economy as well. But they are coming -- it looks like they are going to come to an agreement with the European Union that is going to leave this entire area out, rather than having rules on it as TPP and as we hope NAFTA would. So I think that is a troubling trend that we are seeing as well.

Mr. Reed. And I will pile on. We just spent time dealing with Indonesia at, of all things, ITU, where there is an effort underway to essentially give the ITU power to control what is called over the

top, which is essentially everything on the internet, through the ITU. And part of that is a move to restrict the success of the United States and the United States companies around data and get a lot of that under the control of the ITU and ultimately the United Nations.

You know, I am sending staff around the world to deal with these exact issues from a small business perspective. So it is everywhere, it is pernicious. And ultimately, we are going to have to address it quickly.

Ms. Daskal. And I would just add briefly, in addition to the protectionism concerns and the security motivating factors, there are, as we have talked about a little bit today, concerns about privacy, particularly amongst the EU. And there are steps that the United States can take both to take steps to improve its privacy protections both in the foreign intelligence surveillance regime and in the consumer privacy protection regime. And as Mr. Garfield said, also to play a leadership role in setting new norms and explaining better what the United States already does well.

Mr. Reed. And I would be remiss if I didn't thank you for your current cosponsorship of H.R. 3718, which is legislation that helps to address some of that, the International Communications Privacy Act. So thank you.

Mrs. Walters. Thank you. And I am out of time. Thank you very much

Mr. Latta. Thank you. The gentlelady yields back.

The chair recognizes the gentleman from Florida for 5 minutes.

Mr. Bilirakis. Thank you very much. I appreciate it, Mr. Chairman. And I apologize for being late. We had a hearing and a markup in the VA Committee.

But I want to ask the question of Mr. Garfield. Each day, my constituents are utilizing internet-enabled tools to access customers abroad in ways impossible a decade ago, of course. American industries from manufacturing tools to financial services to agriculture are increasingly relying on the internet for their current and future global competitiveness, as you know. Unfortunately, U.S. internet services continue to face a number of market access and regulatory barriers.

As governments continue to assert a heavy hand on U.S. internet services, how would you use trade policies to stop other countries from blocking or discriminating against the U.S. services and ensure that the U.S. continues to lead the world in innovation?

Mr. Garfield. Thank you for the question. I would do what Congress suggested when it passed TPA, which is making sure that digital trade, trade promotion, cross-border data flows are a priority, and that we put in place mechanisms for holding markets accountable. It is not a theoretical issue. The United States is in the process of updating NAFTA and has said that they are on the path to do the same thing with the Korean trade agreement. I think in both instances we have the opportunity to ensure that all of the things that you identified that have an impact on the ground in Florida are, in fact, addressed.

Mr. Bilirakis. Thank you. Good answer. I appreciate that.

Mr. Garfield. I tried.

Mr. Bilirakis. Ms., I guess, Espinel. Is that how you pronounce it? Is that right?

Ms. Espinel. Espinel.

Mr. Bilirakis. Okay. Thank you. I have a question for you. In your testimony, you explain how the services and technologies provided by your member companies are fundamentally affecting the ways in which companies are running their businesses, accessing markets, interacting with clients and customers, and generally innovating. How can trade agreements be used to help advance U.S. standards and best practices in protecting innovation and intellectual property like copyright, trade secrets, and, of course, patents?

Ms. Espinel. So one of the things that we have talked about a little bit today is the fact that, right now, one of the gaps in the international legal system is that there is no -- there are no rules of the road. There is no international consensus on what data policy should be. And to me, it feels a little bit like where we were in the 1990s with intellectual property, investment, and services, where there were also no international rules of the road, or at least no trade international rules of the road. And at the time, the United States stepped up.

And as part of the negotiations that led to the establishment of the World Trade Organization, they said intellectual property, investment, services clearly -- already important parts of the U.S.

economy, clearly going to be even more important to the U.S. economy and the global economy. We need to have international trade rules. There need to be some internationally recognized parameters on how intellectual property, investment, and services should work cross border. And the U.S. pushed hard for that to happen. And I am very confident, without U.S. leadership, it would not have happened. But it did, and eventually, all of the members of the WTO agreement -- the WTO countries agree that there should be international rules on intellectual property, investment, and services.

It feels to me like we are at that moment again for data. Data is also new. This is a -- although there has been so much progress and advance already, this is still a new industry. And the way it is impacting industry sectors across the economy is still relatively new. And that is part of the reason why there are no international rules on it yet.

And what I would ask Congress to do is to encourage the administration to look for places, NAFTA as an example, where we can start to set a precedent for international rules on data. I think it is clear that this is going to continue to be a very important part of the U.S. economy in the global economy, like IP investment and services. I am confident it is important so the economy will only grow over the next decade or so. And so we are going to need to have those rules. And I very much hope that this administration takes that mantle up and starts -- continues to work with countries around the world to try to set those rules.

As a former trade negotiator, that is not going to be easy discussion. That is not going to be a few days of discussions with other countries. It is a cutting edge issue, so it is going to be difficult. But it is so important, not just to our economy, but to the economy of our trading partners around the world. But I think it is very important.

And so whether it is NAFTA, whether it is Korea, whether it is discussions with the European Union and the U.K., whether it is discussions with Japan, whether it is discussions in multilateral venues, like the GS and the G8 and the G20, I would encourage the administration to be looking for every opportunity it can to start laying the ground rules for international trade rules on data.

Mr. Bilirakis. All right. Very good. Thank you very much.

I yield back, Mr. Chairman.

Mr. Latta. The gentleman yields back.

And the chair recognizes the gentleman from Pennsylvania for 5 minutes.

Mr. Costello. Thank you, Mr. Chairman.

As we all know, technological innovation shapes every State and region of the country. I am very proud in my southeastern Pennsylvania and congressional district, over 800 million high-tech manufacturing exports, over 200 million IT services exports, 42,000 high-tech sector workers, 30,000 STEM workers, over 17,000 computer and math workers, and over 12,000 highly educated immigrant workers.

My question, Mr. Garfield -- and I appreciated your mention in

your written testimony of several lead innovators from diverse industries and the many different ways they rely on cross-border data transmission as part of their core business function.

Merck, which employs several thousand just east of my district, but many live in my district, they have been able to deliver medical advancements more efficiently as the technology platforms they rely upon have grown increasingly global and sophisticated. I am asking you to elaborate on how removing barriers to cross-border data flows has the potential to increase business efficiency for medical innovators, create jobs, expedite the delivery of lifesaving therapies, and ultimately, lower costs for patient end users. In essence, how does removing these barriers translate into a higher quality of life both here and also in countries engaging in freer digital trade?

Mr. Garfield. Thank you. Thank you for the question. We were just noting that it makes me want to visit Pennsylvania just listening to your description of the place.

Mr. Costello. Come on down.

Mr. Garfield. So the shortest answer to your question is that cross-border data flows allow us to look at patterns where we wouldn't know where to pull the information from. And so you would never know what insight you are going to get from these technologies which leads to greater innovation, greater collaboration, greater job creation, greater economic growth, and greater development in places like Pennsylvania.

And so the bottom line is cross-border data flows is really the oxygen, if you will, as I said at the beginning, for innovation today. And we all know the benefits of innovation and the broad-based impact that it has on economic development and growth in places like Pennsylvania, but throughout the country.

Mr. Costello. Yeah. I want to get to -- and thank you for the answer -- a couple other questions. But does anyone have anything to add different from that? Otherwise, I will move along.

Okay. Next question. Have any studies been conducted on lost productivity that results from some of the current nontariff barriers to digital trade?

Ms. Espinel. I don't know one specifically. I know the U.S. Commerce Department has estimated that the digital trade is worth $250 billion to the U.S. economy. But I am not familiar with the study that looks at lost productivity precisely.

That said, it is clear that cloud computing and data analytics and others contribute to productivity. So it is clear that it is going to have a negative significant impact. But I don't know of a specific study that has looked at that issue.

Mr. Reed. I was going to say, I think the way that -- I am happy to bring you some numbers on that. I think the way that we would look at that is the old what happens if you put your hand out and you spray paint around it? What we look for is countries nearby and regions nearby where they haven't seen the productivity growth that you should expect.

It is interesting you bring up Merck, because that is one of those where you can really see some impact on lifesaving drugs.

Mr. Costello. I think the committee would certainly appreciate any feedback on that question further.

Mr. Garfield, data localization laws that contribute to the restriction of cross-border data flows. You mentioned the U.S. should work to establish new norms to remove some of those barriers. Two questions real quickly. Some of the nations you mentioned, have they demonstrated a willingness to help change the international norms? Second, besides formal negotiations, what else can be done to help change these international norms?

Mr. Garfield. The answer to the first is yes. So in Latin America, for example, we have seen some progress from private sector efforts to push countries away from the direction they were heading on restrictions on cross-border data flows. And so, yes, there is an opportunity there.

What more can you do? I think -- or what can the U.S. do? I think, as we negotiate trade agreements, emphasizing the importance of digital trade and cross-border data flows and building in accountability mechanisms is a key part of that. My colleague tapped me on the shoulder to say that there is a report from ICIP and ITIF that gets into productivity, and we will make sure we get that report to you.

Mr. Costello. Thank you.

I yield back. Thank you, Mr. Chairman.

Mr. Latta. The gentleman yields back.

And seeing no other members seeking to ask questions, I would like to thank our witnesses today for appearing before us today.

And before we do conclude, I would like to include the following documents be submitted for the record by unanimous consent: a letter from Insights Association and a letter from Electronic Privacy Information Center.

[The information follows:]

******** COMMITTEE INSERT ********

Mr. Latta. Pursuant to committee rules, remind members that they have 10 business days to submit additional questions for the record. And I ask that the witnesses submit their responses within 10 business days upon receipt of the questions.

And, without objection, the subcommittee is adjourned.

[Whereupon, at 11:47 a.m., the subcommittee was adjourned.]